

SEWER LEGEND

—SS—	PROPOSED SEWER MAIN	—S6—	EXISTING SEWER MAIN
●	PROPOSED SEWER CLEANOUT	⊙	EXISTING SEWER MANHOLE
○	PROPOSED SEWER MANHOLE	⊙	EXISTING SEWER CLEANOUT
—FM—	PROPOSED SEWER FORCE MAIN		
—SS—	PROPOSED SEWER SERVICE		
⊙	PROPOSED SEWER AIR RELEASE VALVE		
⊙	PROPOSED SEWER TAP AND VALVE		

- ### SANITARY SEWER SYSTEM NOTES:
1. ALL MATERIALS AND INSTALLATION OF THE PROPOSED SANITARY SEWER SYSTEM SHALL MEET THE REQUIREMENTS AS SET FORTH BY THE CITY OF WEST COLUMBIA AND SCDHEC.
 2. ALL PROPOSED SANITARY SEWER LINES (MAINS AND SERVICES) SHALL CONFORM TO "TEN STATE STANDARDS".
 3. CONTRACTOR SHALL NOTIFY THE CITY OF WEST COLUMBIA AND THE ENGINEER 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
 4. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING NECESSARY PERMITS AND LICENSES FROM THE CITY OF WEST COLUMBIA AND SCDHEC PRIOR TO COMMENCING CONSTRUCTION.
 5. CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND/OR PERFORMING ALL NECESSARY TESTING OF THE NEW SANITARY SEWER SYSTEM (MAINS AND/OR SERVICES) ACCORDING TO THE REQUIREMENTS OF THE CITY OF WEST COLUMBIA AND SCDHEC. AT A MINIMUM, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESSURE TESTING ALL MAINS AND SERVICES IN THE PRESENCE OF THE ENGINEER AND A REPRESENTATIVE OF THE CITY OF WEST COLUMBIA.
 6. CONTRACTOR SHALL FURNISH AND INSTALL SILT FENCING AND/OR OTHER SEDIMENT AND EROSION CONTROL DEVICES, AS NECESSARY, TO CONTROL AND LIMIT, TO THE MAXIMUM EXTENT POSSIBLE, EROSION DURING THE INSTALLATION OF THE SANITARY SEWER SYSTEM.
 7. ALL DISTURBED AREAS RESULTING FROM THE INSTALLATION OF THE PROPOSED SANITARY SEWER SYSTEM SHALL BE CLEANED, GRADED, AND IMMEDIATELY STABILIZED UPON COMPLETION OF THE INSTALLATION.
 8. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THE CONSTRUCTION PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION(S) AND ELEVATION(S) OF UTILITY CROSSINGS OF BOTH EXISTING AND PROPOSED UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
 9. THE CONTRACTOR SHALL MAINTAIN, PROTECT, RELOCATE, OR CONNECT ANY AND ALL OPERATING UTILITIES FOUND DURING CONSTRUCTION THAT ARE NOT SHOWN ON THIS PLAN. CONSULT THE ARCHITECT AND ENGINEER IMMEDIATELY IF UTILITIES ARE ENCOUNTERED DURING CONSTRUCTION THAT ARE NOT SHOWN WITHIN THESE PLANS.
 10. CONTRACTOR SHALL FURNISH AND INSTALL ALL FITTINGS, BENDS, ETC. AS REQUIRED TO FACILITATE AND COMPLETE THE SANITARY SEWER SYSTEM INSTALLATION. FITTINGS SHALL BE OF SAME MATERIAL AND PRESSURE CLASS AS PIPING.
 11. SANITARY SEWER PIPING SHALL BE MINIMUM SDR-35 STANDARD DIRECT RATIO CLASSIFICATION 35 PVC AND SHALL BE LAID WITH A MINIMUM OF 30" OF COVER FROM THE TOP OF THE PIPE TO THE FINISHED GRADE ELEVATION, WHEN COVER IS LESS THAN 30". SANITARY SEWER PIPING SHALL BE DUCTILE IRON WITH PROTECTOR 401 LINING.
 12. JOINTS SHALL BE INTEGRAL BELL SPOUT WITH RUBBER GASKETS FORMED INTEGRAL TO BELLS.
 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE SIZE, LOCATION, AND INVERT ELEVATION OF SANITARY SEWER SERVICE(S) FROM THE BUILDING(S).

- ### NOTES TO OWNER AND CONTRACTOR:
1. THE OWNER SHALL PAY ALL SANITARY SEWER FEES ASSOCIATED WITH THE PROJECT TO THE CITY OF WEST COLUMBIA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE PAYMENT OF THOSE FEES BETWEEN THE OWNER AND THE CITY OF WEST COLUMBIA.
 2. IT IS IMPERATIVE THAT COX AND DINKINS, INC. RECEIVE CERTIFIED RECORD DATA FROM THE CONTRACTOR'S SOUTH CAROLINA LICENSED AND REGISTERED PROFESSIONAL LAND SURVEYOR IMMEDIATELY UPON COMPLETION OF THE SANITARY SEWER SYSTEM INSTALLATION. THIS INFORMATION SHALL BE PROVIDED IN A TIMELY FASHION TO ALLOW SUFFICIENT TIME FOR THE RECORD DRAWING SUBMITTAL AND APPROVAL PROCESS THROUGH THE CITY OF WEST COLUMBIA AND SCDHEC.
 3. THE CONTRACTOR SHALL PROVIDE COX AND DINKINS, INC. SIGNED AND SEALED HARD COPIES OF THE CERTIFIED RECORD DRAWINGS. IN ADDITION, COX AND DINKINS, INC. SHALL RECEIVE ALL ELECTRONIC INFORMATION USED TO PREPARE THE AFOREMENTIONED RECORD DRAWINGS, INCLUDING, BUT NOT LIMITED TO, THE AUTOCAD FILE(S) AND FIELD SURVEY DATA FILE(S).
 4. THE CERTIFIED RECORD DATA PROVIDED TO COX AND DINKINS, INC. SHALL INCLUDE LOCATIONS OF ALL APPURTENANT ITEMS ASSOCIATED WITH THE SANITARY SEWER SYSTEM, INCLUDING, BUT NOT LIMITED TO, LINES, MANHOLES, CLEANOUTS, SERVICE LINE BENDS, ETC.
 5. THE CITY OF WEST COLUMBIA, AS COORDINATED AND ASSISTED BY THE CONTRACTOR, WILL CONDUCT THE REQUIRED TESTS ON THE SANITARY SEWER SYSTEM. IF DIRECTED BY THE CITY OF WEST COLUMBIA OR THE ENGINEER, THE CONTRACTOR WILL BE RESPONSIBLE FOR PERFORMING THE REQUIRED TESTING.
 6. UPON APPROVAL OF THE RECORD DRAWINGS BY THE CITY OF WEST COLUMBIA, SUCCESSFUL TESTING OF THE SANITARY SEWER SYSTEM, AND RECEIPT OF AN APPROVAL LETTER FROM THE CITY OF WEST COLUMBIA, COX AND DINKINS, INC. WILL PREPARE AND SUBMIT THE NECESSARY PACKAGE TO SCDHEC REQUIRED FOR FINAL APPROVAL TO PLACE THE SANITARY SEWER SYSTEM INTO OPERATION.

- ### CODED SANITARY SEWER NOTES
- (S1) CONTRACTOR SHALL FURNISH AND INSTALL NEW SANITARY SEWER PUMP STATION AND WET WELL PER CITY OF WEST COLUMBIA SPECIFICATIONS. SEE DETAILS.
 - (S2) CONTRACTOR SHALL FURNISH AND INSTALL NEW 8" SDR 35 PVC SANITARY SEWER GRAVITY MAIN. SEE SANITARY SEWER PROFILES FOR MORE INFORMATION.
 - (S3) CONTRACTOR SHALL FURNISH AND INSTALL NEW 4" C900 PVC FORCE MAIN. SEE SANITARY SEWER PROFILES FOR MORE INFORMATION.
 - (S4) SANITARY SEWER LINE CROSSES STORM DRAINAGE LINE AT THIS LOCATION. SEE PROFILES.
 - (S5) SANITARY SEWER LINE CROSSES WATER LINE AT THIS LOCATION. SEE PROFILES. MAINTAIN 18" MINIMUM VERTICAL SEPARATION WITH WATER ABOVE SANITARY SEWER.
 - (S6) CONTRACTOR SHALL FURNISH AND INSTALL NEW 8" DUCTILE IRON PIPE WITH PROTECTOR 401 LINING SANITARY SEWER GRAVITY MAIN. SEE SANITARY SEWER PROFILES FOR MORE INFORMATION.
 - (S7) CONTRACTOR SHALL FURNISH AND INSTALL NEW SANITARY SEWER CLEANOUT. USE TRAFFIC RATED MATERIALS IN PAVEMENT AREAS. (TYPICAL) (SEE DETAIL).
 - (S8) APPROXIMATE LOCATION WHERE SANITARY SEWER SERVICE LINE EXITS THE BUILDING. (TYPICAL) PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF THE SEWER SERVICE STUB OUT FROM THE PROPOSED BUILDING WITH BUILDING PLUMBING AND/OR ARCHITECTURAL PLANS. ENSURE THE BUILDING STUB OUT ELEVATION AND LOCATION MATCH AND COORDINATE WITH THOSE SHOWN ON THESE PLANS OR NOTIFY THE ENGINEER IMMEDIATELY IF DISCREPANCIES ARE FOUND. CONTRACTOR TO FURNISH AND INSTALL FITTINGS AS REQUIRED TO MAKE VERTICAL TRANSITION TO CONNECT TO BUILDING SERVICE.
 - (S9) CONTRACTOR SHALL FURNISH AND INSTALL 6" SDR 35 PVC SANITARY SEWER SERVICE LINE AT 1.0% MINIMUM SLOPE WITH CLEANOUTS AS SHOWN. MAINTAIN 3" MINIMUM COVER ALONG ENTIRE LENGTH OF SERVICE. (TYPICAL) WHERE COVER IS LESS THAN 3", INSTALL DUCTILE IRON PIPE WITH PROTECTOR 401 LINING.
 - (S10) CONTRACTOR SHALL INSTALL 4" DR11 DUAL WALL HDPE BY DIRECTIONAL BORE UNDER WETLANDS AND EXISTING POND TO ENSURE NO DISTURBANCE OF WETLANDS. CONTRACTOR SHALL STAY AT LEAST 50' AWAY FROM WETLAND LINES WITH BORE PITS.
 - (S11) CONTRACTOR SHALL INSTALL AIR RELEASE VALVE PER CITY OF WEST COLUMBIA AND SCDHEC SPECIFICATIONS AT PROPERTY LINE. SEE DETAIL.
 - (S12) CONTRACTOR SHALL TAP NEW 4" C900 FORCE MAIN TO EXISTING FORCE MAIN AT THIS APPROXIMATE LOCATION. CONTRACTOR SHALL COORDINATE WITH OWNER FOR PAYMENT OF ALL APPLICABLE FEES TO THE CITY OF WEST COLUMBIA PRIOR TO MAKING THE TAP. COORDINATE TAP AND INSTALLATION WITH CITY OF WEST COLUMBIA AS REQUIRED. ALL WORK SHALL BE DONE PER THE APPROVED ENCROACHMENT.
 - (S13) CONTRACTOR SHALL FURNISH AND INSTALL 4" 22-1/2" BEND 401 PROTECTO LINED THRUST RESTRAINT MEETING THE CITY OF WEST COLUMBIA AND SCDHEC REQUIREMENTS.
 - (S14) CONTRACTOR SHALL FURNISH AND INSTALL 4" 45" BEND 401 PROTECTO LINED THRUST RESTRAINT MEETING THE CITY OF WEST COLUMBIA AND SCDHEC REQUIREMENTS.
 - (S15) CONTRACTOR SHALL FURNISH AND INSTALL 4" DEZURIK PLUG VALVE MEETING THE CITY OF WEST COLUMBIA AND SCDHEC REQUIREMENTS.

NOTE: INFORMATION REGARDING THE SOUTHERN POWER GRID, CONTRACTORS AND LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES ARE FROM LOCAL UTILITY COMPANIES. THERE IS NO CERTAINTY OF THE ACCURACY OF THE INFORMATION AND THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES NOT SHOWN ON THESE PLANS.

The Palmetto Utility Protection Service, Inc.
 3 DAYS BEFORE DIGGING IN SOUTH CAROLINA
CALL 811
 CONTRACTOR SHALL CONTACT THE UNDERGROUND LOCATIONS EVERY 15 DAYS FOR AN UPDATE TO UTILITY LOCATIONS

- ### REFERENCES:
1. REFERENCES
ALTA/NPS LAND TITLE SURVEY PREPARED FOR FICKLING & COMPANY DATED FEBRUARY 25, 2021 BY COX AND DINKINS, INC.

- ### GENERAL NOTES:
1. THE SUBJECT PROPERTY IS IDENTIFIED AS LEXINGTON COUNTY TAX MAP PARCELS 03699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27.
 2. TOTAL AREA OF SUBJECT PROPERTY IS 52.95 ACRES.
 3. THE SUBJECT PARCELS 03699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27 ARE IN THE CITY OF WEST COLUMBIA AND ZONED AS "D (DEVELOPMENT)".
 4. CONTOUR INTERVAL ELEVATIONS ARE ONE (1) FOOT. ELEVATIONS SHOWN ARE NAVD 88 DATUM.
 5. THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE. THE LOCATIONS OF OTHER UNDERGROUND UTILITIES AND THEIR SERVICES ARE UNKNOWN. CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
 6. THIS PROPERTY IS LOCATED IN FLOOD ZONE X PER FLOOD INSURANCE RATE MAP NUMBER 45063C0144J & 45063C0163J, REVISED JULY 5, 2018, BY SCALED LOCATION AND GRAPHIC PLOTTING ONLY.
 7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THEY AND THEIR SUBCONTRACTORS HAVE THE CORRECTMOST UP-TO-DATE PLANS AVAILABLE.
 8. ALL SIDEWALKS, STRIPING AND SIGNAGE SHALL BE ADA AND MUTCD COMPLIANT.
 9. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

COX AND DINKINS
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James M. Beck
 LICENSED PROFESSIONAL ENGINEER
 No. 27748

COX AND DINKINS, INC.
 No. C00294

CERTIFICATE OF AUTHORIZATION SEAL

REVISIONS	DATE	DESCRIPTION
1	2/4/2022	Add Sewer Service to Blg 11.
2	03/11/2022	Revised Per West Columbia Comments.

PRIMARY PERMITTEE:
TODD ANDERSEN
 COLUMBIA APARTMENT RESIDENCES, LLC
 1545 PEACHTREE ST. NW, SUITE 280
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 email: tandersen@novaregroup.com

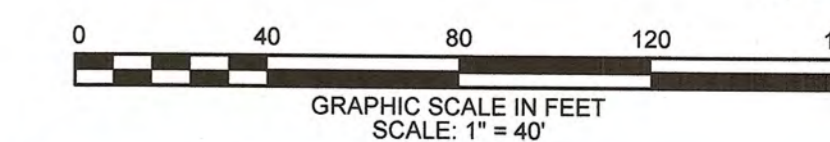
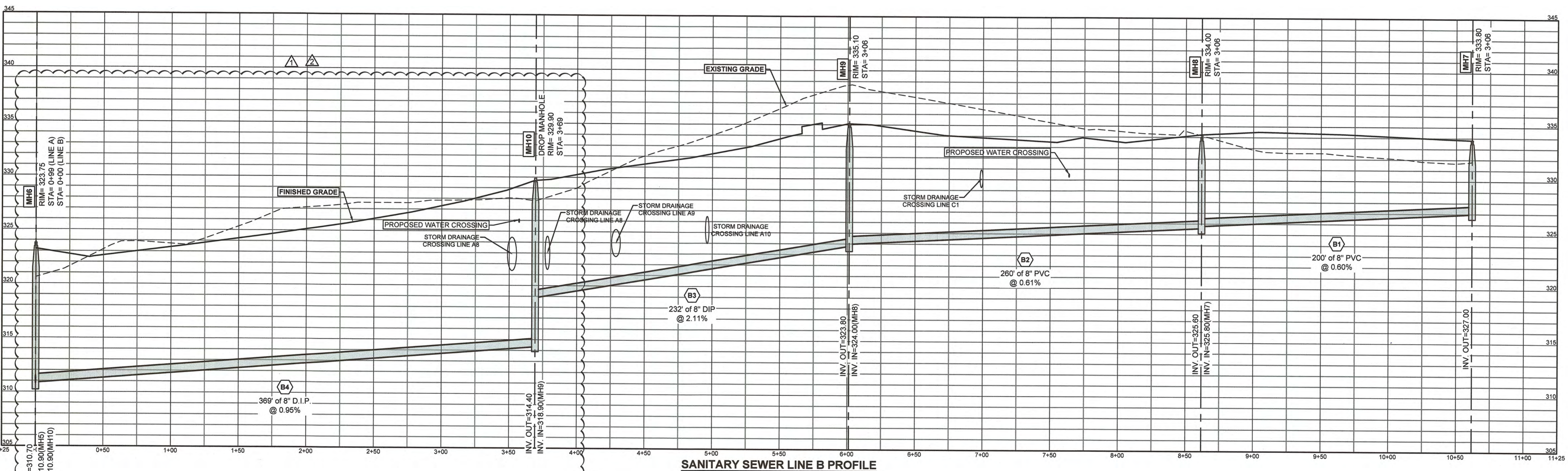
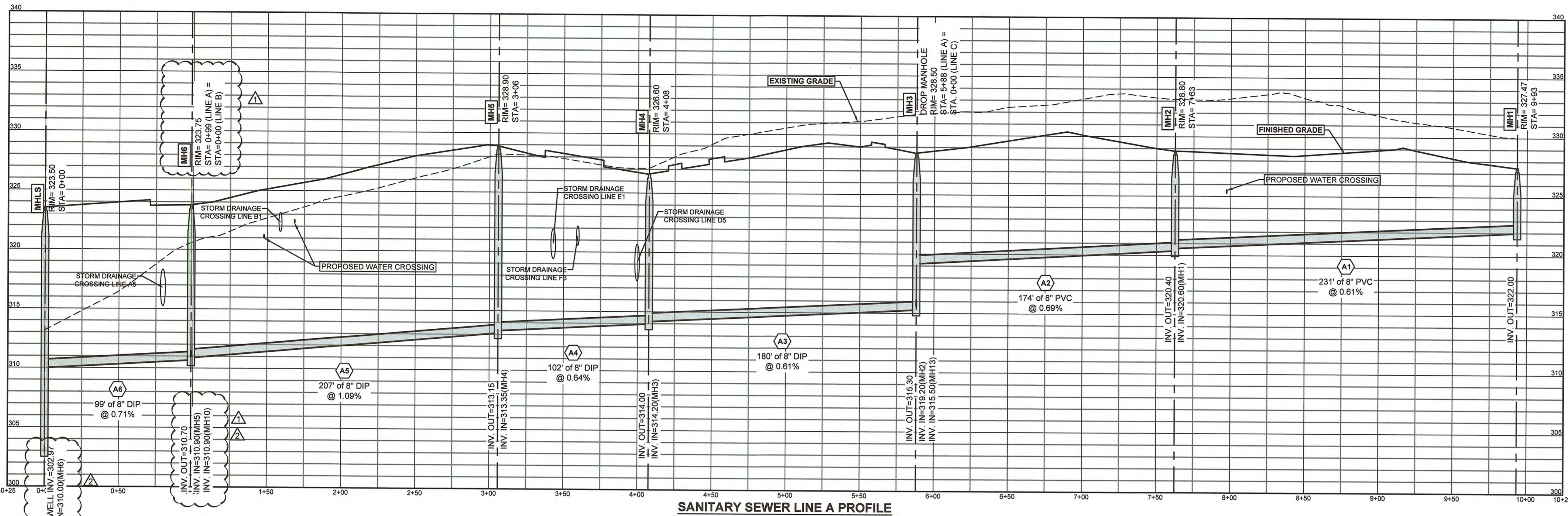
PROJECT: **LULLWATER AT WEST COLUMBIA**
SUNSET BLVD. @ HENBET DR.
 LOCATED IN THE CITY OF WEST COLUMBIA,
 LEXINGTON COUNTY, SOUTH CAROLINA

PROJECT NO. 2238
 SF NO. 144-12

ENLARGED SANITARY SEWER PLAN

TMS: 03699-03-11, 04535-1-14, 04597-09-21, -22, -26, & -27
 BOOK: 68G-42
 DATE: JANUARY 14, 2022
 SHEET NO. **C7D of 48**

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NOTES:
 1. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS PROFILE.
 2. AS SHOWN, PIPE LENGTHS ARE CENTER TO CENTER OF STRUCTURES.

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SOUTH CAROLINA PROFESSIONAL ENGINEER
 No. 27748
 3/11/2022
 LAURA M. BAKER
 LICENSED PROFESSIONAL ENGINEER
 No. 27748

SOUTH CAROLINA PROFESSIONAL ENGINEER
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 CERTIFICATE OF AUTHORIZATION SEAL

NO.	DATE	DESCRIPTION
1	1/18/2022	Revised Sewer Line B4
2	2/4/2022	Revised Sewer Line A5, A6, and B4
3	3/11/2022	Reissue Only - No Revisions This Sheet

PRIMARY PERMITTEE:
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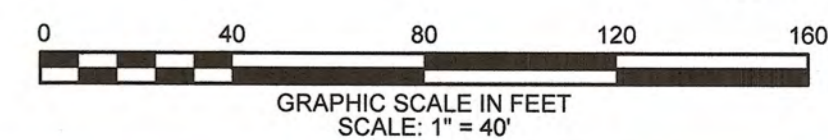
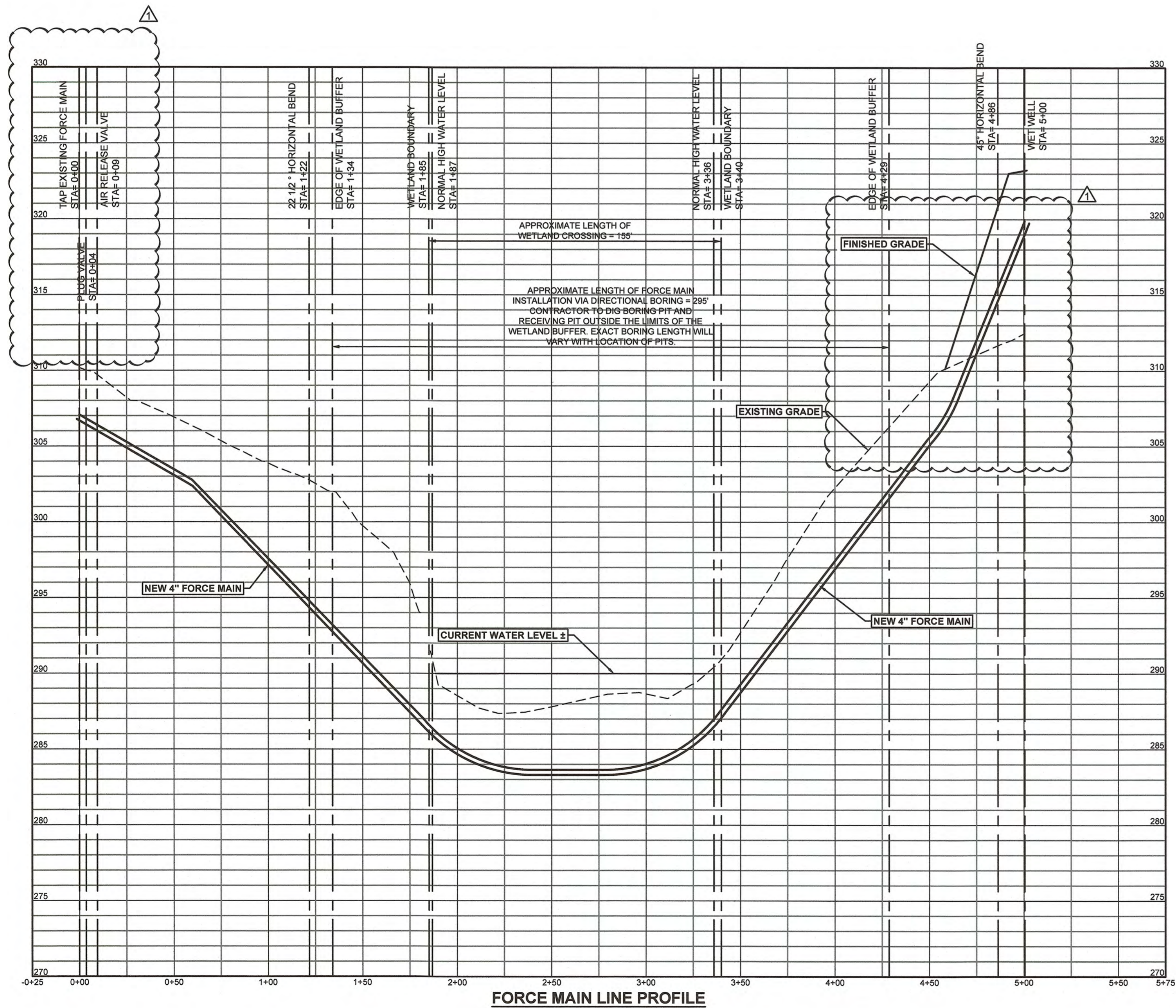
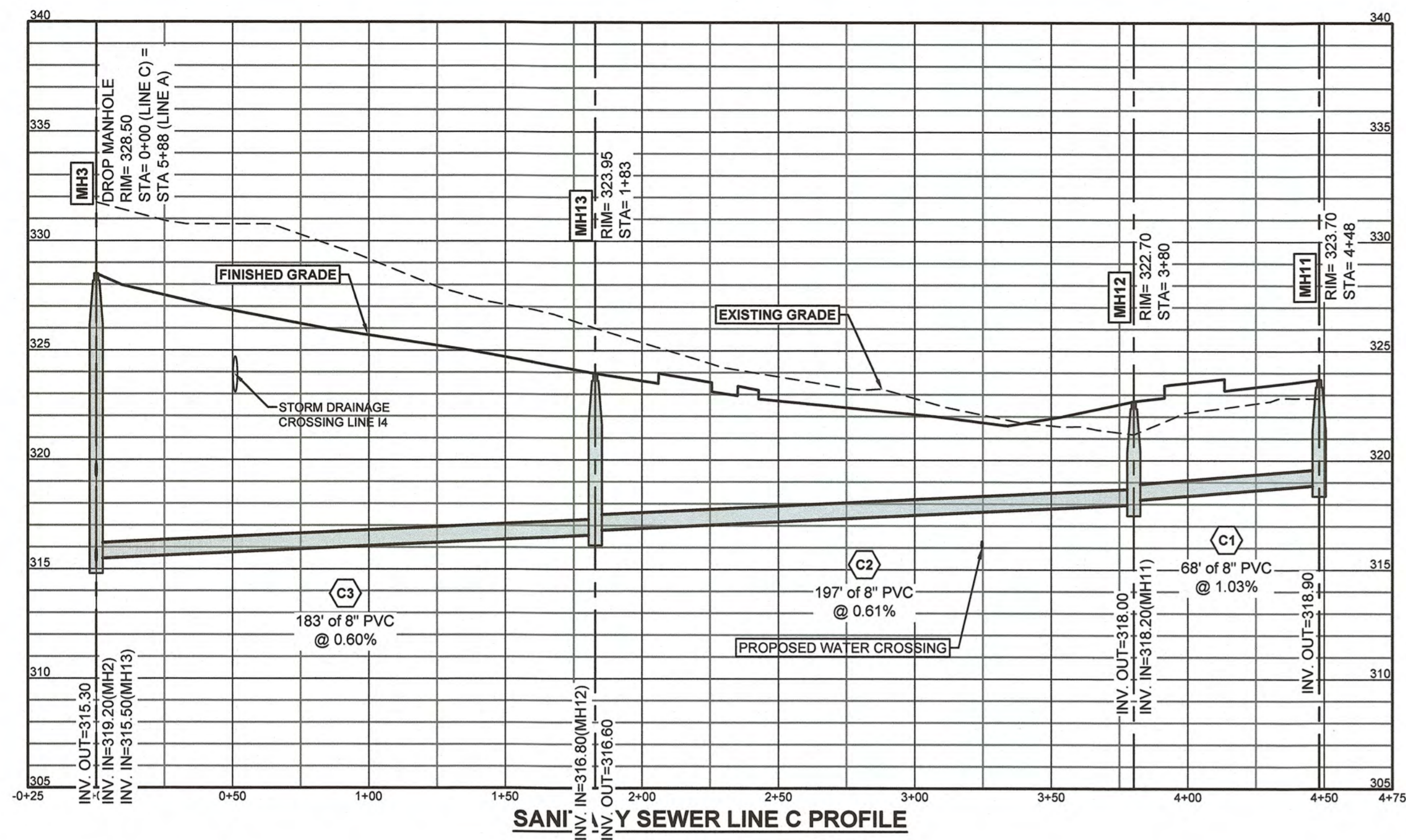
PROJECT:
LULLWATER AT WEST COLUMBIA
SUNSET BLVD. @ HENBET DR.
 LOCATED IN THE CITY OF WEST COLUMBIA,
 LEXINGTON COUNTY, SOUTH CAROLINA

PROJECT NO.
 2238
 SF NO.
 144-12

SANITARY SEWER PROFILES

TMS 03699-03-11, 04635-1-14,
 04597-09-21, -22, -26, & -27
 BOOK 68G-42
 DATE JANUARY 14, 2022
 SHEET NO. **C8** of 48

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NOTES:
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SOUTH CAROLINA PROFESSIONAL ENGINEER
 No. 27748
 3/11/2022
James M. Bell
 LICENSED PROFESSIONAL ENGINEER
 No. 27748

SOUTH CAROLINA PROFESSIONAL ENGINEER
 COX AND DINKINS, INC.
 No. C00294
 STATE OF SOUTH CAROLINA
 CERTIFICATE OF AUTHORIZATION SEAL

NO.	DATE	DESCRIPTION
1	03/11/2022	Revised per West Columbia Comments.

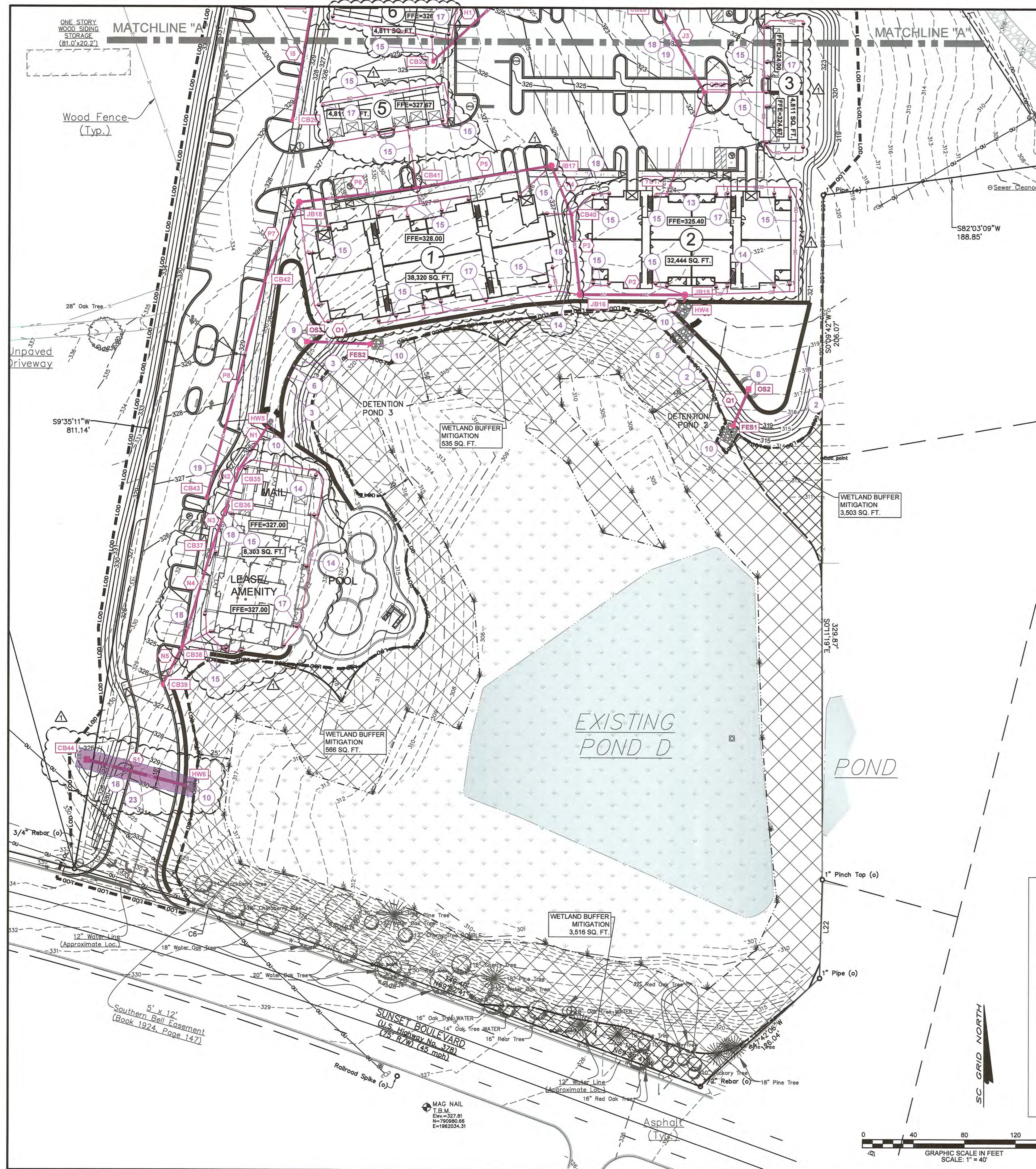
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PROJECT:
LULLWATER AT WEST COLUMBIA
SUNSET BLVD. @ HENBET DR.
 LOCATED IN THE CITY OF WEST COLUMBIA,
 LEXINGTON COUNTY, SOUTH CAROLINA
 PROJECT NO. 2238
 SF NO. 144-12

SANITARY SEWER PROFILES

TMS 03899-03-11, 04535-1-14,
 04567-09-21, -22, -26, & -27
 BOOK 68G-42
 DATE JANUARY 14, 2022
 SHEET NO. **C9 of 48**

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LEGEND

	PROPOSED STORM DRAINAGE LINE		LIMITS OF DISTURBANCE
	PROPOSED JUNCTION BOX		STORM DRAINAGE LINE DESIGNATION - SEE PROFILES
	PROPOSED SLAB TOP CATCH BASIN		STORM DRAINAGE STRUCTURE DESIGNATION - SEE PROFILES
	PROPOSED GRATE FRAME AND HOOD CATCH BASIN		24\"/>
	PROPOSED GRATE & FRAME CATCH BASIN		12\"/>
	12\"/>		23\"/>

STORM DRAINAGE NOTES:

- ALL MATERIAL AND INSTALLATION SHALL MEET CITY OF WEST COLUMBIA, LEXINGTON COUNTY AND SCDEH STANDARDS AS A MINIMUM.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL REQUIRED LAND DISTURBANCE AND/OR ANY OTHER PERMITS NECESSARY FOR THIS PROJECT HAVE BEEN ISSUED BY GOVERNING AGENCIES PRIOR TO THE START OF CONSTRUCTION.
- INSTALLATION OF SEDIMENT CONTROL STRUCTURES AND MEASURES INCLUDING BUT NOT LIMITED TO: SEDIMENT BASIN(S), DIVERSION SWALE(S), ASSOCIATED STORM DRAINAGE PIPING, AND ALL ASSOCIATED APPURTENANCES SHALL OCCUR PER THE CONSTRUCTION SEQUENCES.
- UPON COMPLETION OF THE BASIN(S) AND INSTALLATION OF ALL STORM DRAINAGE ELEMENTS, THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH RECORD STORM DRAINAGE DRAWINGS ROTATED TO SOUTH CAROLINA STATE PLANE AND SIGNED AND SEALED BY A LICENSED STATE OF SOUTH CAROLINA SURVEYOR.
- THE ENGINEER SHALL BE PROVIDED ALL ELECTRONIC INFORMATION USED TO PREPARE THE AFOREMENTIONED RECORD STORM DRAINAGE DRAWINGS, INCLUDING THE AUTOCAD FILE(S) AND FIELD SURVEY DATA FILES.

CODED NOTES

- DETENTION POND 1: CONSTRUCT MINIMUM 10' WIDE BERM AT ELEVATION = 318.00'. TOP OF BERM MUST BE THIS GRADE AFTER SETTLEMENT.
- DETENTION POND 2: CONSTRUCT MINIMUM 10' WIDE BERM AT ELEVATION = 319.00'. TOP OF BERM MUST BE THIS GRADE AFTER SETTLEMENT.
- DETENTION POND 3: CONSTRUCT MINIMUM 10' WIDE BERM AT ELEVATION = 326.00'. TOP OF BERM MUST BE THIS GRADE AFTER SETTLEMENT.
- CONSTRUCT 15' RIPRAP LINED EMERGENCY SPILLWAY ON GEOTEXTILE FABRIC AT ELEVATION = 316.50'. SIZED AS SHOWN. ENSURE THAT THE FILTER FABRIC DOES NOT GET TORN. EXCAVATE RIP-RAP AREA MINIMUM 10-12' BELOW FINISHED GRADE PRIOR TO INSTALLING RIP-RAP. (SEE DETAIL)
- CONSTRUCT 10' RIPRAP LINED EMERGENCY SPILLWAY ON GEOTEXTILE FABRIC AT ELEVATION = 318.00'. SEE EROSION CONTROL PLAN FOR MORE INFORMATION. COORDINATE WITH RETAINING WALL INSTALLATION TO ENSURE PROPER SIZE, LOCATION AND ELEVATION IS ACHIEVED.
- CONSTRUCT 10' GRASS LINED EMERGENCY SPILLWAY AT ELEVATION = 325.00'. SEE EROSION CONTROL PLAN FOR MORE INFORMATION. COORDINATE WITH RETAINING WALL INSTALLATION TO ENSURE PROPER SIZE, LOCATION AND ELEVATION IS ACHIEVED.
- DETENTION POND 1: OUTLET STRUCTURE (OS1) WITH 5\"/>
- DETENTION POND 2: OUTLET STRUCTURE (OS2) WITH 2.5\"/>
- DETENTION POND 3: OUTLET STRUCTURE (OS3) WITH 2\"/>
- RIPRAP APRON AND/OR PLUNGE POOL. SEE EROSION CONTROL PLAN FOR MORE INFORMATION. (SEE DETAIL FOR SIZE)
- 80 LF OF 24\"/>
- 100 LF OF 24\"/>
- 12\"/>
- 10\"/>
- 6\"/>
- 3\"/>
- PROPOSED STORM DRAINAGE CROSSES WATER LINE AT THIS LOCATION. SEE PROFILES FOR MORE INFORMATION.
- PROPOSED STORM DRAINAGE CROSSES SEWER LINE AT THIS LOCATION. SEE PROFILES FOR MORE INFORMATION.
- EXISTING POND C: CONTRACTOR SHALL CONSTRUCT 30' RIPRAP LINED EMERGENCY SPILLWAY ON GEOTEXTILE FABRIC AT ELEVATION = 296.50'. EXCAVATE RIP-RAP AREA MINIMUM 10-12' BELOW FINISHED GRADE PRIOR TO INSTALLING RIP-RAP. (SEE DETAIL) INSTALL RIPRAP AS SHOWN.
- EXISTING POND C: EXISTING OUTFALL PIPE TO REMAIN. CONTRACTOR SHALL ENSURE THAT THE EXISTING OUTFALL PIPE FROM THE OUTLET STRUCTURE (EX OS) IS CLEAR OF DEBRIS AND OBSTRUCTIONS. NOTIFY ENGINEER IMMEDIATELY IF PIPE IS DAMAGED AND IMPEDING FLOW.
- EXISTING POND C: EXISTING OUTLET STRUCTURE TO REMAIN. CONTRACTOR SHALL CORE TWO (2) NEW 8\"/>
- PROPOSED 15' PRIVATE STORM WATER EASEMENT.
- PROPOSED STORM DRAINAGE CROSSES PROPOSED STORM DRAINAGE AT THIS LOCATION. SEE PROFILES FOR MORE INFORMATION.

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SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 27748
3/11/2022
J. M. B. B. B.
J. M. B. B. B.
LICENSED PROFESSIONAL ENGINEER
No. 27748

SOUTH CAROLINA PROFESSIONAL ENGINEER
COX AND DINKINS, INC.
No. C00294
CERTIFICATE OF AUTHORIZATION SEAL

NO.	DATE	DESCRIPTION
1	3/11/2022	Added roof drainage, easement on Line S
2		Revised CN 14, 15, 17

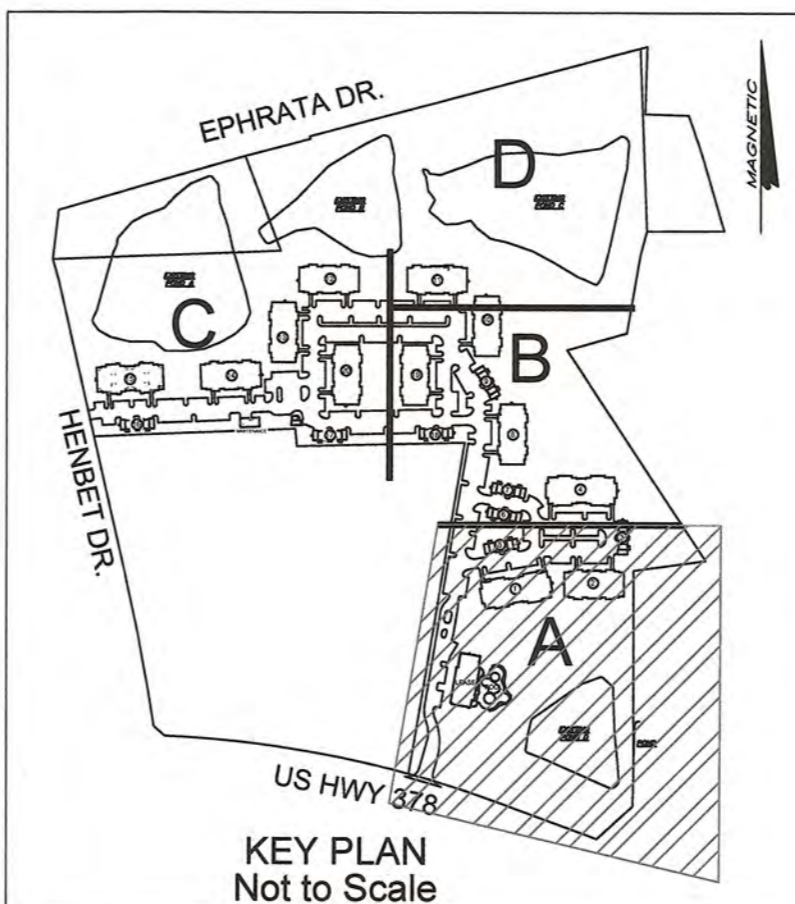
PRIMARY PERMITTEE:
TODD ANDERSEN
COLUMBIA APARTMENT RESIDENCES, LLC
6545 PEACHTREE ST. NW, SUITE 280
ATLANTA, GA 30309
(404) 815-1234
email: tandersen@novaregroup.com

PROJECT: **LULLWATER AT WEST COLUMBIA SUNSET BLVD. @ HENBET DR.**
LOCATED IN THE CITY OF WEST COLUMBIA, LEXINGTON COUNTY, SOUTH CAROLINA

PROJECT NO. 2238
SF NO. 144-12

ENLARGED STORM DRAINAGE PLAN

TMS: U3699-03-11, U4635-11-14, U4597-09-21, -22, -26, & -27
BOOK: 68G-42
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SHEET NO: **C10A** of 48



REFERENCES:

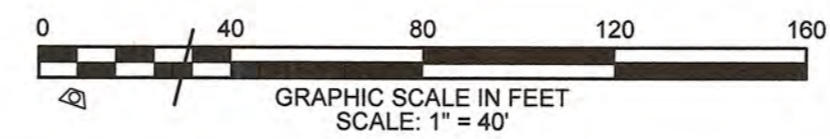
- REFERENCES
- ALTANSPS LAND TITLE SURVEY PREPARED FOR FICKLING & COMPANY DATED FEBRUARY 25, 2021 BY COX AND DINKINS, INC.

GENERAL NOTES:

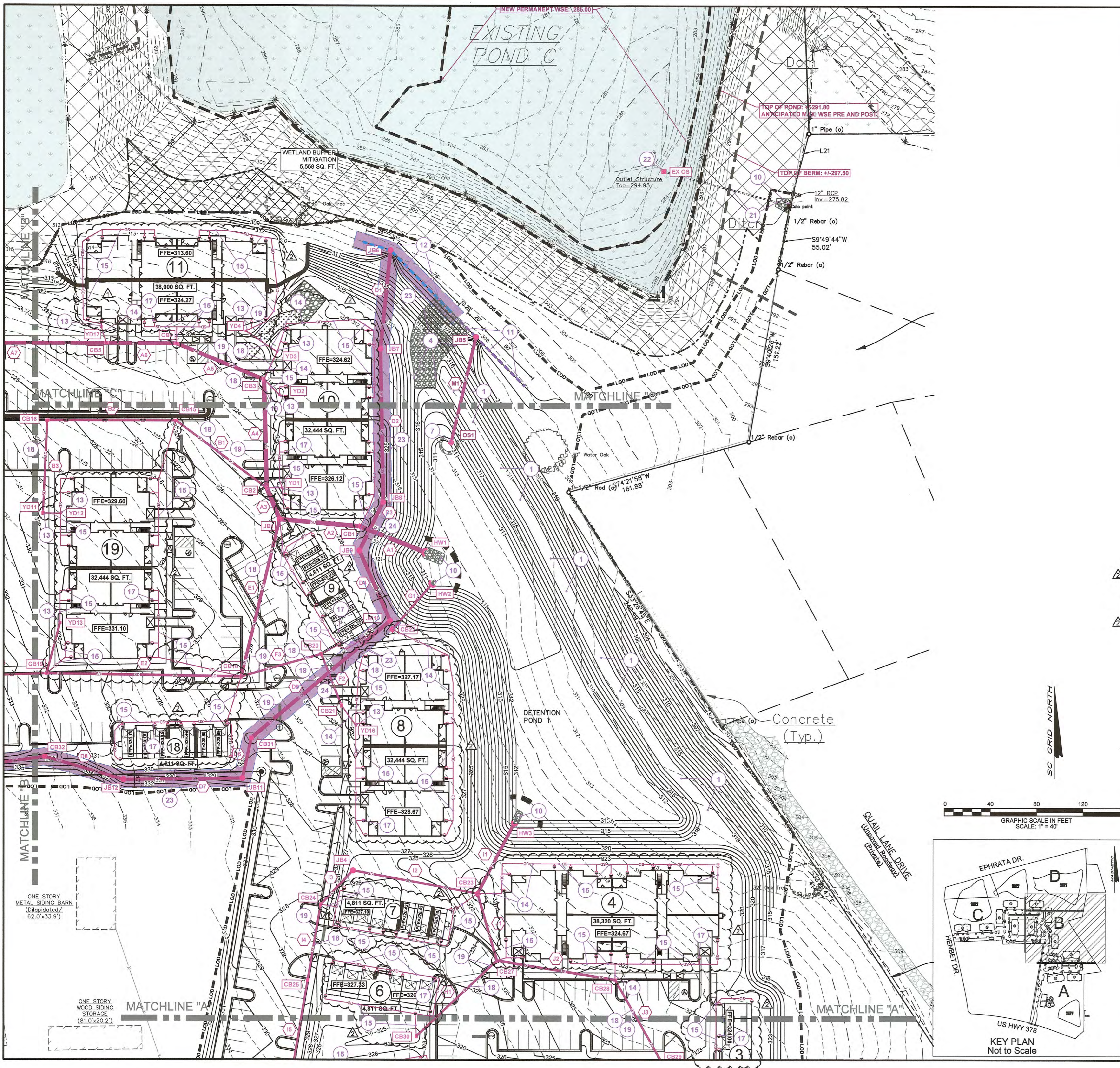
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- TOTAL AREA OF SUBJECT PROPERTY IS 52.95 ACRES.
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- CONTOUR INTERVAL ELEVATIONS ARE ONE (1) FOOT. ELEVATIONS SHOWN ARE NAVD 88 DATUM.
- THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE. THE LOCATIONS OF OTHER UNDERGROUND UTILITIES AND THEIR SERVICES ARE UNKNOWN. CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
- THIS PROPERTY IS LOCATED IN FLOOD ZONE X PER FLOOD INSURANCE RATE MAP NUMBER 45063C0144J & 45063C0163A, REVISED JULY 5, 2018, BY SCALED LOCATION AND GRAPHIC PLOTTING ONLY.
- IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT THEY AND THEIR SUBCONTRACTORS HAVE THE CORRECT/MOST UP-TO-DATE PLANS AVAILABLE.
- ALL SIDEWALKS, STRIPING AND SIGNAGE SHALL BE ADA AND MUTCD COMPLIANT.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

NOTE:
INFORMATION REGARDING THE REPORTED PRESENCE, SIZE, CHARACTER AND LOCATION OF EXISTING UNDERGROUND UTILITIES HAS BEEN OBTAINED FROM THE RECORD DRAWINGS AND FIELD SURVEY DATA. THE ACCURACY OF THIS INFORMATION AND IT SHALL BE CONSIDERED IN THAT LIGHT BY THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR THE PROTECTION OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR THE PROTECTION OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR THE PROTECTION OF ALL UTILITIES.

The Palmetto Utility Protection Service, Inc.
South Carolina 811
3 DAYS BEFORE DIGGING IN SOUTH CAROLINA
CALL 811
CONTRACTOR SHALL CONTACT THE UNDERGROUND LOCATORS EVERY 10 DAYS FOR AN UPDATE TO UTILITY LOCATIONS.



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LEGEND

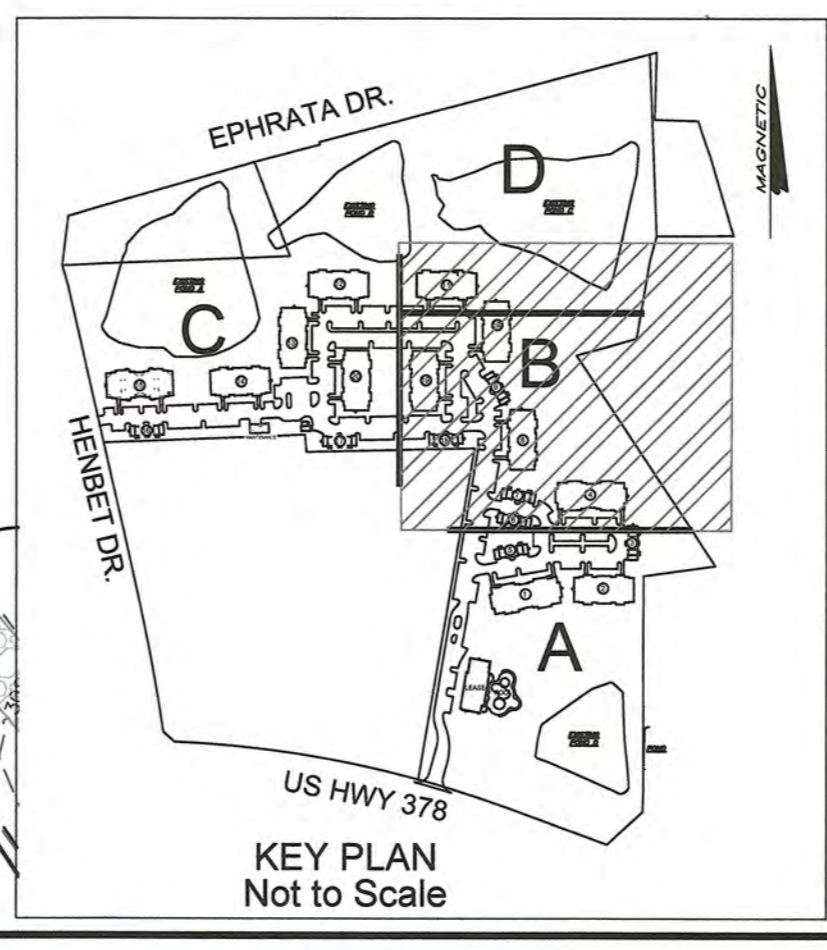
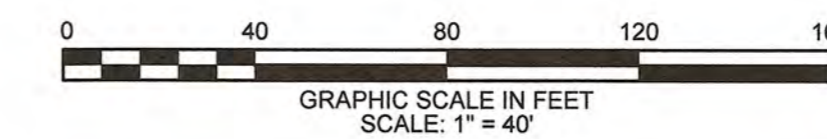
	PROPOSED STORM DRAINAGE LINE		LIMITS OF DISTURBANCE
	PROPOSED JUNCTION BOX		STORM DRAINAGE LINE DESIGNATION - SEE PROFILES
	PROPOSED SLAB TOP CATCH BASIN		STORM DRAINAGE STRUCTURE DESIGNATION - SEE PROFILES
	PROPOSED GRATE FRAME AND HOOD CATCH BASIN		24" CONTECH SLOTTED DRAIN LEVEL SPREADER WITH 2" GRATE - SEE DETAIL
	PROPOSED GRATE & FRAME CATCH BASIN		PROPOSED 15" STORMWATER EASEMENT
	12" NYLOPLAST DRAIN BASIN		

STORM DRAINAGE NOTES:

- ALL MATERIAL AND INSTALLATION SHALL MEET CITY OF WEST COLUMBIA, LEXINGTON COUNTY AND SCDHEC STANDARDS AS A MINIMUM.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL REQUIRED LAND DISTURBANCE AND/OR ANY OTHER PERMITS NECESSARY FOR THIS PROJECT HAVE BEEN ISSUED BY GOVERNING AGENCIES PRIOR TO THE START OF CONSTRUCTION.
- INSTALLATION OF SEDIMENT CONTROL STRUCTURES AND MEASURES INCLUDING BUT NOT LIMITED TO: SEDIMENT BASIN(S), DIVERSION SWALE(S), ASSOCIATED STORM DRAINAGE PIPING, AND ALL ASSOCIATED APPURTENANCES SHALL OCCUR PER THE CONSTRUCTION SEQUENCES.
- UPON COMPLETION OF THE BASIN(S) AND INSTALLATION OF ALL STORM DRAINAGE ELEMENTS, THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH RECORD STORM DRAINAGE DRAWINGS ROTATED TO SOUTH CAROLINA STATE PLANE AND SIGNED AND SEALED BY A LICENSED STATE OF SOUTH CAROLINA SURVEYOR.
- THE ENGINEER SHALL BE PROVIDED ALL ELECTRONIC INFORMATION USED TO PREPARE THE AFOREMENTIONED RECORD STORM DRAINAGE DRAWINGS, INCLUDING THE AUTOCAD FILE(S) AND FIELD SURVEY DATA FILES.

CODED NOTES

- DETENTION POND 1: CONSTRUCT MINIMUM 10' WIDE BERM AT ELEVATION = 318.00'. TOP OF BERM MUST BE THIS GRADE AFTER SETTLEMENT.
- DETENTION POND 2: CONSTRUCT MINIMUM 10' WIDE BERM AT ELEVATION = 319.00'. TOP OF BERM MUST BE THIS GRADE AFTER SETTLEMENT.
- DETENTION POND 3: CONSTRUCT MINIMUM 10' WIDE BERM AT ELEVATION = 326.00'. TOP OF BERM MUST BE THIS GRADE AFTER SETTLEMENT.
- CONSTRUCT 15' RIPRAP LINED EMERGENCY SPILLWAY ON GEOTEXTILE FABRIC AT ELEVATION = 316.50'. SIZED AS SHOWN. ENSURE THAT THE FILTER FABRIC DOES NOT GET TORN. EXCAVATE RIP-RAP AREA MINIMUM 10-12" BELOW FINISHED GRADE PRIOR TO INSTALLING RIP-RAP. (SEE DETAIL)
- CONSTRUCT 10' RIPRAP LINED EMERGENCY SPILLWAY ON GEOTEXTILE FABRIC AT ELEVATION = 318.00'. SEE EROSION CONTROL PLAN FOR MORE INFORMATION. COORDINATE WITH RETAINING WALL INSTALLATION TO ENSURE PROPER SIZE, LOCATION AND ELEVATION IS ACHIEVED.
- CONSTRUCT 10' GRASS LINED EMERGENCY SPILLWAY AT ELEVATION = 325.00'. SEE EROSION CONTROL PLAN FOR MORE INFORMATION. COORDINATE WITH RETAINING WALL INSTALLATION TO ENSURE PROPER SIZE, LOCATION AND ELEVATION IS ACHIEVED.
- DETENTION POND 1: OUTLET STRUCTURE (OS1) WITH 5" SKIMMER ATTACHED INSTALLED DURING THE INITIAL LAND DISTURBANCE PHASE. SKIMMER SHALL REMAIN ATTACHED UNTIL FINAL STABILIZATION HAS BEEN ACHIEVED. REMOVE TEMPORARY STEEL PLATE USED DURING CONSTRUCTION TO COVER COMPOUND WEIR ONLY AFTER SKIMMER IS REMOVED AND STABILIZATION IS ACHIEVED. INSTALL ORIFICE HOOD OVER BOTTOM ORIFICE. (SEE DETAIL)
- DETENTION POND 2: OUTLET STRUCTURE (OS2) WITH 2.5" SKIMMER ATTACHED INSTALLED DURING THE INITIAL LAND DISTURBANCE PHASE. SKIMMER SHALL REMAIN ATTACHED UNTIL FINAL STABILIZATION HAS BEEN ACHIEVED. CORE PERMANENT ORIFICE(S) IN THE OUTLET STRUCTURE ONLY AFTER SKIMMER IS REMOVED AND STABILIZATION IS ACHIEVED. INSTALL ORIFICE HOOD OVER BOTTOM ORIFICE. (SEE DETAIL)
- DETENTION POND 3: OUTLET STRUCTURE (OS3) WITH 2" SKIMMER ATTACHED INSTALLED DURING THE INITIAL LAND DISTURBANCE PHASE. SKIMMER SHALL REMAIN ATTACHED UNTIL FINAL STABILIZATION HAS BEEN ACHIEVED. CORE PERMANENT ORIFICE(S) IN THE OUTLET STRUCTURE ONLY AFTER SKIMMER IS REMOVED AND STABILIZATION IS ACHIEVED. INSTALL ORIFICE HOOD OVER BOTTOM ORIFICE. (SEE DETAIL)
- RIPRAP APRON AND/OR PLUNGE POOL. SEE EROSION CONTROL PLAN FOR MORE INFORMATION. (SEE DETAIL FOR SIZE)
- 80 LF OF 24" CONTECH SLOTTED DRAIN LEVEL SPREADER. SEE DETAIL FOR INSTALLATION.
- 100 LF OF 24" CONTECH SLOTTED DRAIN LEVEL SPREADER. SEE DETAIL FOR INSTALLATION.
- 12" NYLOPLAST DRAIN BASIN WITH 12" PEDESTRIAN GRATE ASSEMBLY.
- 10" HDPE ROOF DRAIN / CONDENSATE COLLECTOR LINE @ 1.0% MINIMUM WITH 1" MINIMUM COVER. VERIFY LOCATION AND DEPTH WITH PLUMBING PLANS PRIOR TO INSTALLING MAIN.
- 6" HDPE ROOF DRAIN LINE @ 1.0% MINIMUM WITH 1" MINIMUM COVER. VERIFY LOCATION DEPTH PLUMBING PLANS PRIOR TO INSTALLING MAIN.
- 3" HDPE HVAC CONDENSATE DRAIN LINE @ 0.5% MIN. WITH CLEAN OUT AS SHOWN.
- ROOF DRAIN CLEANOUT (TYPICAL THIS SYMBOL). USE TRAFFIC RATED COVER IN PAVEMENT AREAS. (TYPICAL) (SEE DETAIL)
- PROPOSED STORM DRAINAGE CROSSES WATER LINE AT THIS LOCATION. SEE PROFILES FOR MORE INFORMATION.
- PROPOSED STORM DRAINAGE CROSSES SEWER LINE AT THIS LOCATION. SEE PROFILES FOR MORE INFORMATION.
- EXISTING POND C: CONTRACTOR SHALL CONSTRUCT 30' RIPRAP LINED EMERGENCY SPILLWAY ON GEOTEXTILE FABRIC AT ELEVATION = 296.50'. EXCAVATE RIP-RAP AREA MINIMUM 10-12" BELOW FINISHED GRADE PRIOR TO INSTALLING RIP-RAP. (SEE DETAIL) INSTALL RIPRAP AS SHOWN.
- EXISTING POND C: EXISTING OUTFALL PIPE TO REMAIN. CONTRACTOR SHALL ENSURE THAT THE EXISTING OUTFALL PIPE FROM THE OUTLET STRUCTURE (EX OS) IS CLEAR OF DEBRIS AND OBSTRUCTIONS. NOTIFY ENGINEER IMMEDIATELY IF PIPE IS DAMAGED AND IMPEDING FLOW.
- EXISTING POND C: EXISTING OUTLET STRUCTURE TO REMAIN. CONTRACTOR SHALL CORE TWO (2) NEW 8" ORIFICES IN EXISTING OUTLET STRUCTURE (EX OS) AT ELEVATION 285.00. REPAIR EXISTING OUTLET AS NECESSARY.
- PROPOSED 15' PRIVATE STORM WATER EASEMENT.
- PROPOSED STORM DRAINAGE CROSSES PROPOSED STORM DRAINAGE AT THIS LOCATION. SEE PROFILES FOR MORE INFORMATION.



NOTE: INFORMATION REGARDING THE REPORTED PRESENCE, SIZE, CHARACTER AND LOCATION OF ANY UNDERGROUND UTILITIES AND STRUCTURES SHOWN ON THESE PLANS MAY HAVE BEEN PROVIDED TO COX AND DINKINS, INC. FROM LOCAL UTILITY COMPANIES. THERE IS NO GUARANTEE OF THE ACCURACY OF THIS INFORMATION AND IT SHALL BE CONSIDERED AT THE USER'S RISK. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION. COX AND DINKINS, INC. HAS CONDUCTED A VISUAL SURVEY OF THE SITE AND HAS CONCLUDED THAT THE INFORMATION IS NOT ACCURATE. FURTHERMORE, OTHER UTILITIES AND STRUCTURES MAY BE PRESENT ON THE SITE AND ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE UNDERGROUND LOCATORS EVERY 15 DAYS BEFORE DRIVING IN SOUTH CAROLINA. CALL 811. CONTRACTOR SHALL CONTACT THE UNDERGROUND LOCATORS EVERY 15 DAYS FOR AN UPDATE TO UTILITY LOCATIONS.

The Palmetto Utility Protection Service, Inc.
South Carolina 811
CALL 811

REFERENCES:

- REFERENCES
- ALTAIRPS LAND TITLE SURVEY PREPARED FOR FICKLING & COMPANY DATED FEBRUARY 25, 2021 BY COX AND DINKINS, INC.

GENERAL NOTES:

- THE SUBJECT PROPERTY IS IDENTIFIED AS LEXINGTON COUNTY TAX MAP PARCELS 03699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27.
- TOTAL AREA OF SUBJECT PROPERTY IS 52.95 ACRES.
- THE SUBJECT PARCELS 03699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27 ARE IN THE CITY OF WEST COLUMBIA AND ZONED AS "D" (DEVELOPMENT).
- CONTOUR INTERVAL ELEVATIONS ARE ONE (1) FOOT. ELEVATIONS SHOWN ARE NAVD 88 DATUM.
- THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE. THE LOCATIONS OF OTHER UNDERGROUND UTILITIES AND THEIR SERVICES ARE UNKNOWN. CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
- THIS PROPERTY IS LOCATED IN FLOOD ZONE X PER FLOOD INSURANCE RATE MAP NUMBER 45063C0144J & 45063C0163J, REVISED JULY 5, 2018, BY SCALED LOCATION AND GRAPHIC PLOTTING ONLY.
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- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

COX AND DINKINS
ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
724 BELTLINE BLVD.
COLUMBIA, SC 29205
803.254.0518
COXANDINKINS.COM

Laura M. Baker
LICENSED PROFESSIONAL ENGINEER
No. 27748

COX AND DINKINS, INC.
No. C00294

CERTIFICATE OF AUTHORIZATION SEAL

NO.	DATE	DESCRIPTION
1	02/04/2022	Added Storm Structure in front of Bldg 11
2	3/11/2022	Added roof drainage, revised CN 14, 15, 17

PRIMARY PERMITTEE:
TODD ANDERSEN
COLUMBIA APARTMENT RESIDENCES, LLC
1645 PEACHTREE ST. NW, SUITE 280
ATLANTA, GA 30309
(404) 815-1234
email: tandersen@novaregroup.com

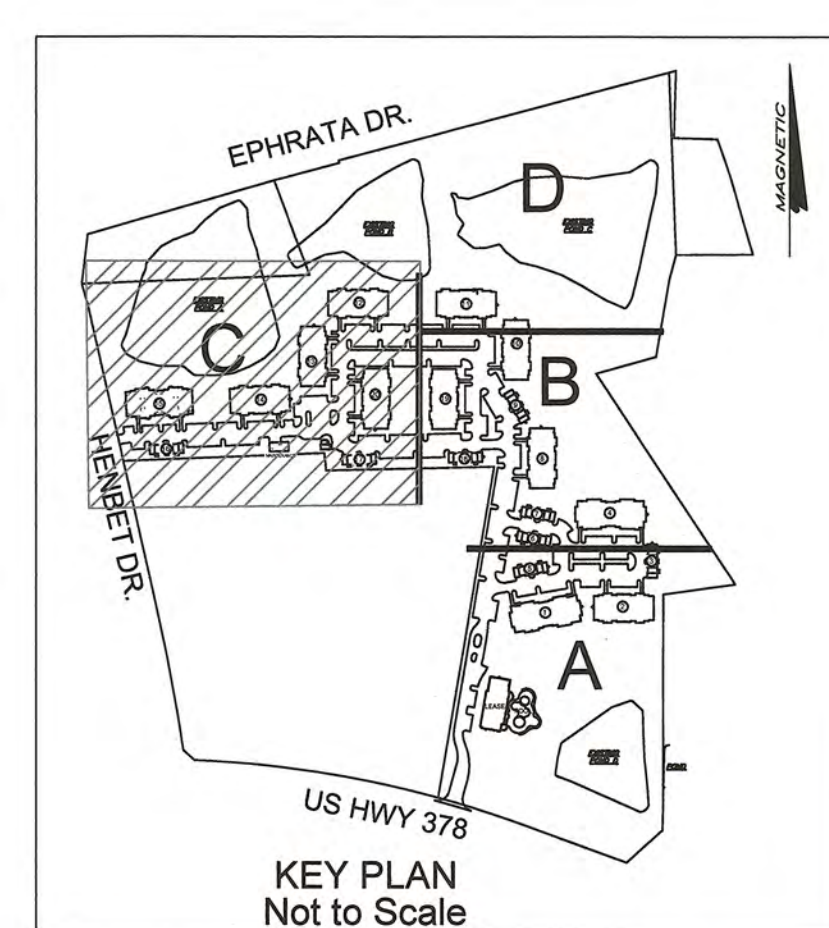
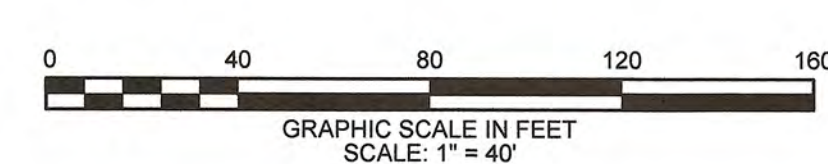
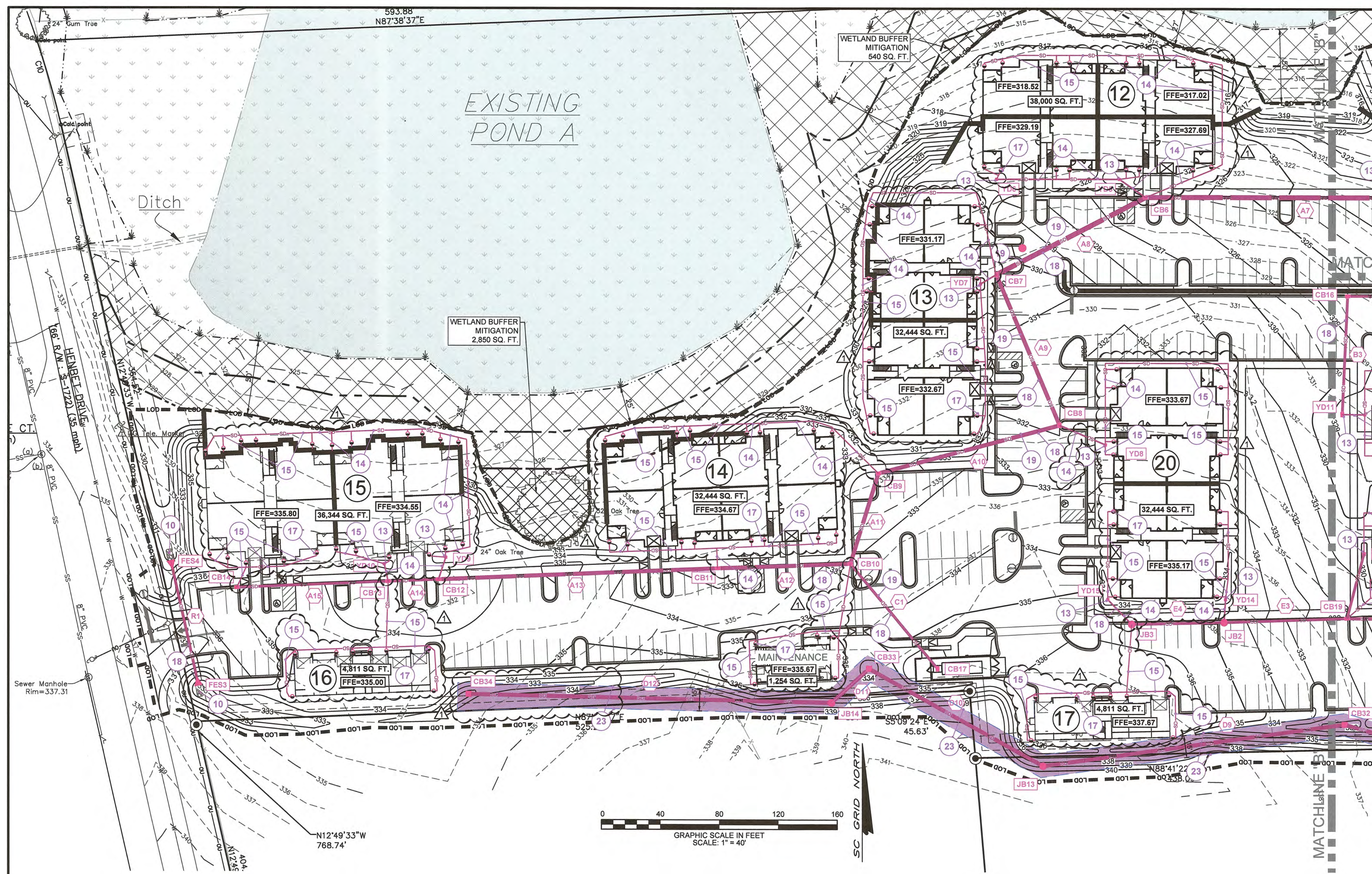
PROJECT: **LULLWATER AT WEST COLUMBIA**
SUNSET BLVD. @ HENBET DR.
LOCATED IN THE CITY OF WEST COLUMBIA,
LEXINGTON COUNTY, SOUTH CAROLINA

PROJECT NO.: 2238
SF NO.: 144-12

ENLARGED STORM DRAINAGE PLAN

TMS: U3699-03-11, U4535-01-14, U4597-09-21, -22, -26, & -27
BOOK: 68G-42
DATE: JANUARY 14, 2022
SHEET NO: **C10B of 48**

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LEGEND

—●—	PROPOSED STORM DRAINAGE LINE	—●—	LOD	—●—	LOD	—	LIMITS OF DISTURBANCE
■	PROPOSED JUNCTION BOX	○	AM	○	AM	○	STORM DRAINAGE LINE DESIGNATION - SEE PROFILES
■	PROPOSED SLAB TOP CATCH BASIN	○	CB#	○	CB#	○	STORM DRAINAGE STRUCTURE DESIGNATION - SEE PROFILES
■	PROPOSED GRATE FRAME AND HOOD CATCH BASIN	○	11 12	○	11 12	○	24" CONTECH SLOTTED DRAIN LEVEL SPREADER WITH 2" GRATE - SEE DETAIL
■	PROPOSED GRATE & FRAME CATCH BASIN	○	13	○	23	○	PROPOSED 15' STORMWATER EASEMENT
○	13 12 NYLOPLAST DRAIN BASIN						

STORM DRAINAGE NOTES:

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- RIPRAP APRON AND/OR PLUNGE POOL. SEE EROSION CONTROL PLAN FOR MORE INFORMATION. (SEE DETAIL FOR SIZE)
- 80 LF OF 24" CONTECH SLOTTED DRAIN LEVEL SPREADER. SEE DETAIL FOR INSTALLATION.
- 100 LF OF 24" CONTECH SLOTTED DRAIN LEVEL SPREADER. SEE DETAIL FOR INSTALLATION.
- 12" NYLOPLAST DRAIN BASIN WITH 12" PEDESTAL GRATE ASSEMBLY.
- 10' HDPE ROOF DRAIN / CONDENSATE COLLECTOR LINE @ 1.0% MINIMUM WITH 1" MINIMUM COVER. VERIFY LOCATION AND DEPTH WITH PLUMBING PLANS PRIOR TO INSTALLING MAIN.
- 8" HDPE ROOF DRAIN LINE @ 1.0% MINIMUM WITH 1" MINIMUM COVER. VERIFY LOCATION DEPTH PLUMBING PLANS PRIOR TO INSTALLING MAIN.
- 3" HDPE HVAC CONDENSATE DRAIN LINE @ 0.5% MIN. WITH CLEAN OUT AS SHOWN.
- ROOF DRAIN CLEANOUT (TYPICAL THIS SYMBOL), USE TRAFFIC RATED COVER IN PAVEMENT AREAS. (TYPICAL) (SEE DETAIL).
- PROPOSED STORM DRAINAGE CROSSES WATER LINE AT THIS LOCATION. SEE PROFILES FOR MORE INFORMATION.
- PROPOSED STORM DRAINAGE CROSSES SEWER LINE AT THIS LOCATION. SEE PROFILES FOR MORE INFORMATION.
- EXISTING POND C: CONTRACTOR SHALL CONSTRUCT 30' RIPRAP LINED EMERGENCY SPILLWAY ON GEOTEXTILE FABRIC AT ELEVATION = 296.50'. EXCAVATE RIP-RAP AREA MINIMUM 10-12" BELOW FINISHED GRADE PRIOR TO INSTALLING RIP-RAP. (SEE DETAIL) INSTALL RIPRAP AS SHOWN.
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- PROPOSED 15' PRIVATE STORM WATER EASEMENT.
- PROPOSED STORM DRAINAGE CROSSES PROPOSED STORM DRAINAGE AT THIS LOCATION. SEE PROFILES FOR MORE INFORMATION.

REFERENCES:

- REFERENCES
- ALTA/NSPS LAND TITLE SURVEY PREPARED FOR FICKLING & COMPANY DATED FEBRUARY 25, 2021 BY COX AND DINKINS, INC.

GENERAL NOTES:

- THE SUBJECT PROPERTY IS IDENTIFIED AS LEXINGTON COUNTY TAX MAP PARCELS 03899-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27.
- TOTAL AREA OF SUBJECT PROPERTY IS 62.95 ACRES.
- THE SUBJECT PARCELS 03899-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27 ARE IN THE CITY OF WEST COLUMBIA AND ZONED AS "D (DEVELOPMENT)".
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- THIS PROPERTY IS LOCATED IN FLOOD ZONE X PER FLOOD INSURANCE RATE MAP NUMBER 45083C0144J & 45083C0163J, REVISED JULY 5, 2018, BY SCALED LOCATION AND GRAPHIC PLOTTING ONLY.
- IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT THEY AND THEIR SUBCONTRACTORS HAVE THE CORRECTMOST UP-TO-DATE PLANS AVAILABLE.
- ALL SIDEWALKS, STRIPING AND SIGNAGE SHALL BE ADA AND MUTCD COMPLIANT.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

REFERENCES:

- REFERENCES
- ALTA/NSPS LAND TITLE SURVEY PREPARED FOR FICKLING & COMPANY DATED FEBRUARY 25, 2021 BY COX AND DINKINS, INC.

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COX AND DINKINS
ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
724 BELTLINE BLVD.
COLUMBIA, SC 29205
803.254.0518
COXANDDINKINS.COM

REVISIONS

NO.	DATE	DESCRIPTION
1	3/11/2022	Added roof drainage, revised CN 14, 15, 17 Revise easement on Line D12

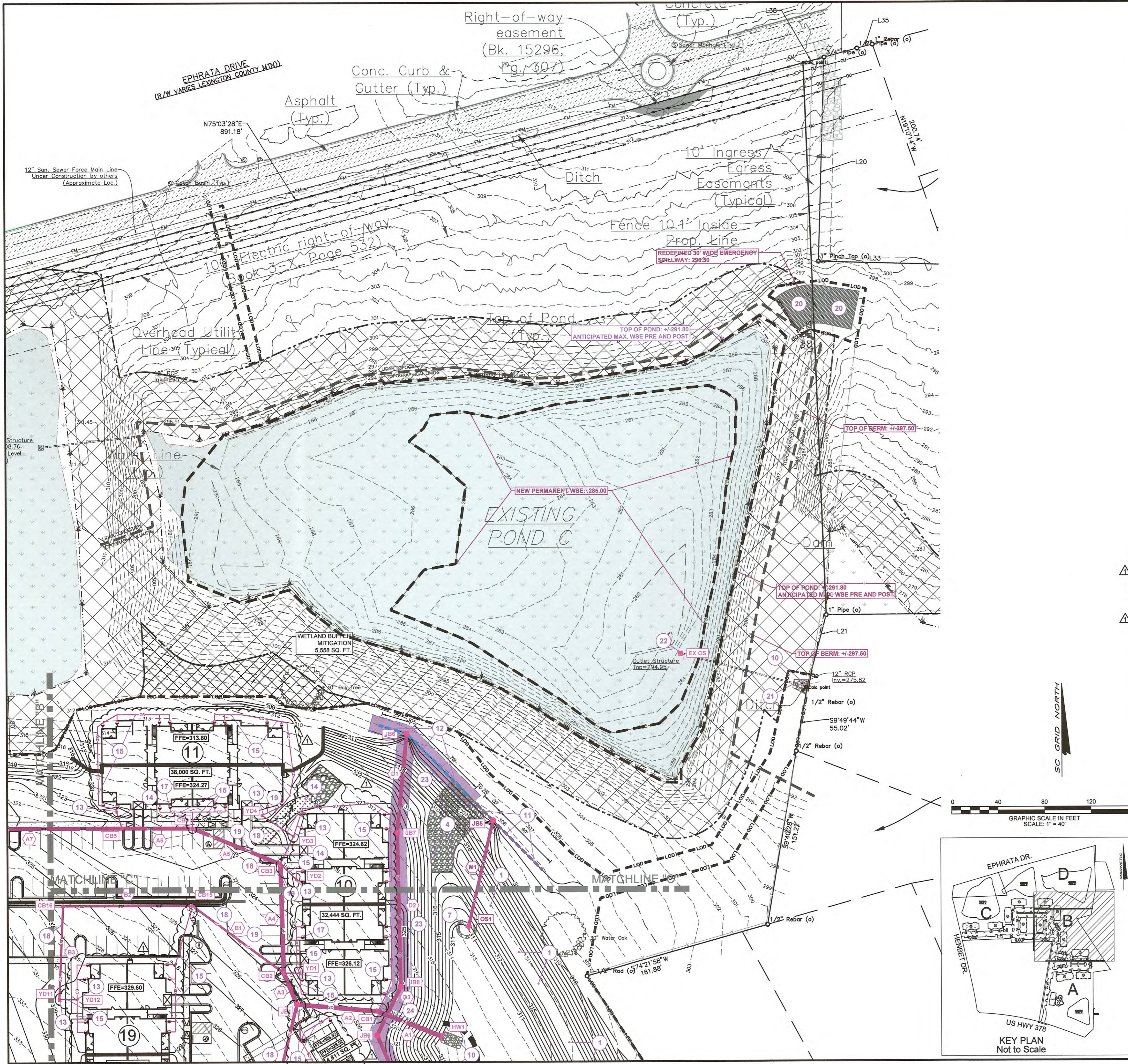
PRIMARY PERMITTEE:
TODD ANDERSEN
COLUMBIA APARTMENT
RESIDENCES, LLC
1545 PEACHTREE ST. NW, SUITE 260
ATLANTA, GA 30309
(404) 815-1234
email: tandersen@novaregroup.com

PROJECT
LULLWATER AT WEST COLUMBIA
SUNSET BLVD. @ HENBET DR.
LOCATED IN THE CITY OF WEST COLUMBIA,
LEXINGTON COUNTY, SOUTH CAROLINA

ENLARGED STORM DRAINAGE PLAN

TMS 03899-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27
BOOK 68G-42
DATE JANUARY 14, 2022
SHEET NO. **C10C** of 48

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LEGEND

	PROPOSED STORM DRAINAGE LINE		LIMITS OF DISTURBANCE
	PROPOSED JUNCTION BOX		STORM DRAINAGE LINE DESIGNATION - SEE PROFILES
	PROPOSED SLAB TOP CATCH BASIN		STORM DRAINAGE STRUCTURE DESIGNATION - SEE PROFILES
	PROPOSED GRATE FRAME AND HOOD CATCH BASIN		24\"/>
	PROPOSED GRATE & FRAME CATCH BASIN		PROPOSED 15\"/>

STORM DRAINAGE NOTES:

- ALL MATERIAL AND INSTALLATION SHALL MEET CITY OF WEST COLUMBIA, LEXINGTON COUNTY AND SCDEC STANDARDS AS A MINIMUM.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL REQUIRED LAND DISTURBANCE AND/OR ANY OTHER PERMITS NECESSARY FOR THIS PROJECT HAVE BEEN ISSUED BY GOVERNING AGENCIES PRIOR TO THE START OF CONSTRUCTION.
- INSTALLATION OF SEDIMENT CONTROL STRUCTURES AND MEASURES INCLUDING BUT NOT LIMITED TO: SEDIMENT BASINS, DIVERSION SWALES(S), ASSOCIATED STORM DRAINAGE PIPING, AND ALL ASSOCIATED APPURTENANCES SHALL OCCUR PER THE CONSTRUCTION SEQUENCES.
- UPON COMPLETION OF THE BASIN(S) AND INSTALLATION OF ALL STORM DRAINAGE ELEMENTS, THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH RECORD STORM DRAINAGE DRAWINGS ROTATED TO SOUTH CAROLINA STATE PLANE AND SIGNED AND SEALED BY A LICENSED STATE OF SOUTH CAROLINA SURVEYOR.
- THE ENGINEER SHALL BE PROVIDED ALL ELECTRONIC INFORMATION USED TO PREPARE THE AFOREMENTIONED RECORD STORM DRAINAGE DRAWINGS, INCLUDING THE AUTOCAD FILE(S) AND FIELD SURVEY DATA FILES.

- ### CODING NOTES
- DETENTION POND 1: CONSTRUCT MINIMUM 10' WIDE BERM AT ELEVATION = 318.00'. TOP OF BERM MUST BE THIS GRADE AFTER SETTLEMENT.
 - DETENTION POND 2: CONSTRUCT MINIMUM 10' WIDE BERM AT ELEVATION = 319.00'. TOP OF BERM MUST BE THIS GRADE AFTER SETTLEMENT.
 - DETENTION POND 3: CONSTRUCT MINIMUM 10' WIDE BERM AT ELEVATION = 326.00'. TOP OF BERM MUST BE THIS GRADE AFTER SETTLEMENT.
 - CONSTRUCT 15' RIPRAP LINED EMERGENCY SPILLWAY ON GEOTEXTILE FABRIC AT ELEVATION = 316.50'. SIZED AS SHOWN. ENSURE THAT THE FILTER FABRIC DOES NOT GET TORN. EXCAVATE RIP-RAP AREA MINIMUM 10'-12' BELOW FINISHED GRADE PRIOR TO INSTALLING RIP-RAP. (SEE DETAIL)
 - CONSTRUCT 10' RIPRAP LINED EMERGENCY SPILLWAY ON GEOTEXTILE FABRIC AT ELEVATION = 318.00'. SEE EROSION CONTROL PLAN FOR MORE INFORMATION. COORDINATE WITH RETAINING WALL INSTALLATION TO ENSURE PROPER SIZE, LOCATION AND ELEVATION IS ACHIEVED.
 - CONSTRUCT 10' GRASS LINED EMERGENCY SPILLWAY AT ELEVATION = 325.00'. SEE EROSION CONTROL PLAN FOR MORE INFORMATION. COORDINATE WITH RETAINING WALL INSTALLATION TO ENSURE PROPER SIZE, LOCATION AND ELEVATION IS ACHIEVED.
 - DETENTION POND 1: OUTLET STRUCTURE (OS1) WITH 5\"/>

NOTE: INFORMATION REGARDING THE REPORTED PRESENCE, SIZE, LOCATION AND LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES HAS BEEN OBTAINED FROM THE CITY OF WEST COLUMBIA, LEXINGTON COUNTY AND THE SOUTH CAROLINA UTILITY PROTECTION SERVICE, INC. FROM LOCAL UTILITY COMPANIES. THERE IS NO GUARANTEE OF THE ACCURACY OF THE INFORMATION PROVIDED HEREIN. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF WEST COLUMBIA, LEXINGTON COUNTY AND THE SOUTH CAROLINA UTILITY PROTECTION SERVICE, INC. PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF WEST COLUMBIA, LEXINGTON COUNTY AND THE SOUTH CAROLINA UTILITY PROTECTION SERVICE, INC. PRIOR TO CONSTRUCTION.

South Carolina 811
3 DAYS BEFORE DIGGING IN SOUTH CAROLINA
CALL 811
CONTRACTOR SHALL CONTACT THE UNDERGROUND LOCATIONS EVERY 10 DAYS FOR AN UPDATE TO UTILITY LOCATIONS.

REFERENCES:

- REFERENCES
- ALTANSPS LAND TITLE SURVEY PREPARED FOR FICKLING & COMPANY DATED FEBRUARY 25, 2021 BY COX AND DINKINS, INC..

GENERAL NOTES:

- THE SUBJECT PROPERTY IS IDENTIFIED AS LEXINGTON COUNTY TAX MAP PARCELS 03699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27.
- TOTAL AREA OF SUBJECT PROPERTY IS 52.95 ACRES.
- THE SUBJECT PARCELS 03699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27 ARE IN THE CITY OF WEST COLUMBIA AND ZONED AS 'D' (DEVELOPMENT)'.
- CONTOUR INTERVAL ELEVATIONS ARE ONE (1) FOOT. ELEVATIONS SHOWN ARE NAVD 88 DATUM.
- THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE. THE LOCATIONS OF OTHER UNDERGROUND UTILITIES AND THEIR SERVICES ARE UNKNOWN. CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
- THIS PROPERTY IS LOCATED IN FLOOD ZONE X PER FLOOD INSURANCE RATE MAP NUMBER 45063C0144J & 45063C0163J, REVISED JULY 5, 2018, BY SCALED LOCATION AND GRAPHIC PLOTTING ONLY.
- IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT THEY AND THEIR SUBCONTRACTORS HAVE THE CORRECTMOST UP-TO-DATE PLANS AVAILABLE.
- ALL SIDEWALKS, STRIPING AND SIGNAGE SHALL BE ADA AND MUTCD COMPLIANT.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

COX AND DINKINS
ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
724 BELTLINE BLVD.
COLUMBIA, SC 29206
803.254.0518
COXANDINKINS.COM

Professional Engineer Seal
South Carolina Professional Engineer
No. 27748
3/11/2022
James M. Dinkins
LICENSED PROFESSIONAL ENGINEER
No. 27748

Certificate of Authorization Seal
South Carolina Certificate of Authorization
No. C00294
COX AND DINKINS, INC.
No. C00294

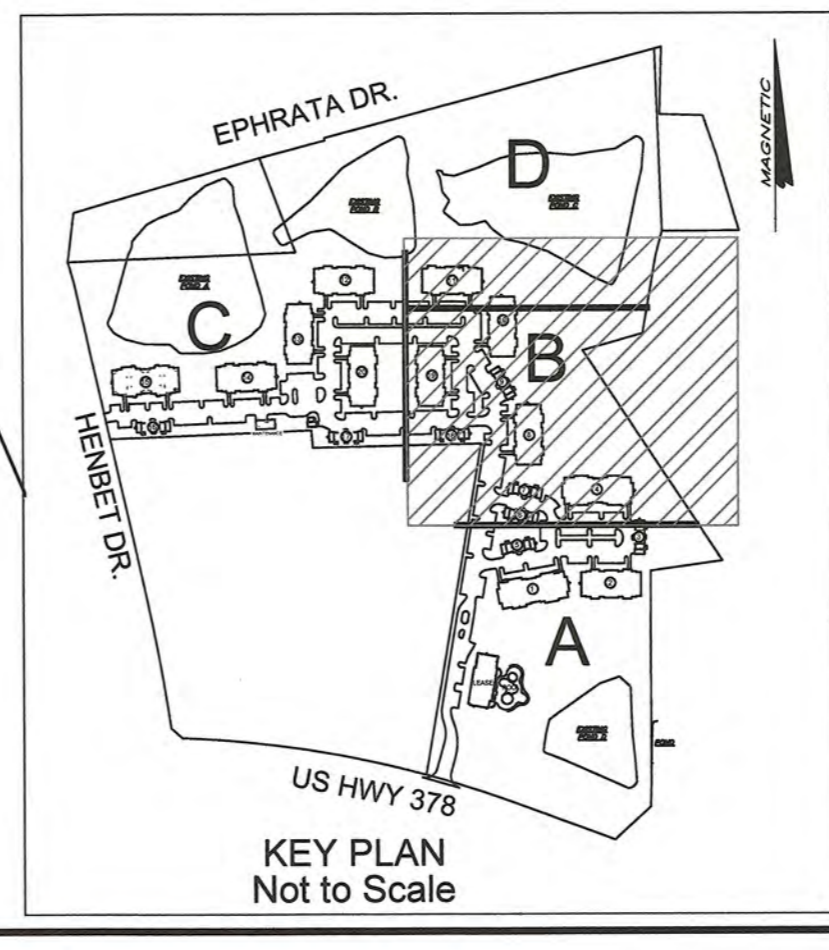
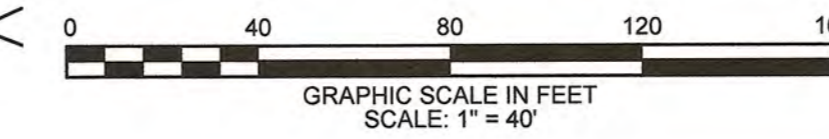
NO.	DATE	DESCRIPTION
1	3/11/2022	Add roof drainage and revised CN 14, 15, 17

PRIMARY PERMITTEE:
TODD ANDERSEN
COLUMBIA APARTMENT RESIDENCES, LLC
1545 PEACHTREE ST. NW, SUITE 260
ATLANTA, GA 30309
(404) 815-1234
email: tandersen@novaregroup.com

PROJECT: LULLWATER AT WEST COLUMBIA
SUNSET BLVD. @ HENBET DR.
LOCATED IN THE CITY OF WEST COLUMBIA,
LEXINGTON COUNTY, SOUTH CAROLINA

ENLARGED STORM DRAINAGE PLAN

TMS: U3699-03-11, 04535-1-14, 04597-09-21, -22, -26, & -27
BOOK: 68G-42
DATE: JANUARY 14, 2022
SHEET NO: **C10D of 48**



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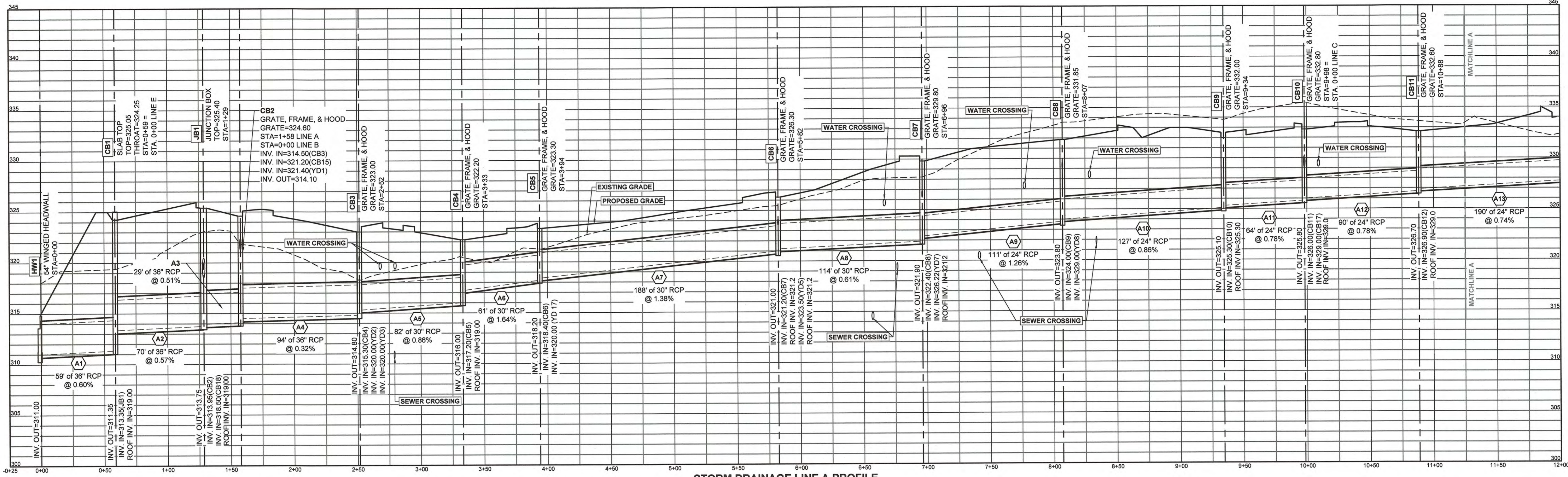
NO.	DATE	DESCRIPTION

PRIMARY PERMITTEE:
TODD ANDERSEN
 COLUMBIA APARTMENT
 RESIDENCES, LLC
 1545 PEACHTREE ST. NW, SUITE 260
 ATLANTA, GA 30309
 (404) 815-1234
 email: tandersen@novaregroup.com

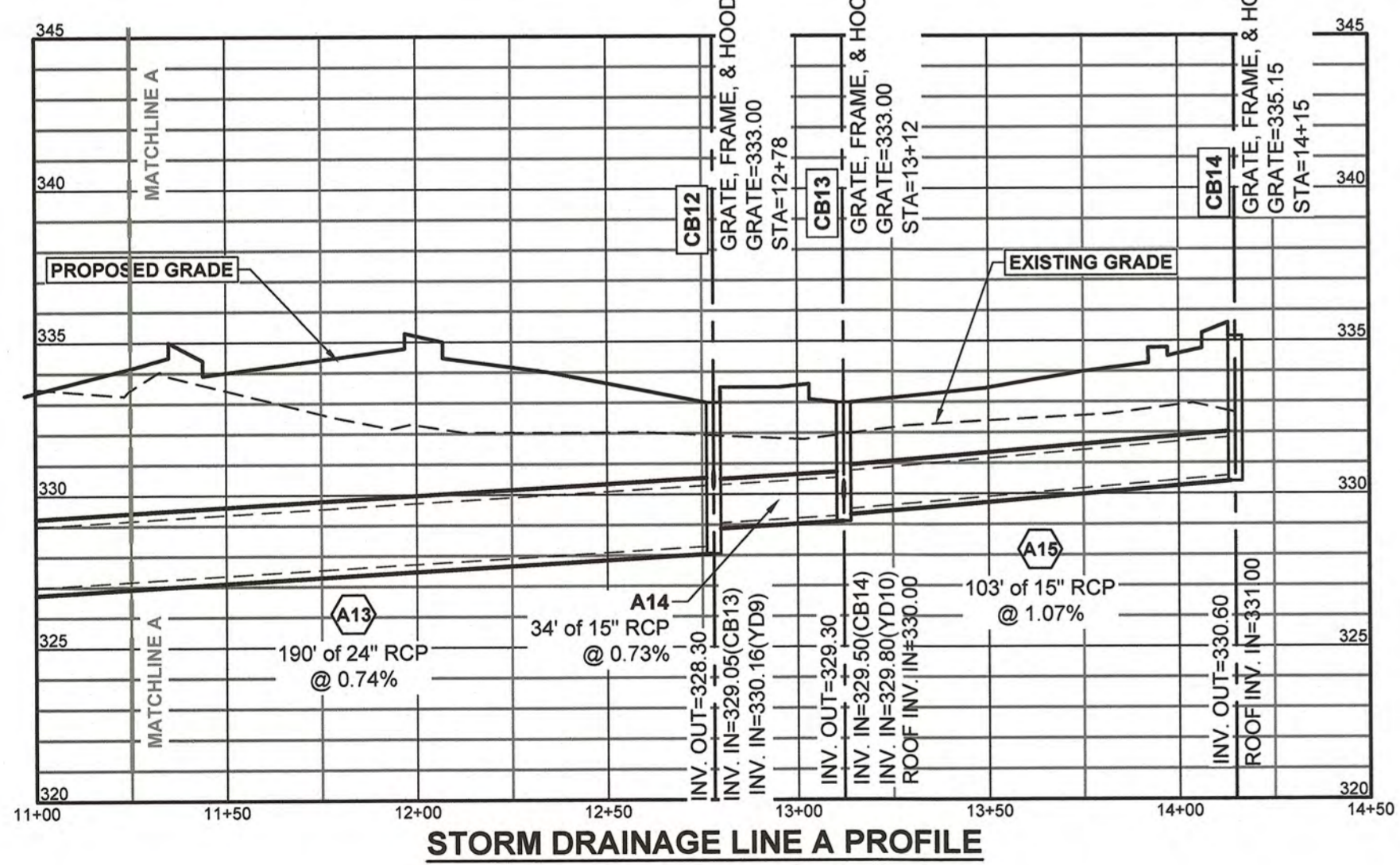
PROJECT:
LULLWATER AT WEST COLUMBIA
SUNSET BLVD. @ HENBET DR.
 LOCATED IN THE CITY OF WEST COLUMBIA,
 LEXINGTON COUNTY, SOUTH CAROLINA

PROJECT NO. 2238
 SF NO. 144-12

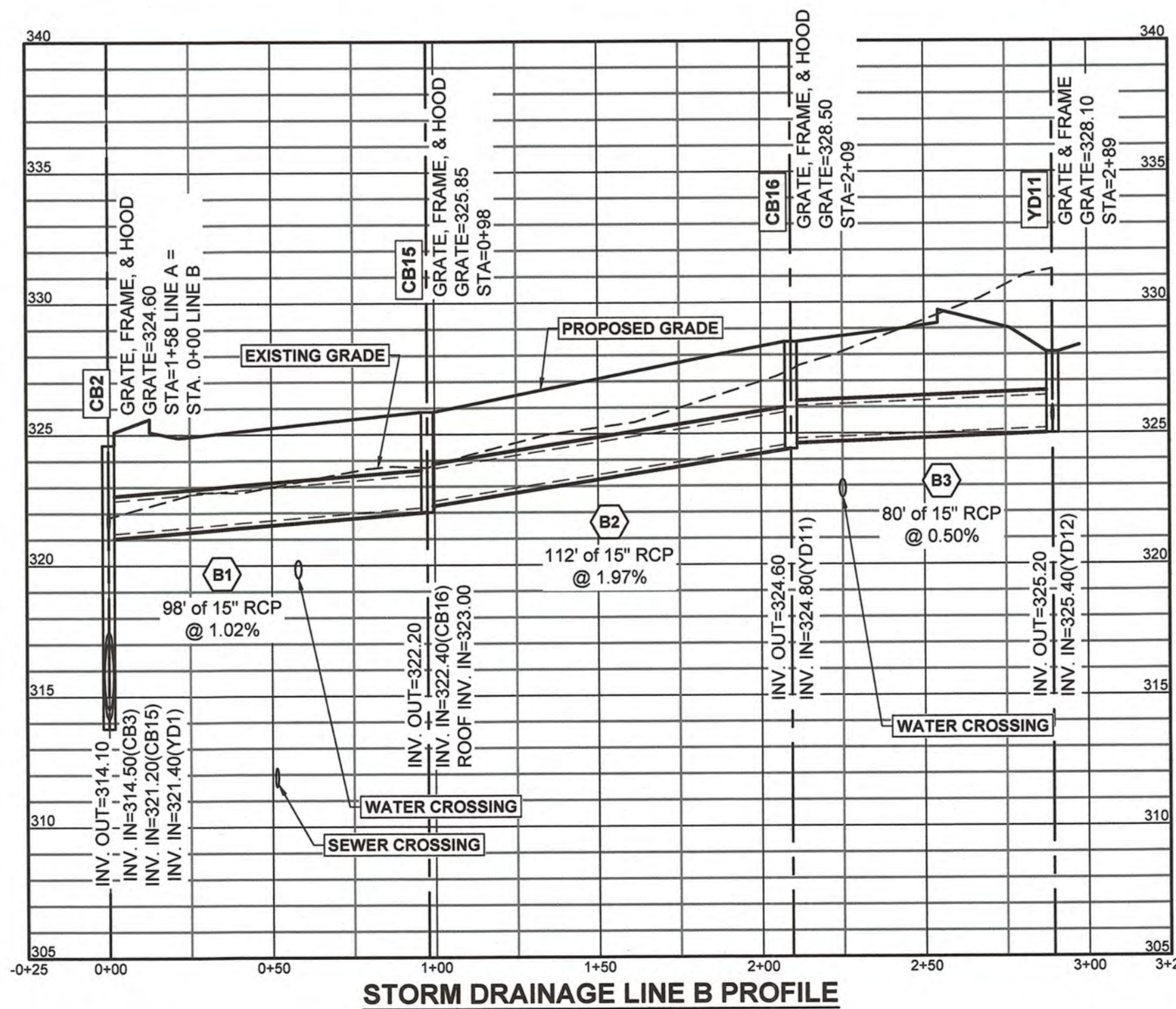
STORM DRAINAGE PROFILES



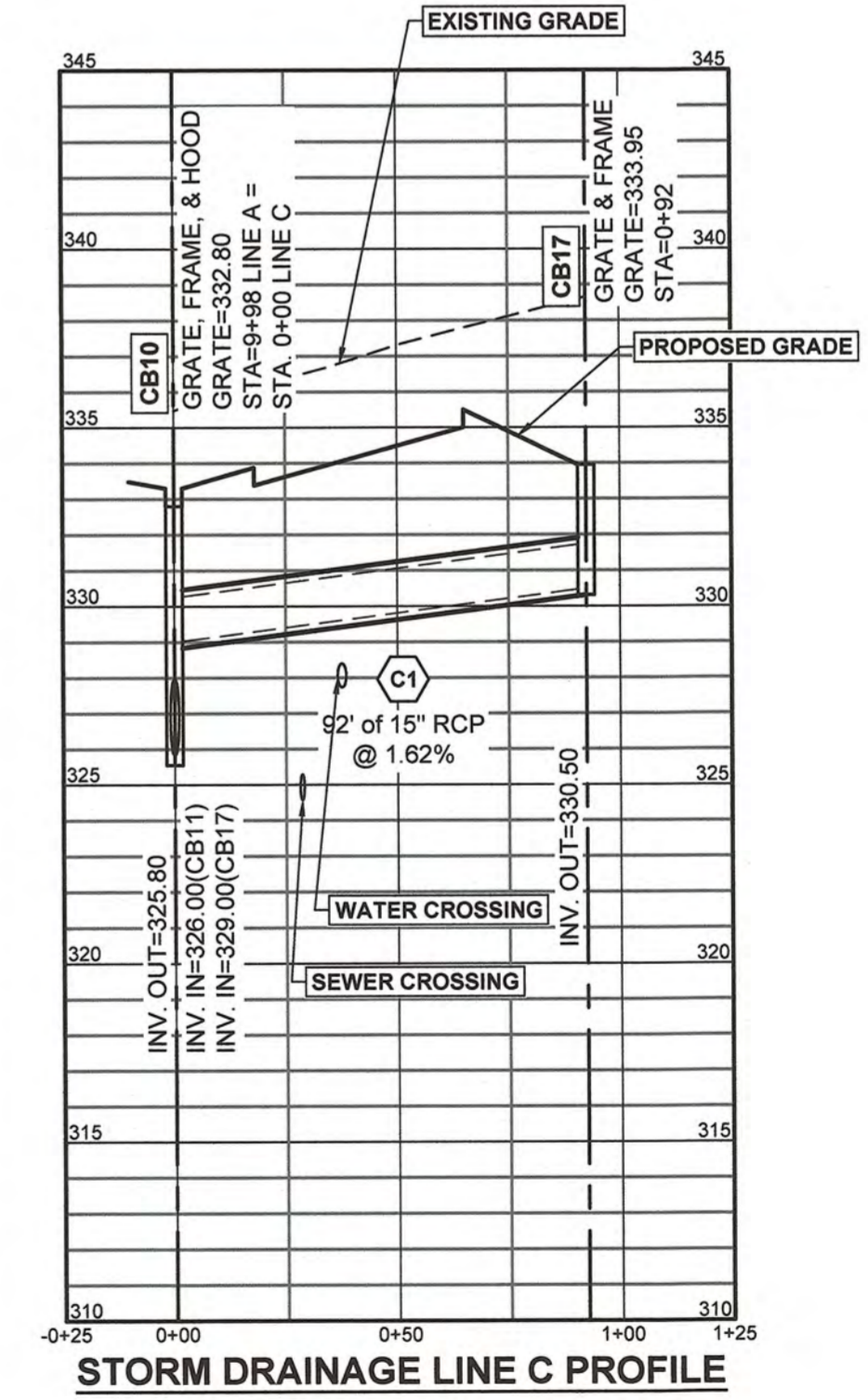
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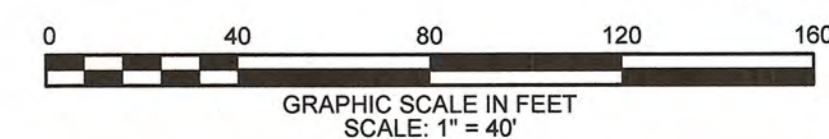
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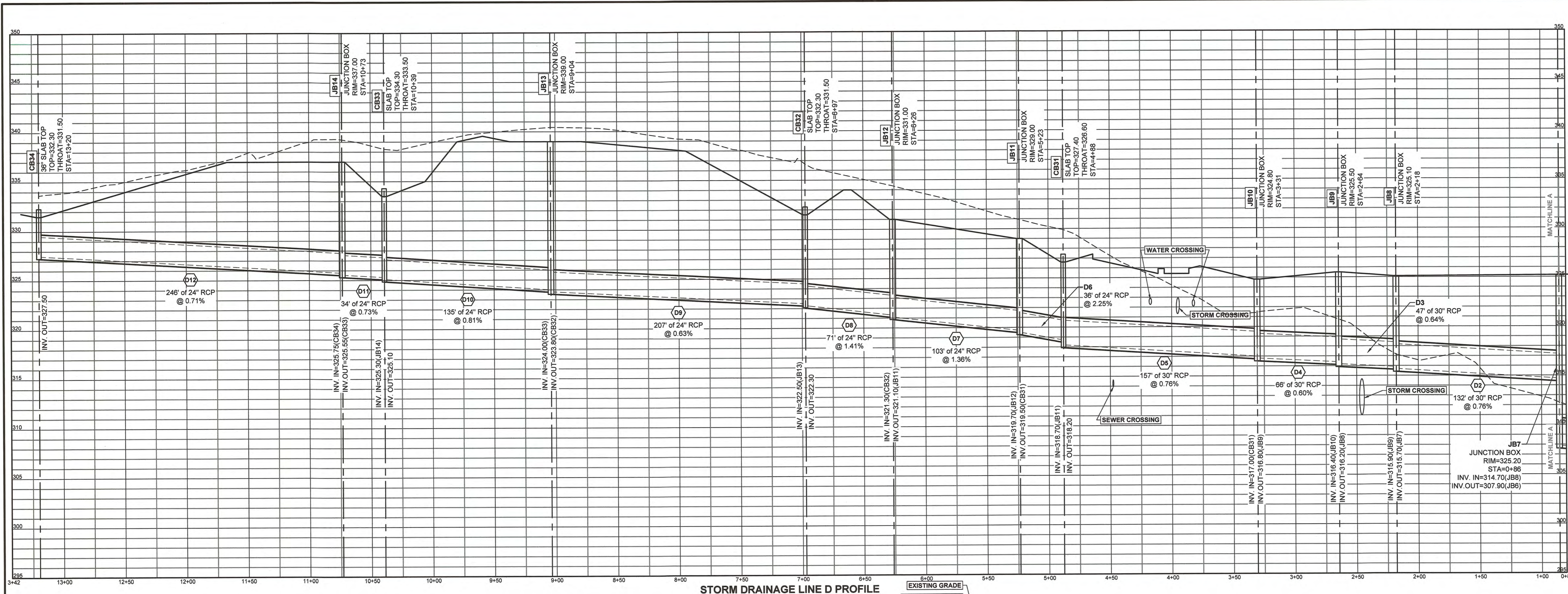
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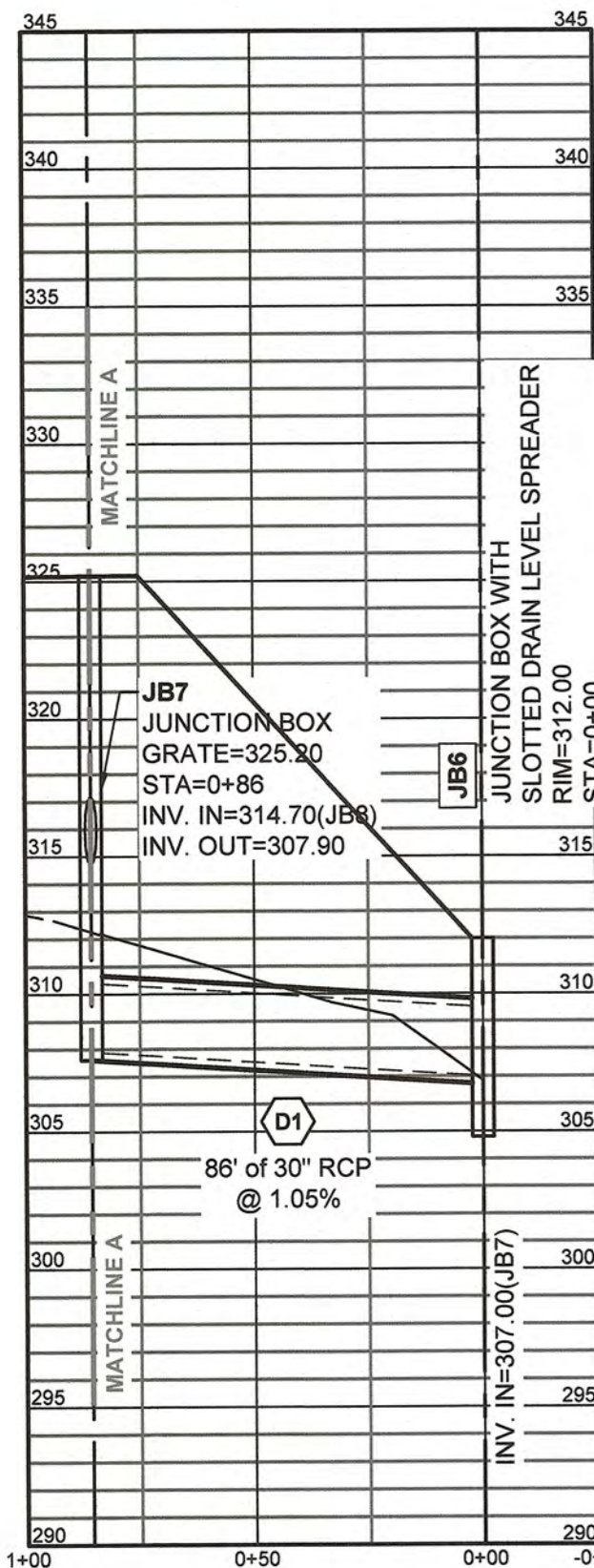
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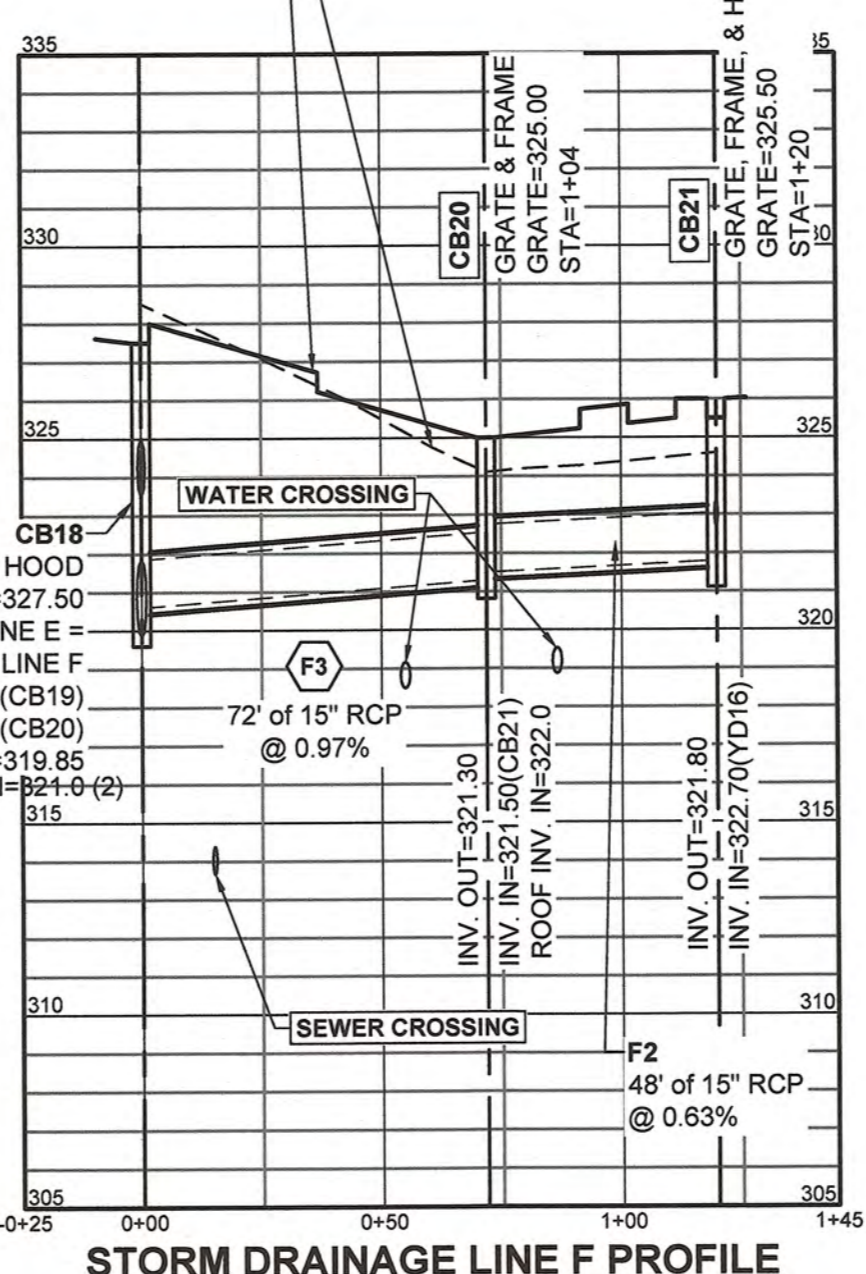
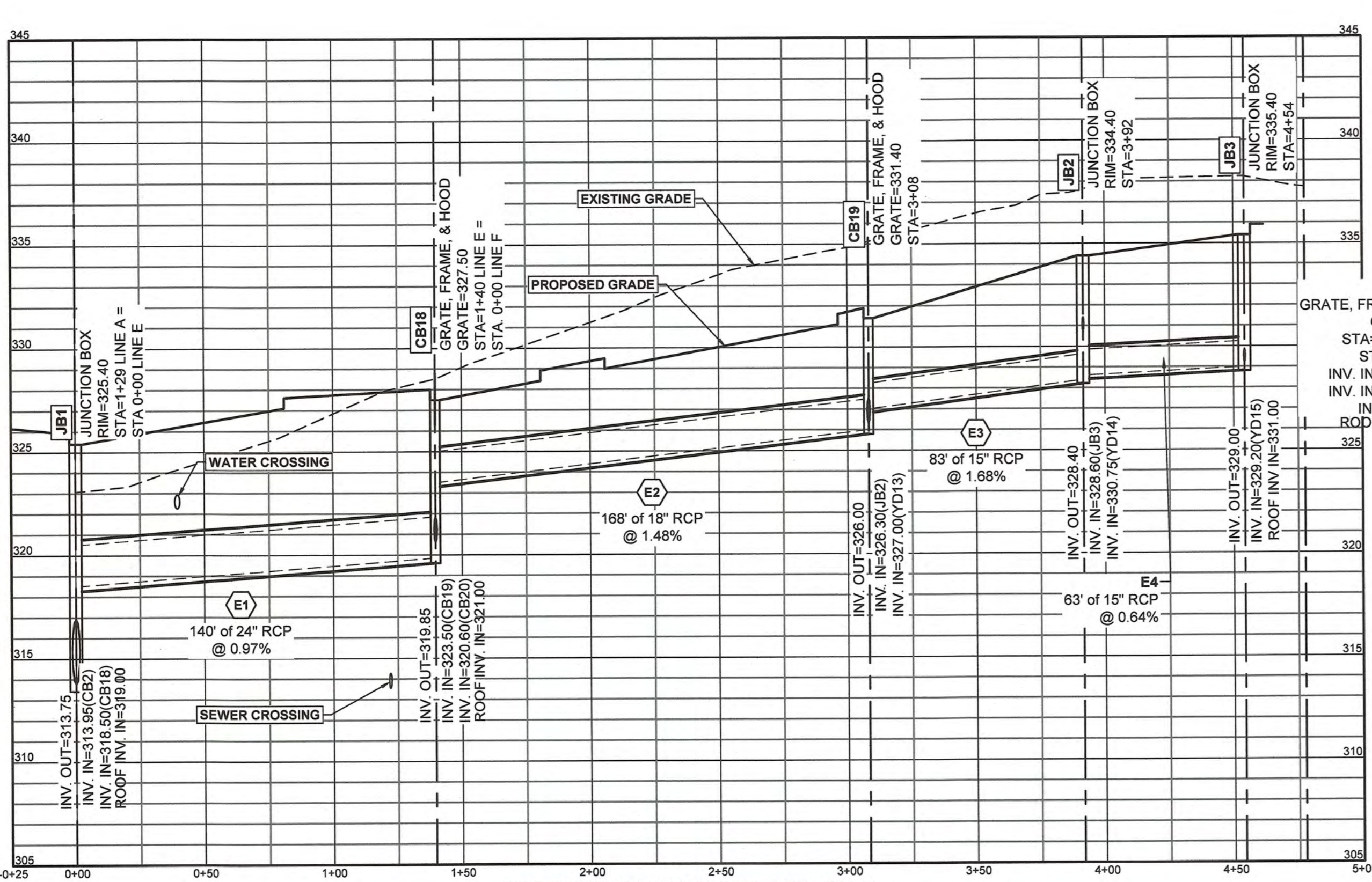
NOTES:
 1. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS PROFILE.
 2. AS SHOWN, PIPE LENGTHS ARE CENTER TO CENTER OF STRUCTURES.



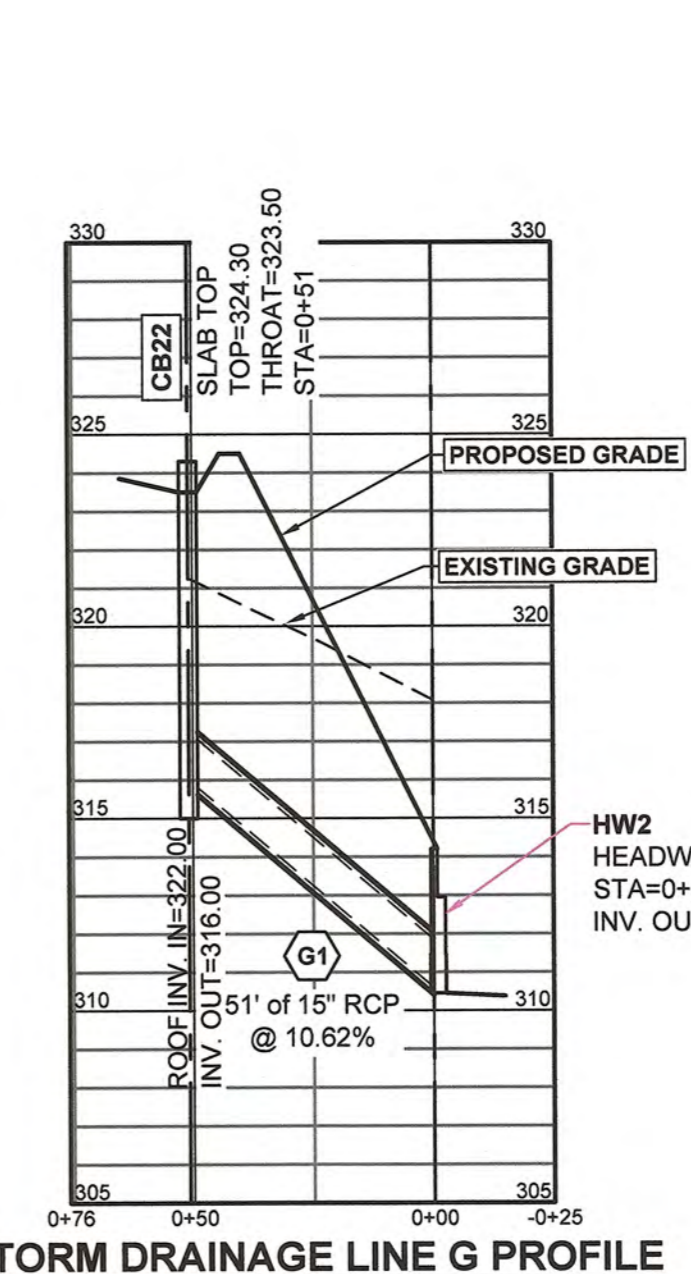
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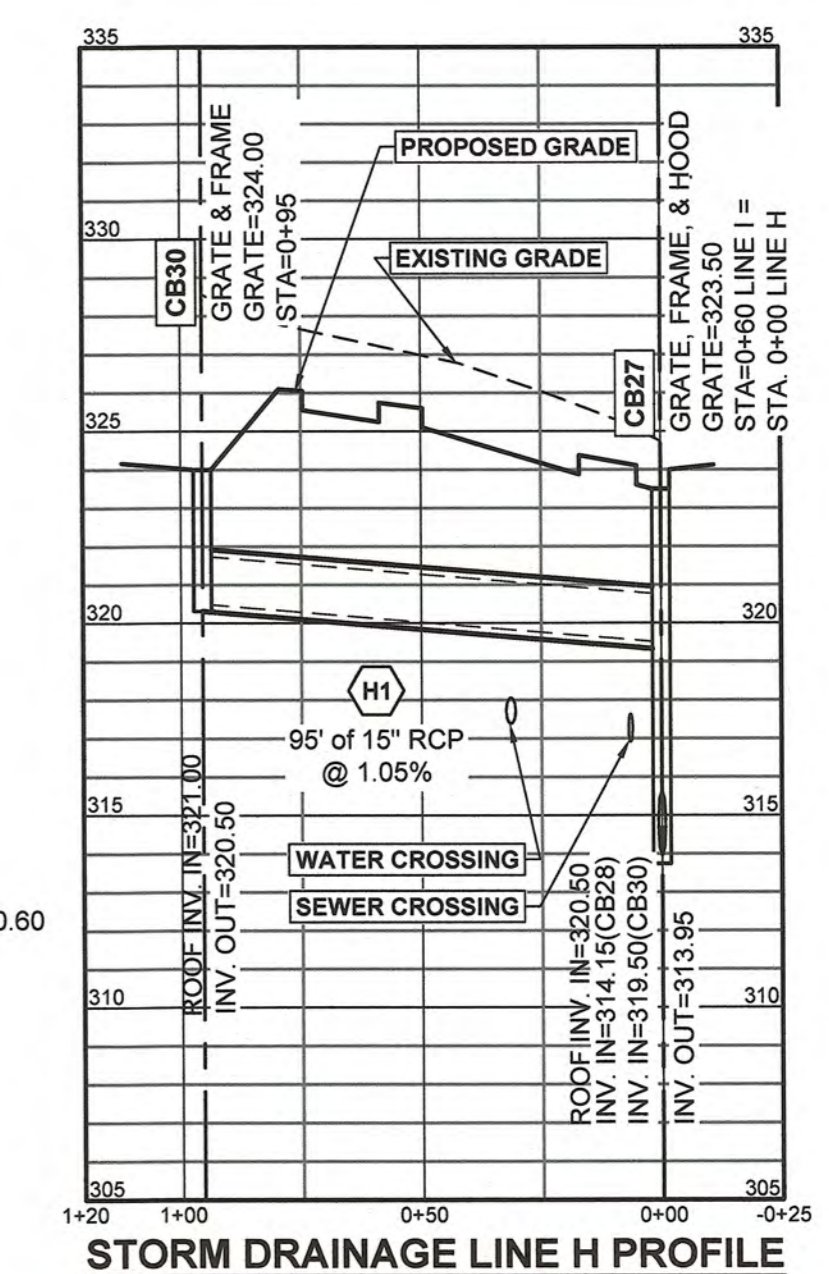
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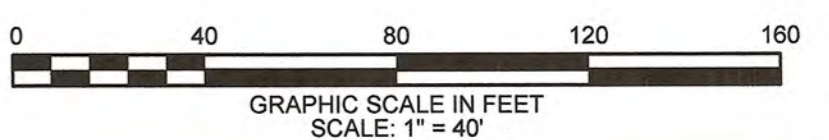
STORM DRAINAGE LINE F PROFILE



STORM DRAINAGE LINE G PROFILE

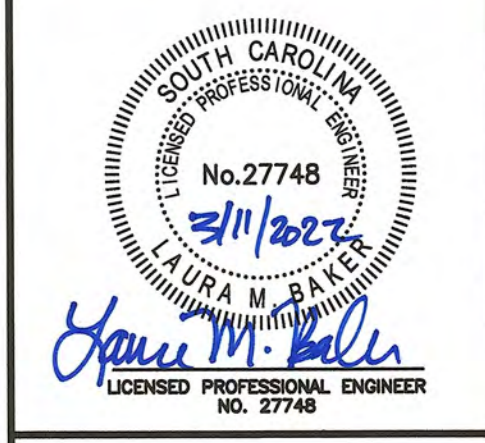


STORM DRAINAGE LINE H PROFILE



- NOTES:**
- OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS PROFILE.
 - AS SHOWN, PIPE LENGTHS ARE CENTER TO CENTER OF STRUCTURES.

COX AND DINKINS
ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
724 BELTLINE BLVD.
COLUMBIA, SC 29205
803.254.0518
COXANDINKINS.COM



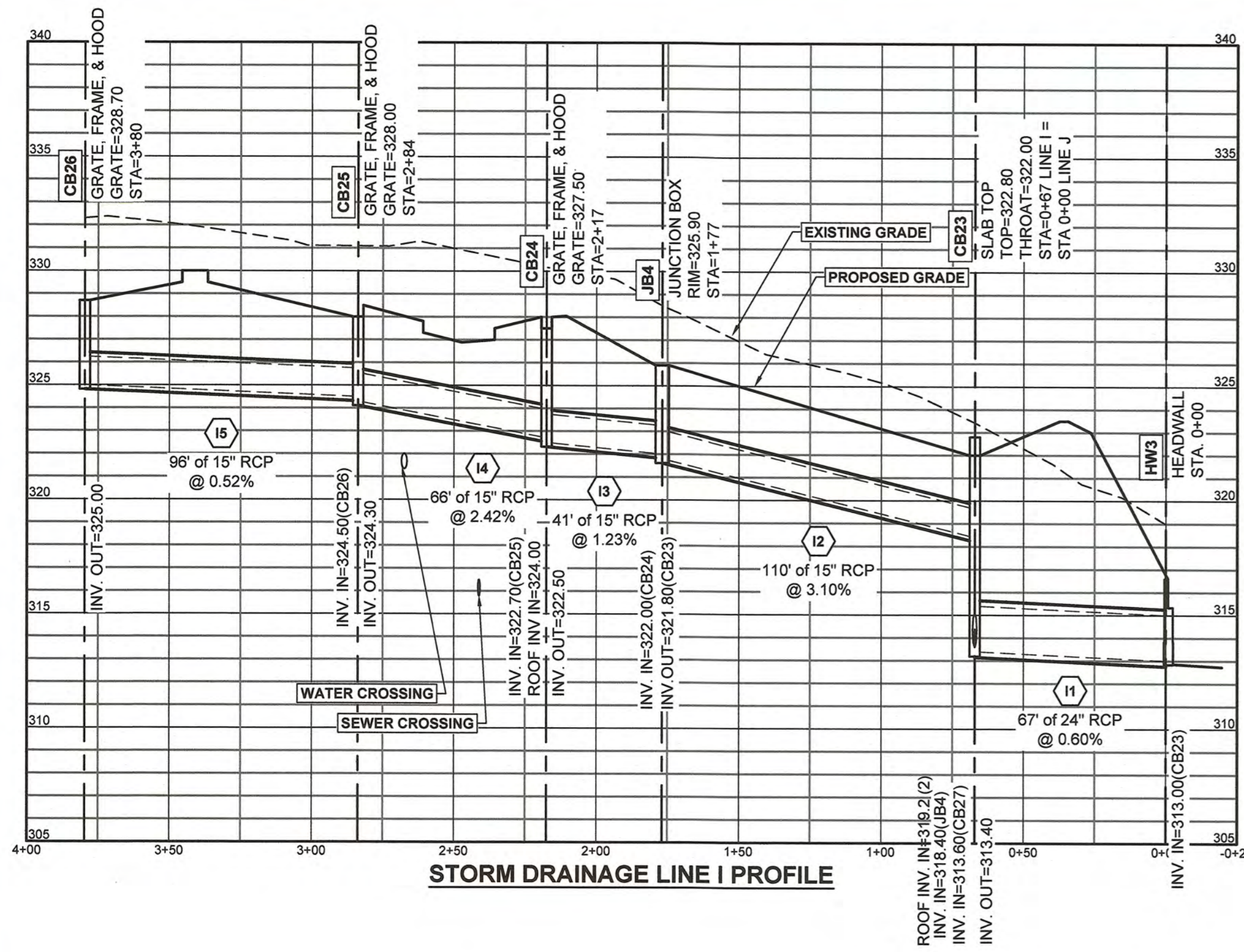
NO.	DATE	DESCRIPTION

PRIMARY PERMITTEE:
TODD ANDERSEN
COLUMBIA APARTMENT
RESIDENCES, LLC
1545 PEACHTREE ST. NW, SUITE 280
ATLANTA, GA 30309
(404) 815-1234
email: tandersen@novaregroup.com

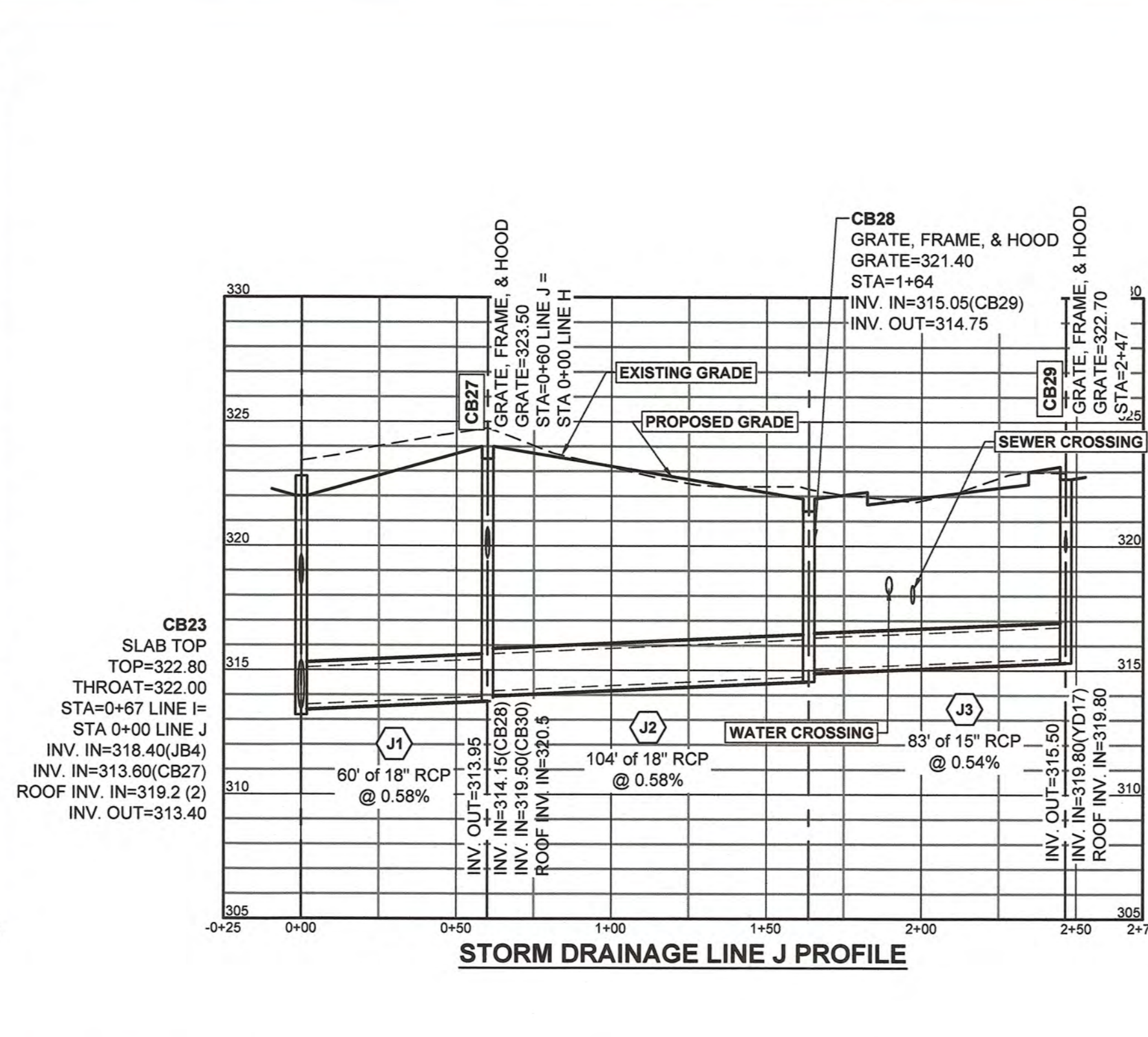
PROJECT:
LULLWATER AT WEST COLUMBIA
SUNSET BLVD. @ HENBET DR.
LOCATED IN THE CITY OF WEST COLUMBIA,
LEXINGTON COUNTY, SOUTH CAROLINA
PROJECT NO. 2238
SF NO. 144-12
STORM DRAINAGE PROFILES

TMS 03699-03-11; U6535-1-14;
04597-09-21, -22, -26, & -27
BOOK 68G-42
DATE JANUARY 14, 2022
SHEET NO. **C12** of 48

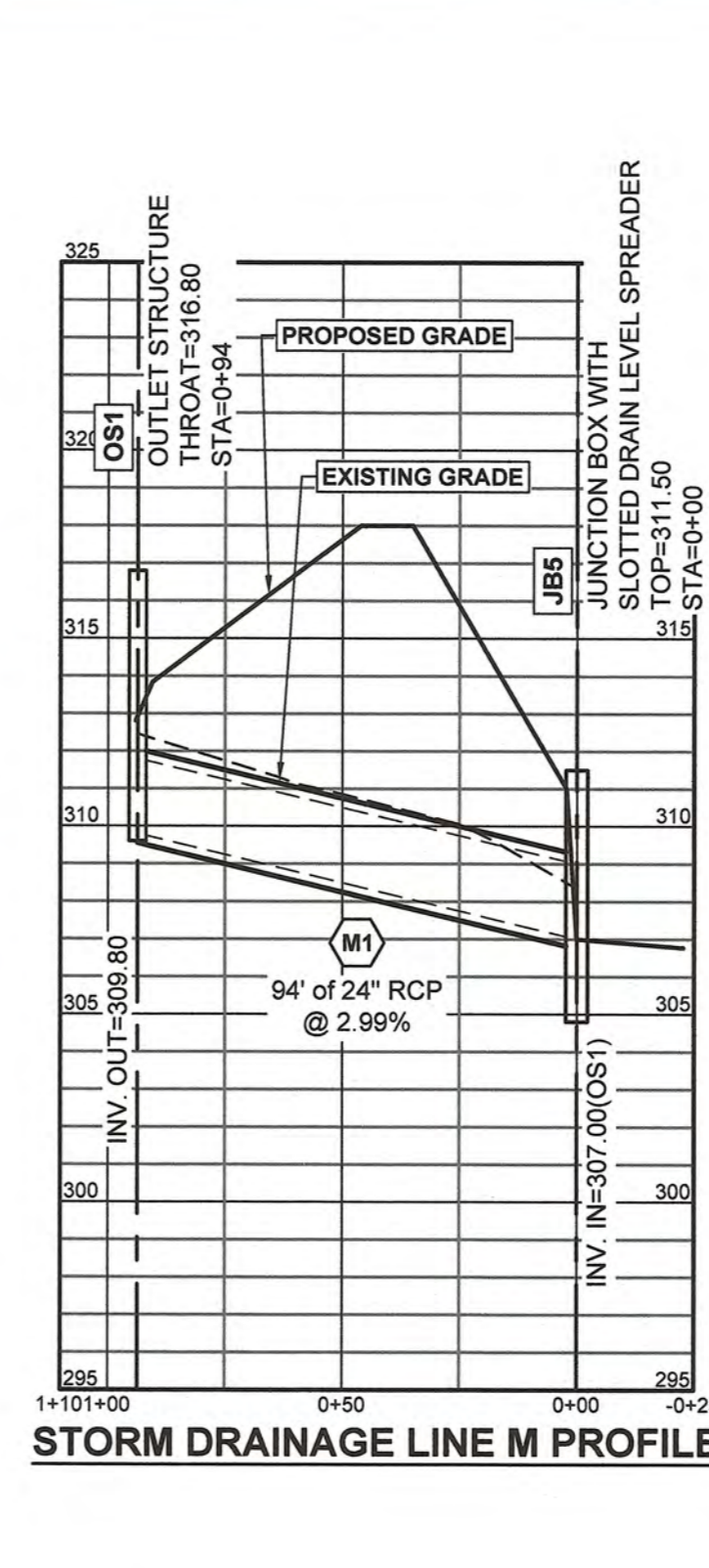
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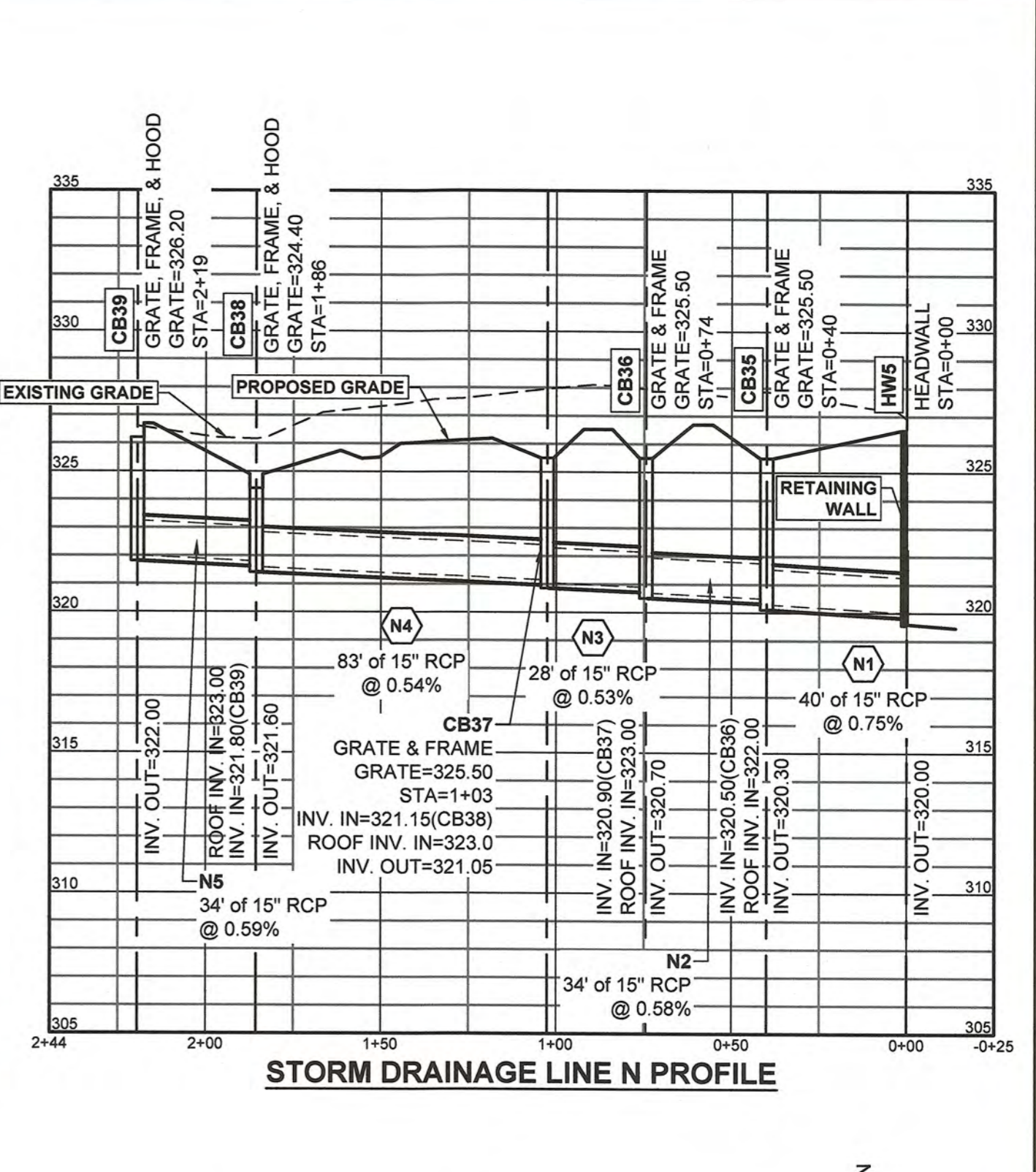
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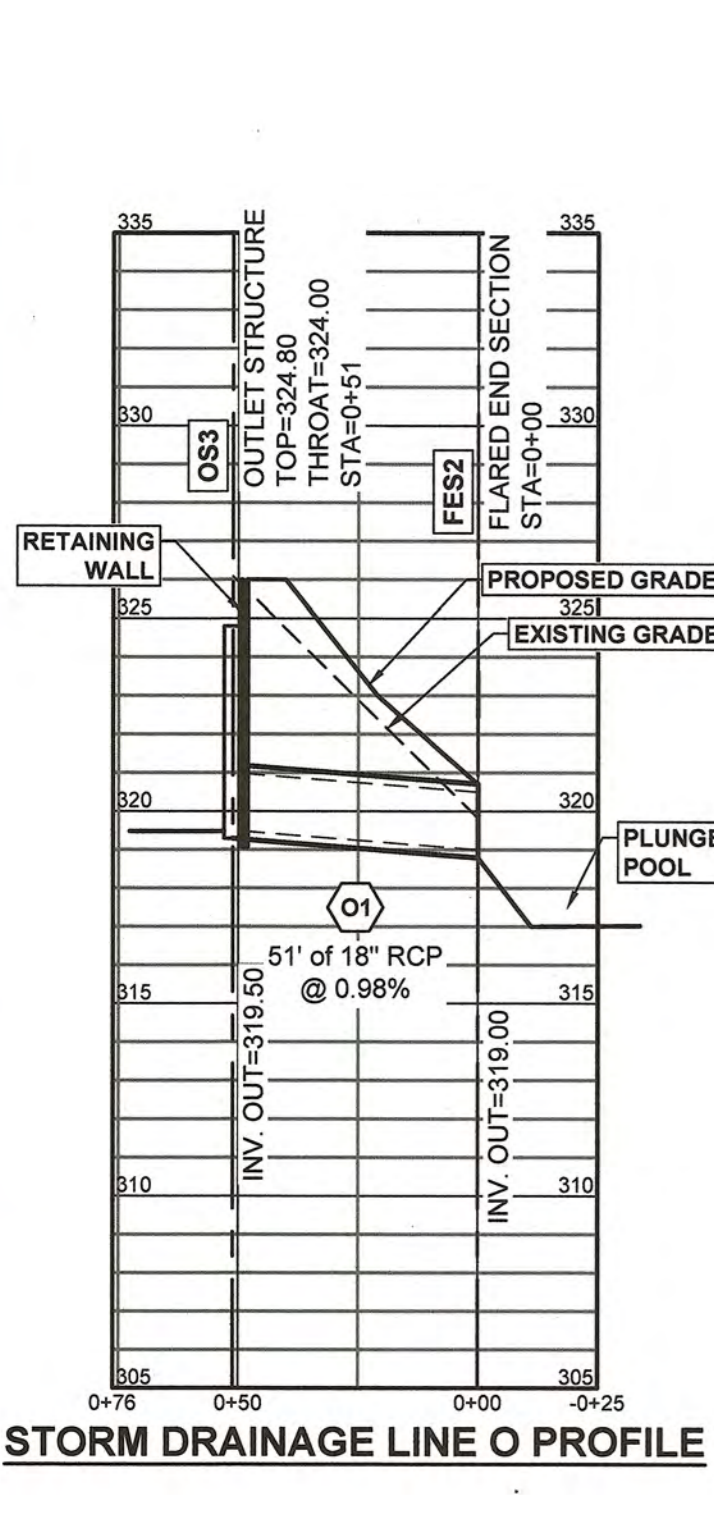
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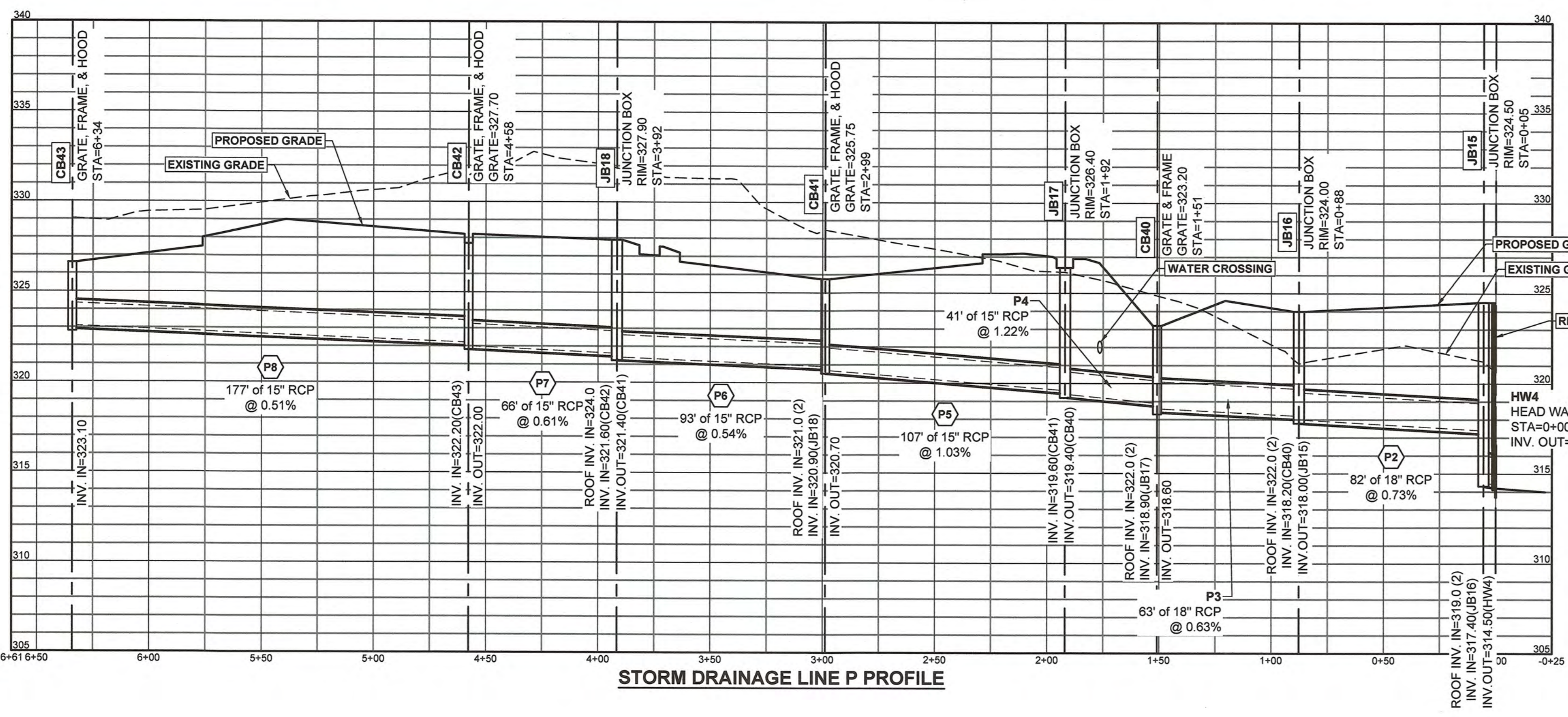
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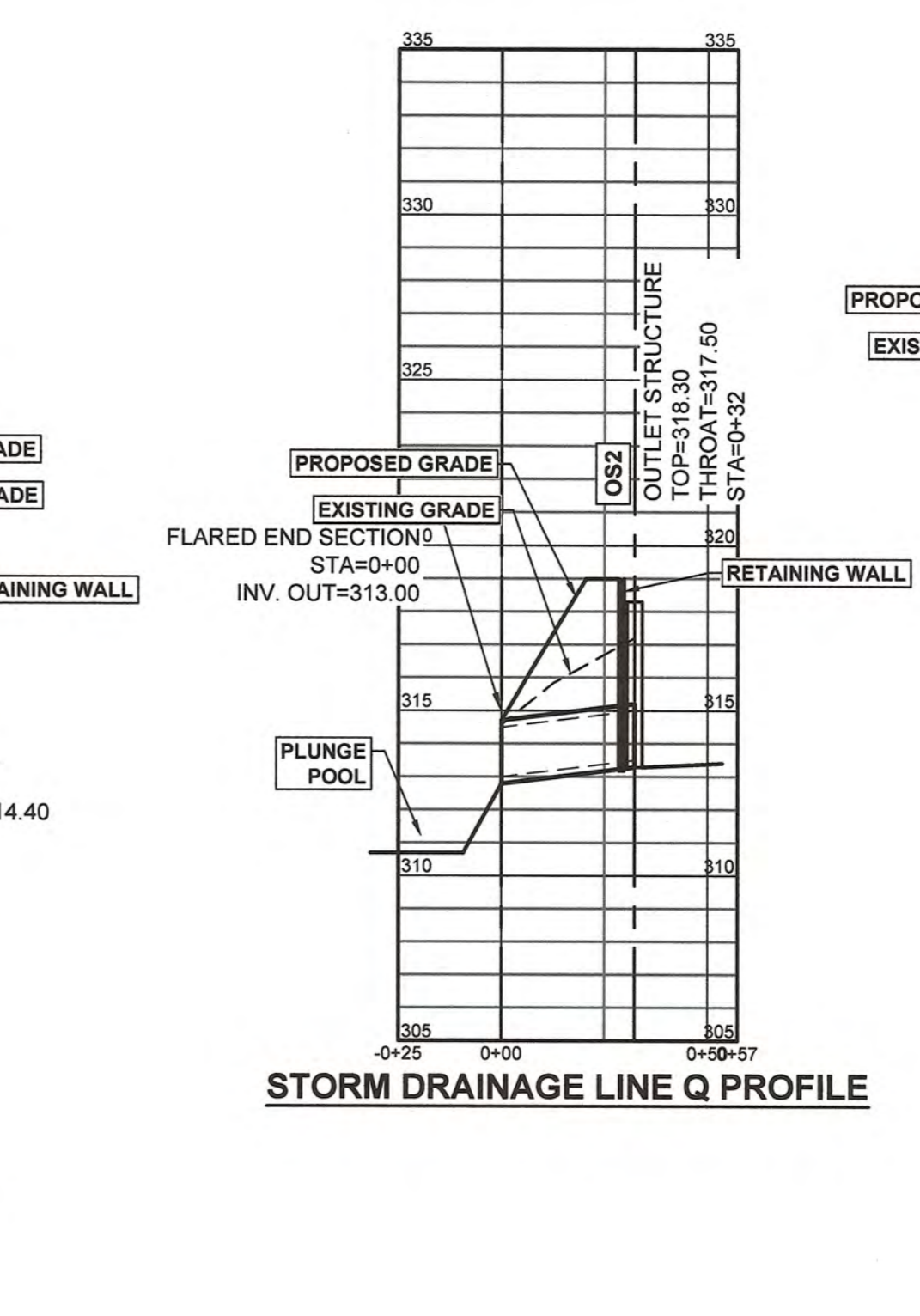
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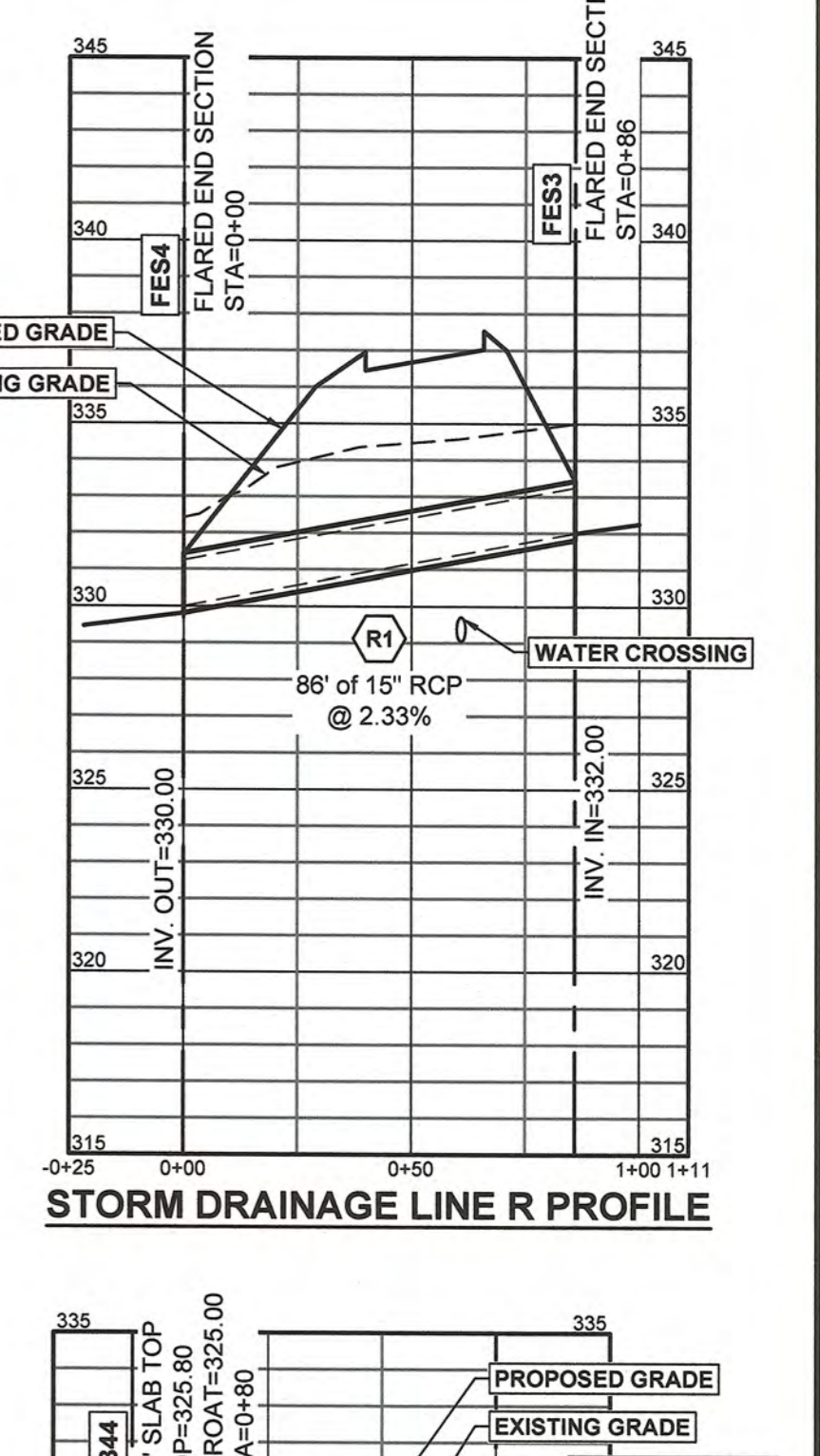
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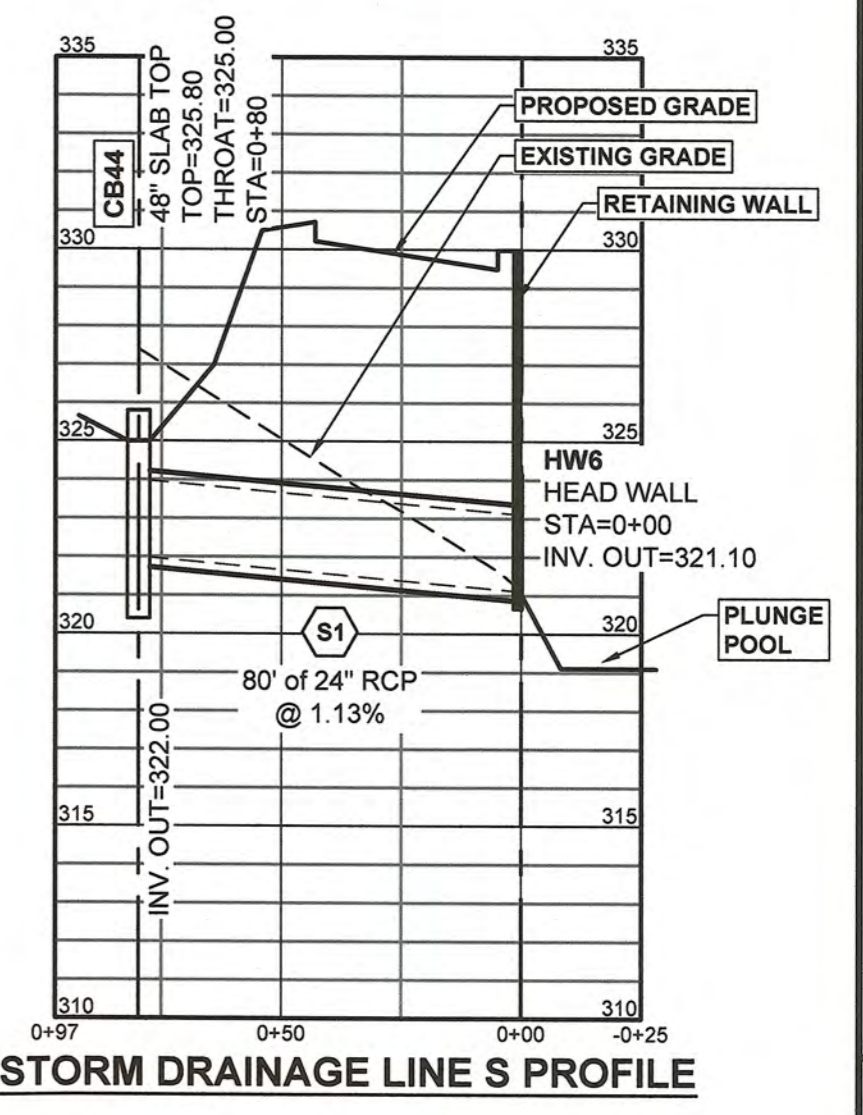
STORM DRAINAGE LINE P PROFILE



STORM DRAINAGE LINE Q PROFILE



STORM DRAINAGE LINE R PROFILE



STORM DRAINAGE LINE S PROFILE



- NOTES:**
- OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS PROFILE.
 - AS SHOWN, PIPE LENGTHS ARE CENTER TO CENTER OF STRUCTURES.

COX AND DINKINS
 ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
 724 BELTLINE BLVD.
 COLUMBIA, SC 29206
 803.254.0518
 COXANDINKINS.COM

SOUTH CAROLINA PROFESSIONAL ENGINEER
 No. 27748
 3/1/2022
 JOHN M. BOLEY
 LICENSED PROFESSIONAL ENGINEER
 No. 27748

SOUTH CAROLINA PROFESSIONAL ENGINEER
 COX AND DINKINS, INC.
 No. C00294
 CERTIFICATE OF AUTHORIZATION SEAL

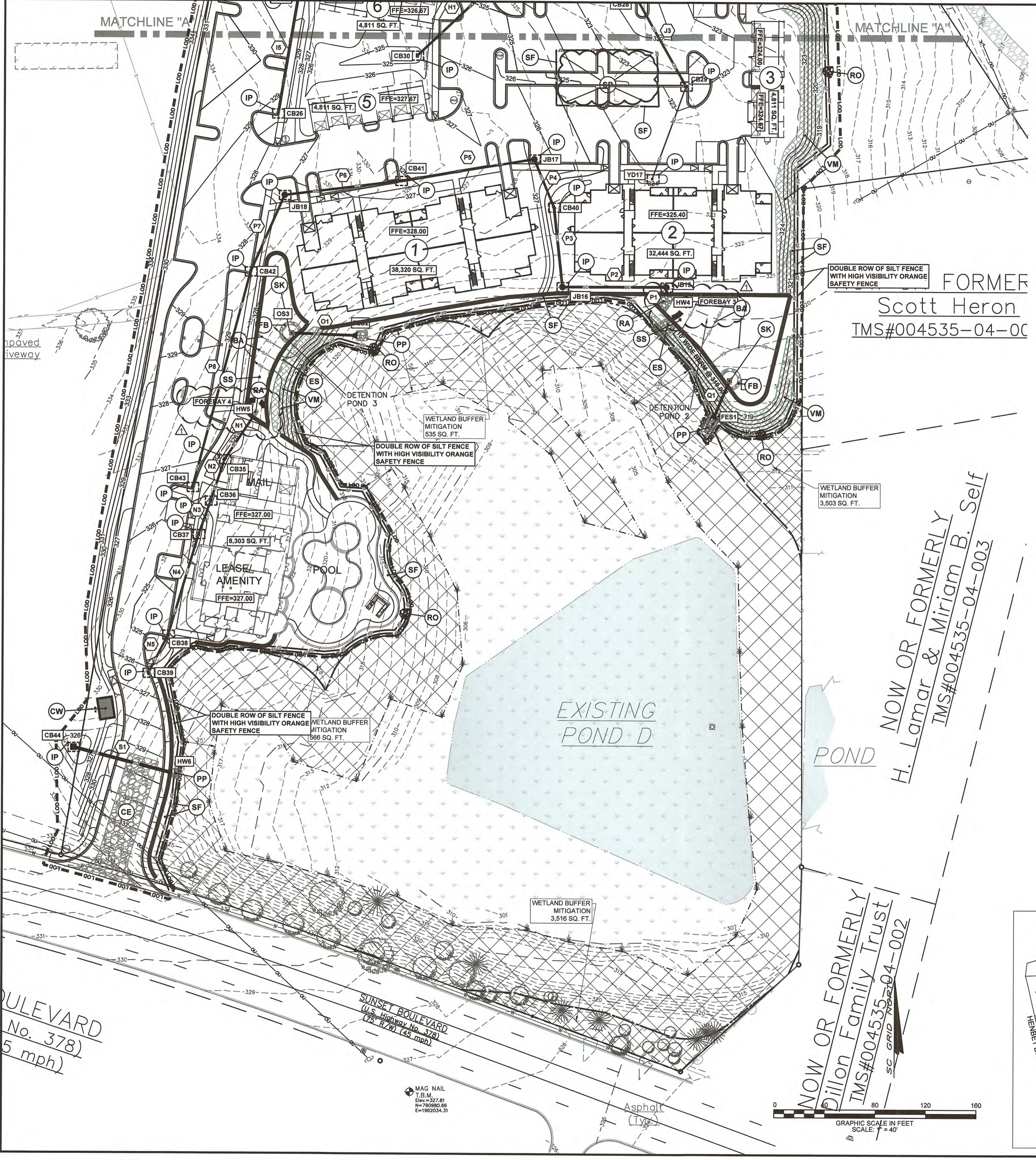
NO.	DATE	DESCRIPTION

PRIMARY PERMITTEE:
TODD ANDERSEN
 COLUMBIA APARTMENT
 RESIDENCES, LLC
 1545 PEACHTREE ST. NW, SUITE 280
 ATLANTA, GA 30309
 (404) 815-1234
 email: tandersen@novaregroup.com

PROJECT
LULLWATER AT WEST COLUMBIA
SUNSET BLVD. @ HENBET DR.
 LOCATED IN THE CITY OF WEST COLUMBIA,
 LEXINGTON COUNTY, SOUTH CAROLINA
 PROJECT NO. 2238
 SF NO. 144-12

TMS U3698-03-11, U4635-1-14,
 04597-09-21, -22, -26, & -27
 BOOK 68G-42
 DATE JANUARY 14, 2022
 SHEET NO. **C13** of 48

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LEGEND

--- LOD --- LOD	LIMITS OF DISTURBANCE	(CW)	CONCRETE WASHOUT
--- SF --- SF	WIRE BACKED SILT FENCE (SEE DETAIL)	(FB)	FILTER BERM
-365-	PROPOSED INDEX CONTOUR	(SK)	SKIMMER
-364-	PROPOSED INTERMEDIATE CONTOUR	(PSD)	PIPE SLOPE DRAIN
-365-	EXISTING INDEX CONTOUR	(SS)	SEDIMENT STAKE
-365-	EXISTING INTERMEDIATE CONTOUR	(IP)	INLET PROTECTION
←	FLOW ARROW INDICATING STORMWATER FLOW DIRECTION	(RA)	RIPRAP APRON
(BA)	POROUS BAFFLE (SEE DETAIL)	(SP)	STOCKPILE
(VM)	VEGETATIVE MATTING - NORTH AMERICAN GREEN SC-160 OR APPROVED EQUAL TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS	(PP)	PLUNGE POOL
(CE)	CONSTRUCTION ENTRANCE / EXIT	(CD)	CHECK DAM
		(ES)	EMERGENCY SPILLWAY
		(RO)	SILT FENCE ROCK OUTLET

- CONSTRUCTION SEQUENCE : PHASE 2**
- 2-6 MONTHS FROM START DATE
 - ENSURE THAT SWPPP PHASE 1 PERIMETER CONTROLS AND DETENTION PONDS ARE IN PLACE.
 - ROUGH GRADING.
 - 1-6 MONTHS FROM SWPPP - PHASE 1
 - BEGIN BUILDING PAD CONSTRUCTION.
 - 1-6 MONTHS FROM SWPPP - PHASE 1
 - INSTALL FOREBAYS IN DETENTION PONDS, INSTALL UTILITIES AND THE REMAINDER OF STORM DRAINAGE SYSTEM. INSTALL INLET PROTECTION AFTER THE INSTALLATION OF EACH DRAINAGE STRUCTURE. INITIAL STABILIZATION MEASURES AS SOON AS PRACTICAL ON PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORKING HAS CEASED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SUFFICIENT IRRIGATION TO ESTABLISH VEGETATION. TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED WHERE EARTH MOVING OPERATIONS WILL BE RESUMED WITHIN FOURTEEN (14) DAYS.
 - 2-18 MONTHS FROM SWPPP - PHASE 1
 - COMMENCE BUILDING CONSTRUCTION.
 - 2-6 MONTHS FROM SWPPP - PHASE 1
 - INSTALL VEGETATIVE MATTING.
 - 2-18 MONTHS FROM SWPPP - PHASE 1
 - MAINTAIN EROSION AND SEDIMENT CONTROL DEVICES THROUGHOUT ALL STAGES OF CONSTRUCTION. THE CONTRACTOR SHALL FURNISH AND INSTALL ADDITIONAL SEDIMENT AND EROSION CONTROL DEVICES AS NEEDED AND/OR AS DIRECTED BY THE ENGINEER OR INSPECTOR.
 - INSPECT SEEDED AREAS WHERE STABILIZATION MEASURES HAVE BEEN INITIATED AND RE-APPLY SEED AS NECESSARY TO ACHIEVE AND MAINTAIN A MINIMUM 70% COVERAGE OF THE SEEDED AREAS.
 - 3-10 MONTHS FROM SWPPP - PHASE 1
 - PERFORM FINE GRADING, CURBS AND GUTTER INSTALLATION, ETC.
 - INSTALL STONE BASE IN ROADWAYS AND ENSURE DRAINAGE IS DIRECTED TO THE STORM DRAINAGE SYSTEM. PROTECT STORM DRAINAGE INLETS DURING STONE PLACEMENT AND MAINTAIN INLET PROTECTION.
 - 18 MONTHS FROM SWPPP PHASE 1
 - PAVE ROADWAYS AND GRASS/SEED ALL DISTURBED AREAS PER THE SEEDING SCHEDULE.
 - UPON INSTALLATION OF CURBS, ASPHALT, AND CATCH BASIN TOPS, FURNISH AND INSTALL SEDIMENT TUBE INLET PROTECTION OR DROP INLET SEDIMENT FILTER. (SEE DETAIL)
 - PROCEED TO SWPPP PHASE 3.

NOTE TO CONTRACTOR REGARDING PHASED SWPPP

THE INTENT OF THE PHASED SWPPP IS TO LIMIT THE AMOUNT OF EXPOSED SOIL DURING CONSTRUCTION TO PREVENT LOSS OF SEDIMENT. THE CONTRACTOR MUST REVIEW ALL PORTIONS OF THE SWPPP TO UNDERSTAND EACH PHASE AND THE PURPOSE OF THE PHASING. THERE WILL BE INFORMATION CONTAINED IN THE CONSTRUCTION PHASE SWPPP AND DETAILS THAT WILL BE NEEDED AS YOU TRANSITION FROM INITIAL PHASE THROUGH STABILIZATION PHASE. CONSULT ALL PLAN SHEETS AND DETAILS TO DETERMINE THE BEST COURSE OF ACTION WHILE KEEPING THE OVERALL INTENT OF THESE PHASED SWPPPS. IT IS HIGHLY RECOMMENDED THAT THE CONTRACTOR HAVE THE PROJECT ENGINEER OR SWPPP INSPECTOR PERFORM AN INSPECTION TO VERIFY THAT ALL ELEMENTS OF THE INITIAL SWPPP ARE INSTALLED PROPERLY PRIOR TO MOVING FORWARD WITH THE CONSTRUCTION PHASE SWPPP.

**TOTAL DISTURBED AREA
18.2 ACRES**

COX AND DINKINS
ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
724 BELTLINE BLVD.
COLUMBIA, SC 29205
803.254.0518
COXANDINKINS.COM

Professional Engineer Seal for James M. Bales, License No. 27748, State of South Carolina.

Certificate of Authorization Seal for COX AND DINKINS, INC., License No. C00294, State of South Carolina.

NO.	DATE	DESCRIPTION
1	03/11/2022	Revised per Lexington County Comments.

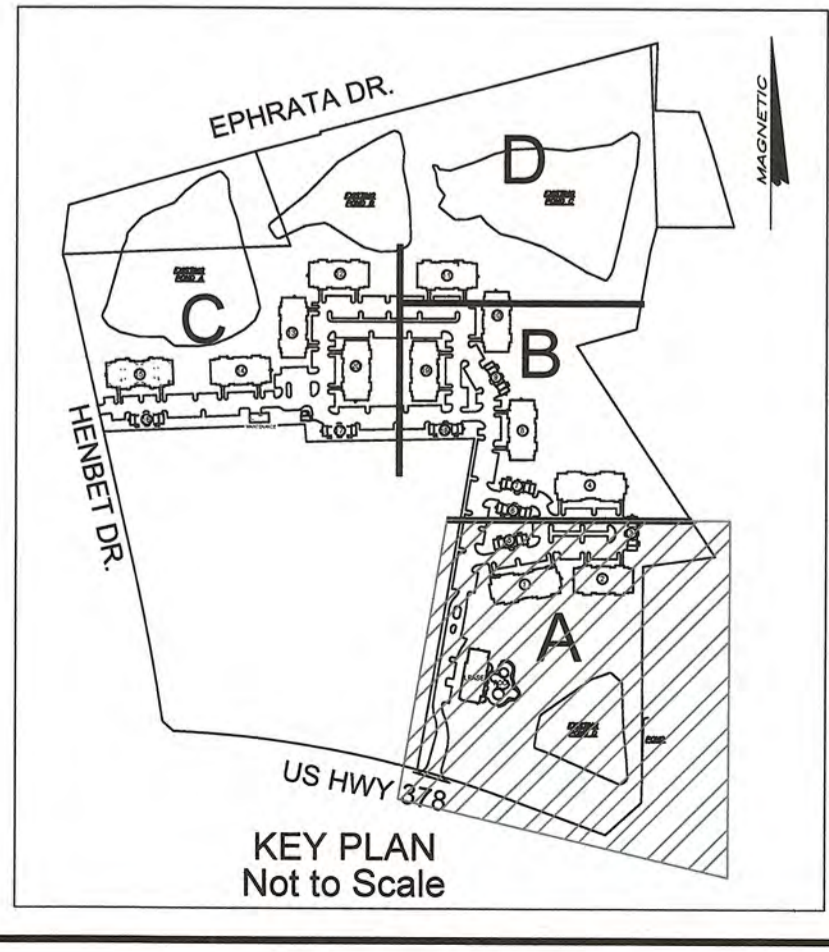
PRIMARY PERMITTEE:
TODD ANDERSEN
COLUMBIA APARTMENT RESIDENCES, LLC
1645 PEACHTREE ST. NW, SUITE 260
ATLANTA, GA 30309
(404) 815-1234
email: tandersen@novaregroup.com

PROJECT
LULLWATER AT WEST COLUMBIA
SUNSET BLVD. @ HENBET DR.
LOCATED IN THE CITY OF WEST COLUMBIA,
LEXINGTON COUNTY, SOUTH CAROLINA

PROJECT NO. 2238
SF NO. 144-12

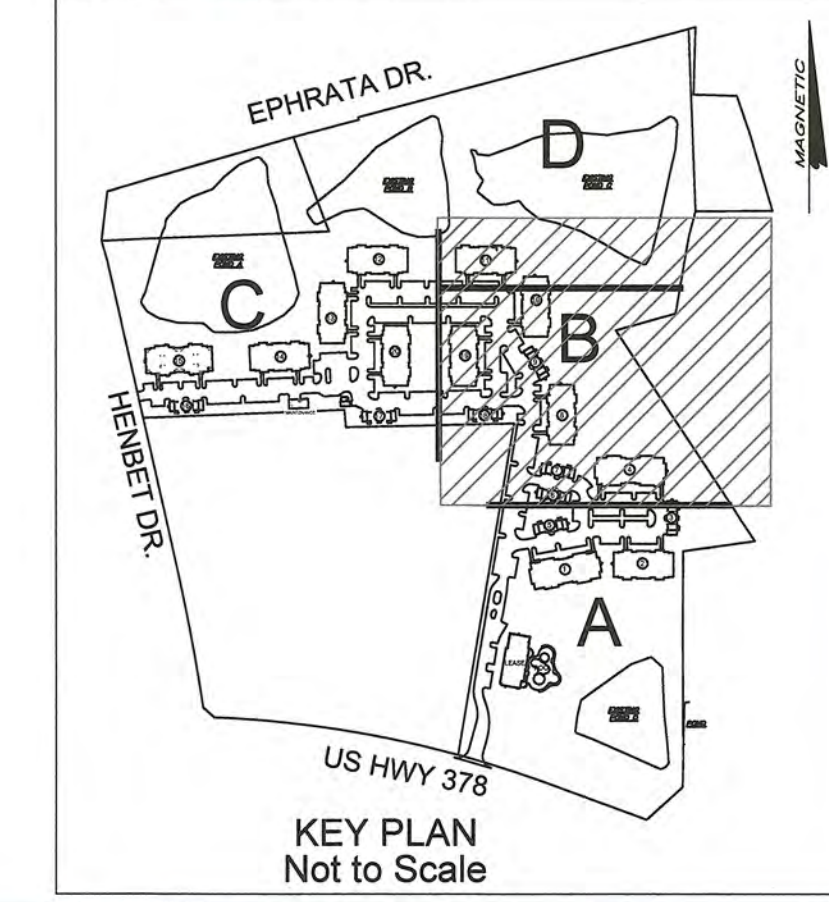
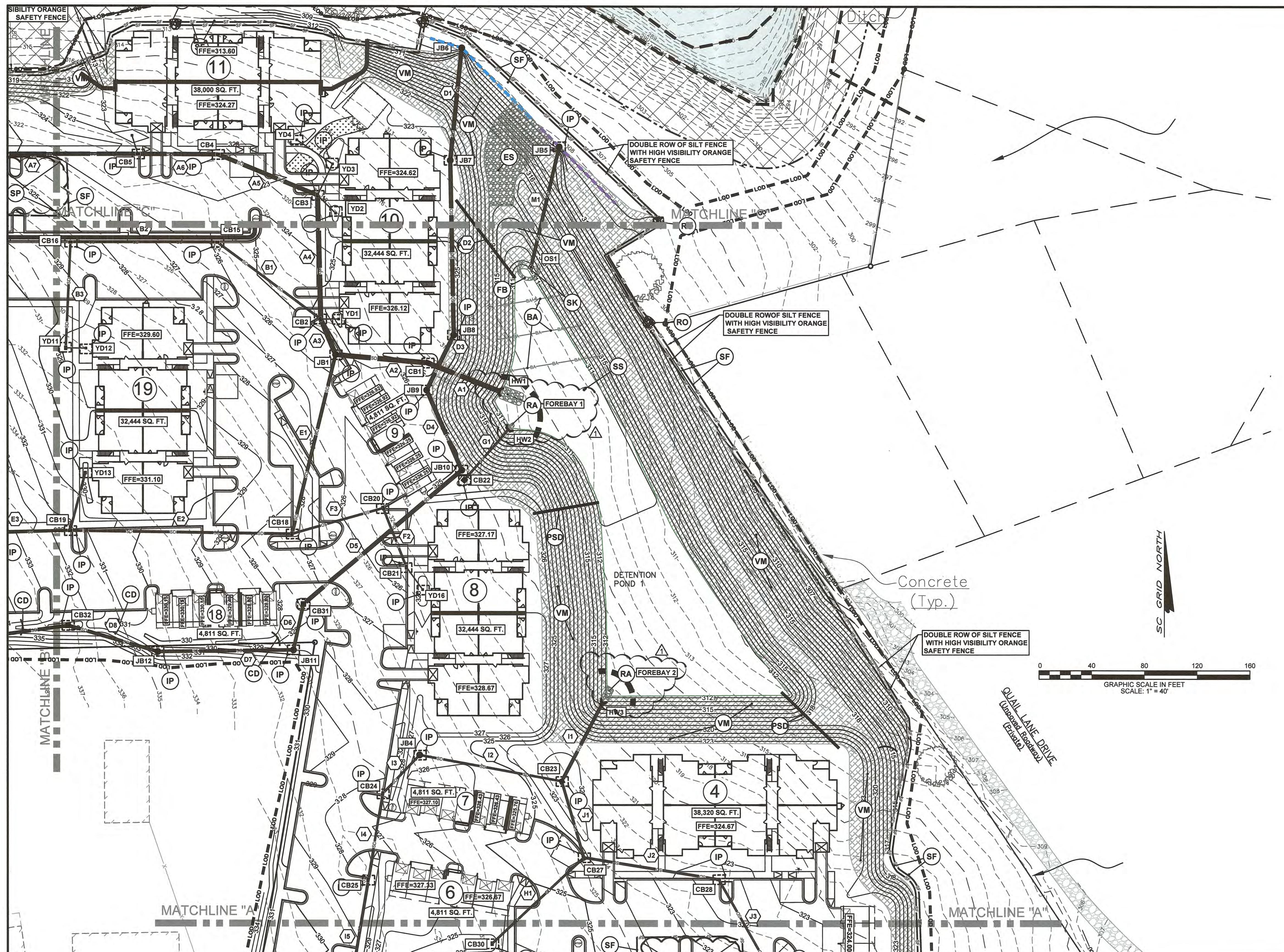
ENLARGED SWPPP - PHASE 2

TMS 03699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27
BOOK 68G-42
DATE JANUARY 14, 2022
SHEET NO. **C14A** of 48



- REFERENCES:**
- ALTANSPL LAND TITLE SURVEY PREPARED FOR FICKLING & COMPANY DATED FEBRUARY 25, 2021 BY COX AND DINKINS, INC.
- GENERAL NOTES:**
- THE SUBJECT PROPERTY IS IDENTIFIED AS LEXINGTON COUNTY TAX MAP PARCELS 03699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27.
 - TOTAL AREA OF SUBJECT PROPERTY IS 52.95 ACRES.
 - THE SUBJECT PARCELS 03699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27 ARE IN THE CITY OF WEST COLUMBIA AND ZONED AS "D (DEVELOPMENT)".
 - CONTOUR INTERVAL ELEVATIONS ARE ONE (1) FOOT. ELEVATIONS SHOWN ARE NAVD 88 DATUM.
 - THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE. THE LOCATIONS OF OTHER UNDERGROUND UTILITIES AND THEIR SERVICES ARE UNKNOWN. CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
 - THIS PROPERTY IS LOCATED IN FLOOD ZONE X PER FLOOD INSURANCE RATE MAP NUMBER 45063C0144J & 45063C0163J, REVISED JULY 5, 2018, BY SCALIC LOCATION AND GRADING PLOTTING ONLY.
 - IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT THEY AND THEIR SUBCONTRACTORS HAVE THE CORRECT/MOST UP-TO-DATE PLANS AVAILABLE.
 - ALL SIDEWALKS, STRIPING AND SIGNAGE SHALL BE ADA AND MUTCD COMPLIANT.
 - ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

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LEGEND

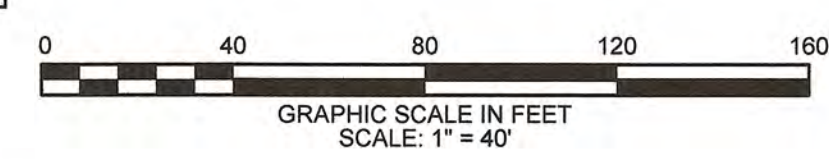
--- LOD --- LOD	LIMITS OF DISTURBANCE	(CW)	CONCRETE WASHOUT
(SF)	WIRE BACKED SILT FENCE (SEE DETAIL)	(FE)	FILTER BERM
---	PROPOSED INDEX CONTOUR	(SK)	SKIMMER
---	PROPOSED INTERMEDIATE CONTOUR	(PSD)	PIPE SLOPE DRAIN
---	EXISTING INDEX CONTOUR	(SS)	SEDIMENT STAKE
---	EXISTING INTERMEDIATE CONTOUR	(IP)	INLET PROTECTION
←	FLOW ARROW INDICATING STORMWATER FLOW DIRECTION	(RA)	RIPRAP APRON
(BA)	POROUS BAFFLE (SEE DETAIL)	(SP)	STOCKPILE
(VM)	VEGETATIVE MATTING - NORTH AMERICAN GREEN SC-150 OR APPROVED EQUAL TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS	(PP)	PLUNGE POOL
(CE)	CONSTRUCTION ENTRANCE / EXIT	(CD)	CHECK DAM
		(ES)	EMERGENCY SPILLWAY
		(RO)	SILT FENCE ROCK OUTLET

- CONSTRUCTION SEQUENCE : PHASE 2**
- 2-4 MONTHS FROM START DATE
 1. ENSURE THAT SWPPP PHASE 1 PERIMETER CONTROLS AND DETENTION PONDS ARE IN PLACE.
 - 1.5 MONTHS FROM SWPPP - PHASE 1
 2. ROUGH GRADING.
 - 1-4 MONTHS FROM SWPPP - PHASE 1
 3. BEGIN BUILDING PAD CONSTRUCTION.
 - 1-4 MONTHS FROM SWPPP - PHASE 1
 4. INSTALL FOREBAYS IN DETENTION PONDS, INSTALL UTILITIES AND THE REMAINDER OF STORM DRAINAGE SYSTEM. INSTALL INLET PROTECTION AFTER THE INSTALLATION OF EACH DRAINAGE STRUCTURE. INITIATE STABILIZATION MEASURES AS SOON AS PRACTICAL ON PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SUFFICIENT IRRIGATION TO ESTABLISH VEGETATION. TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED WHERE EARTH MOVING OPERATIONS WILL BE RESUMED WITHIN FOURTEEN (14) DAYS.
 - 2-18 MONTHS FROM SWPPP - PHASE 1
 5. COMMENCE BUILDING CONSTRUCTION.
 - 2 MONTHS FROM SWPPP - PHASE 1
 6. INSTALL VEGETATIVE MATTING.
 - 2-18 MONTHS FROM SWPPP - PHASE 1
 7. MAINTAIN EROSION AND SEDIMENT CONTROL DEVICES THROUGHOUT ALL STAGES OF CONSTRUCTION. THE CONTRACTOR SHALL FURNISH AND INSTALL ADDITIONAL SEDIMENT AND EROSION CONTROL DEVICES AS NEEDED AND/OR AS DIRECTED BY THE ENGINEER OR INSPECTOR.
 8. INSPECT SEEDING AREAS WHERE STABILIZATION MEASURES HAVE BEEN INITIATED AND RE-APPLY SEED AS NECESSARY TO ACHIEVE AND MAINTAIN A MINIMUM 70% COVERAGE OF THE SEEDING AREAS.
 - 3-10 MONTHS FROM SWPPP - PHASE 1
 9. PERFORM FINE GRADING, CURB AND GUTTER INSTALLATION, ETC.
 10. INSTALL STONE BASE IN ROADWAYS AND ENSURE DRAINAGE IS DIRECTED TO THE STORM DRAINAGE SYSTEM. PROTECT STORM DRAINAGE INLETS DURING STONE PLACEMENT AND MAINTAIN INLET PROTECTION.
 - 6-18 MONTHS FROM SWPPP - PHASE 1
 11. PAVE ROADWAYS AND GRASSISED ALL DISTURBED AREAS PER THE SEEDING SCHEDULE.
 12. UPON INSTALLATION OF CURBS, ASPHALT, AND CATCH BASIN TOPS, FURNISH AND INSTALL SEDIMENT TUBE INLET PROTECTION OR DROP INLET SEDIMENT FILTER. (SEE DETAIL)
 13. PROCEED TO SWPPP PHASE 3.

NOTE TO CONTRACTOR REGARDING PHASED SWPPP

THE INTENT OF THE PHASED SWPPP IS TO LIMIT THE AMOUNT OF EXPOSED SOIL DURING CONSTRUCTION TO PREVENT LOSS OF SEDIMENT. THE CONTRACTOR MUST REVIEW ALL PORTIONS OF THE SWPPP TO UNDERSTAND EACH PHASE AND THE PURPOSE OF THE PHASING. THERE WILL BE INFORMATION CONTAINED IN THE CONSTRUCTION PHASE SWPPP AND DETAILS THAT WILL BE NEEDED AS YOU TRANSITION FROM INITIAL PHASE THROUGH STABILIZATION PHASE. CONSULT ALL PLAN SHEETS AND DETAILS TO DETERMINE THE BEST COURSE OF ACTION WHILE KEEPING THE OVERALL INTENT OF THESE PHASED SWPPPS. IT IS HIGHLY RECOMMENDED THAT THE CONTRACTOR HAVE THE PROJECT ENGINEER OR SWPPP INSPECTOR PERFORM AN INSPECTION TO VERIFY THAT ALL ELEMENTS OF THE INITIAL SWPPP ARE INSTALLED PROPERLY PRIOR TO MOVING FORWARD WITH THE CONSTRUCTION PHASE SWPPP.

**TOTAL DISTURBED AREA
18.2 ACRES**



NOTE: INFORMATION REGARDING THE REPORTED PRESENCE, SIZE, CHARACTER AND LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES SHOWN ON THESE PLANS MAY HAVE BEEN PROVIDED TO COX AND DINKINS, INC. FROM LOCAL UTILITY COMPANIES. THERE IS NO WARRANTY OF THE LIGHT BY THOSE USING THIS DRAWING, HOWEVER, COX AND DINKINS, INC. HAS CONDUCTED SURVEYS AND ANY FACTS THAT WOULD LEAD US TO CONCLUDE THAT THE INFORMATION IS NOT ACCURATE, FURTHERMORE, OTHER UTILITIES AND STRUCTURES NOT SHOWN ON THESE PLANS MAY BE PRESENT. THE OWNER, HIS EMPLOYEES, HIS CONSULTANTS, HIS AGENTS AND HIS CONTRACTORS SHALL REMAIN SOLELY RESPONSIBLE FOR THE ACCURACY OF THE UNDERGROUND INFORMATION. INFORMATION WITH RESPECT TO ANY UNDERGROUND UTILITIES IS BASED UPON ACTUAL FIELD MEASUREMENTS AND OBSERVATIONS, AND IS SHOWN HEREON.

The Palmetto Utility Protection Service, Inc.
South Carolina 811
3 DAYS BEFORE DIGGING IN SOUTH CAROLINA
CALL 811
CONTRACTOR SHALL CONTACT THE UNDERGROUND LOCATORS EVERY 10 DAYS FOR AN UPDATE TO UTILITY LOCATIONS.

- REFERENCES:**
1. REFERENCES
ALTA/NSPS LAND TITLE SURVEY PREPARED FOR FICKLING & COMPANY DATED FEBRUARY 25, 2021 BY COX AND DINKINS, INC.
- GENERAL NOTES:**
1. THE SUBJECT PROPERTY IS IDENTIFIED AS LEXINGTON COUNTY TAX MAP PARCELS 03699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27.
 2. TOTAL AREA OF SUBJECT PROPERTY IS 52.95 ACRES.
 3. THE SUBJECT PARCELS 03699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27 ARE IN THE CITY OF WEST COLUMBIA AND ZONED AS 'D' (DEVELOPMENT).
 4. CONTOUR INTERVAL ELEVATIONS ARE ONE (1) FOOT. ELEVATIONS SHOWN ARE NAVD 88 DATUM.
 5. THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE. THE LOCATIONS OF OTHER UNDERGROUND UTILITIES AND THEIR SERVICES ARE UNKNOWN. CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
 6. THIS PROPERTY IS LOCATED IN FLOOD ZONE X PER FLOOD INSURANCE RATE MAP NUMBER 45063C0144J & 45063C0163J, REVISED JULY 6, 2018, BY SCALED LOCATION AND GRAPHIC PLOTTING ONLY.
 7. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT THEY AND THEIR SUBCONTRACTORS HAVE THE CORRECTMOST UP-TO-DATE PLANS AVAILABLE.
 8. ALL SIDEWALKS, STRIPING AND SIGNAGE SHALL BE ADA AND MUTCD COMPLIANT.
 9. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

COX AND DINKINS
ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
724 BELTLINE BLVD.
COLUMBIA, SC 29205
803.254.0518
COXANDINKINS.COM

South Carolina Professional Engineer
No. 27748
3/11/2022
Laura M. Baker
LICENSED PROFESSIONAL ENGINEER
No. 37748

South Carolina Professional Engineer
No. 00294
Cox and Dinkins, Inc.
CERTIFICATE OF AUTHORIZATION SEAL

NO.	DATE	DESCRIPTION
1	03/11/2022	Revised per Lexington County Comments.

PRIMARY PERMITTEE:
TODD ANDERSEN
COLUMBIA APARTMENT RESIDENCES, LLC
1545 PEACHTREE ST. NW, SUITE 260
ATLANTA, GA 30309
(404) 815-1234
email: tandersen@novaregroup.com

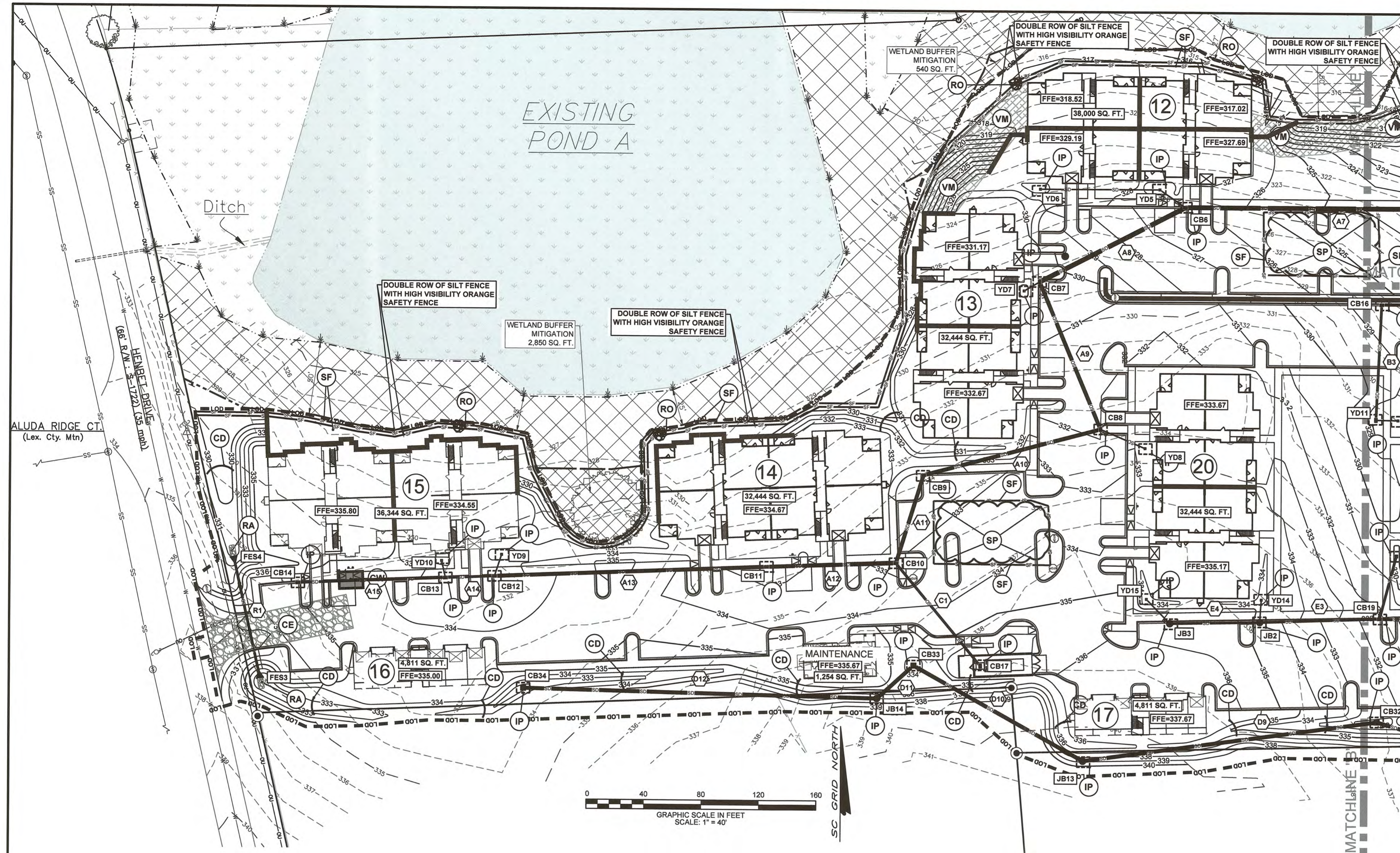
PROJECT:
LULLWATER AT WEST COLUMBIA
SUNSET BLVD. @ HENBET DR.
LOCATED IN THE CITY OF WEST COLUMBIA,
LEXINGTON COUNTY, SOUTH CAROLINA

PROJECT NO.: 2238
SF NO.: 144-12

ENLARGED SWPPP - PHASE 2

TMS 03699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27
BOOK 68G-42
DATE JANUARY 14, 2022
SHEET NO. **C14B** of 48

C:\p\03\2238 West Columbia Multifamily Drawings\2238_Erson.dwg, Plotted By: LMB, Plotted: Mar 11, 2022 - 3:19pm



LEGEND

--- LOD --- LOD	LIMITS OF DISTURBANCE (SEE DETAIL)	☐ CW	CONCRETE WASHOUT
--- SF --- SF	WIRE BACKED SILT FENCE (SEE DETAIL)	○ FB	FILTER BERM
--- 365 ---	PROPOSED INDEX CONTOUR	○ SK	SKIMMER
--- 364 ---	PROPOSED INTERMEDIATE CONTOUR	○ PSD	PIPE SLOPE DRAIN
--- 365 ---	EXISTING INDEX CONTOUR	○ SS	SEDIMENT STAKE
--- 365 ---	EXISTING INTERMEDIATE CONTOUR	○ IP	INLET PROTECTION
← --- BA ---	FLOW ARROW INDICATING STORMWATER FLOW DIRECTION	○ RA	RIPRAP APRON
○ BA	PERVIOUS BAFFLE (SEE DETAIL)	○ SP	STOCKPILE
VM	VEGETATIVE MATTING-NORTH AMERICAN GREEN SC-150 OR APPROVED EQUAL. TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS	○ PP	PLUNGE POOL
CE	CONSTRUCTION ENTRANCE / EXIT	○ CD	CHECK DAM
		○ ES	EMERGENCY SPILLWAY
		○ RO	SILT FENCE ROCK OUTLET

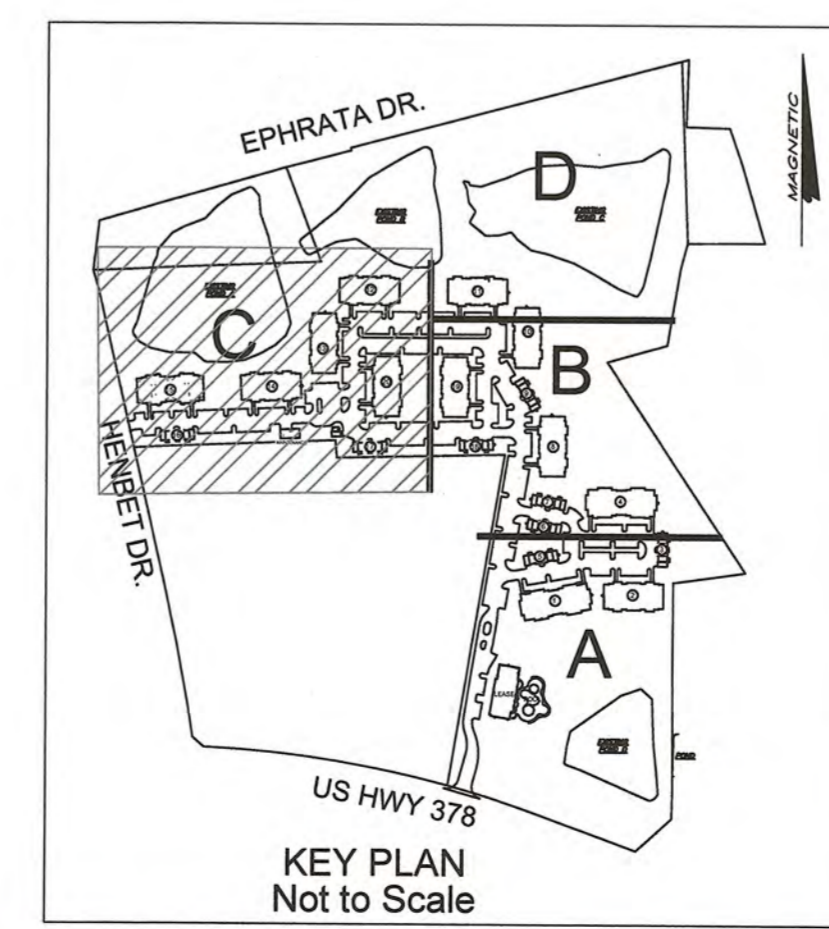
CONSTRUCTION SEQUENCE : PHASE 2

- 2-6 MONTHS FROM START DATE
- ENSURE THAT SWPPP PHASE 1 PERIMETER CONTROLS AND DETENTION PONDS ARE IN PLACE.
- ROUGH GRADING.
- 1-8 MONTHS FROM SWPPP - PHASE 1
- BEGIN BUILDING PAD CONSTRUCTION.
- 1-8 MONTHS FROM SWPPP - PHASE 1
- INSTALL FOREBAYS IN DETENTION PONDS. INSTALL UTILITIES AND THE REMAINDER OF STORM DRAINAGE SYSTEM. INSTALL INLET PROTECTION AFTER THE INSTALLATION OF EACH DRAINAGE STRUCTURE. INITIATE STABILIZATION MEASURES AS SOON AS PRACTICAL ON PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORKED HAS CEASED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SUFFICIENT IRRIGATION TO ESTABLISH VEGETATION. TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED WHERE EARTH MOVING OPERATIONS WILL BE RESUMED WITHIN FOURTEEN (14) DAYS.
- 1-8 MONTHS FROM SWPPP - PHASE 1
- COMMENCE BUILDING CONSTRUCTION.
- 2-6 MONTHS FROM SWPPP - PHASE 1
- INSTALL VEGETATIVE MATTING.
- 1-8 MONTHS FROM SWPPP - PHASE 1
- MAINTAIN EROSION AND SEDIMENT CONTROL DEVICES THROUGHOUT ALL STAGES OF CONSTRUCTION. THE CONTRACTOR SHALL FURNISH AND INSTALL ADDITIONAL SEDIMENT AND EROSION CONTROL DEVICES AS NEEDED AND/OR AS DIRECTED BY THE ENGINEER OR INSPECTOR.
- INSPECT SEEDED AREAS WHERE STABILIZATION MEASURES HAVE BEEN INITIATED AND RE-APPLY SEED AS NECESSARY TO ACHIEVE AND MAINTAIN A MINIMUM 70% COVERAGE OF THE SEEDED AREAS.
- 10 MONTHS FROM SWPPP - PHASE 1
- PERFORM FINE GRADING, CURB AND GUTTER INSTALLATION, ETC.
- INSTALL STONE BASE IN ROADWAYS AND ENSURE DRAINAGES ARE DIRECTED TO THE STORM DRAINAGE SYSTEM. PROTECT STORM DRAINAGE INLETS DURING STONE PLACEMENT AND MAINTAIN INLET PROTECTION.
- 18 MONTHS FROM SWPPP - PHASE 1
- PAVE ROADWAYS AND GRASSSEED ALL DISTURBED AREAS PER THE SEEDING SCHEDULE.
- UPON INSTALLATION OF CURBING, ASPHALT, AND CATCH BASIN TOPS, FURNISH AND INSTALL SEDIMENT TUBE INLET PROTECTION OR DROP INLET SEDIMENT FILTER. (SEE DETAIL)
- PROCEED TO SWPPP PHASE 3.

NOTE TO CONTRACTOR REGARDING PHASED SWPPP

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**TOTAL DISTURBED AREA
18.2 ACRES**



- REFERENCES:**
- ALTANSIPS LAND TITLE SURVEY PREPARED FOR FICKLING & COMPANY DATED FEBRUARY 25, 2021 BY COX AND DINKINS, INC.
- GENERAL NOTES:**
- THE SUBJECT PROPERTY IS IDENTIFIED AS LEXINGTON COUNTY TAX MAP PARCELS 03699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27.
 - TOTAL AREA OF SUBJECT PROPERTY IS 52.95 ACRES.
 - THE SUBJECT PARCELS 03699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27 ARE IN THE CITY OF WEST COLUMBIA AND ZONED AS "D (DEVELOPMENT)".
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 - THIS PROPERTY IS LOCATED IN FLOOD ZONE X PER FLOOD INSURANCE RATE MAP NUMBER 45063C0144J & 45063C0163J, REVISED JULY 5, 2018, BY SCALED LOCATION AND GRAPHIC PLOTTING ONLY.
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COX AND DINKINS
ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
724 BELTLINE BLVD.
COLUMBIA, SC 29206
803.254.0518
COXANDINKINS.COM

Laura M. B. Baker
LICENSED PROFESSIONAL ENGINEER
No. 27748

COX AND DINKINS, INC.
No. C00294

CERTIFICATE OF AUTHORIZATION SEAL

NO.	DATE	DESCRIPTION
1	03/11/2022	Revised per Lexington County Comments.

PRIMARY PERMITTEE:
TODD ANDERSEN
COLUMBIA APARTMENT
RESIDENCES, LLC
1545 PEACHTREE ST. NW, SUITE 260
ATLANTA, GA 30309
(404) 815-1234
email: tandersen@novaregroup.com

PROJECT
LULLWATER AT WEST COLUMBIA
SUNSET BLVD. @ HENBET DR.
LOCATED IN THE CITY OF WEST COLUMBIA,
LEXINGTON COUNTY, SOUTH CAROLINA

PROJECT NO.
2238

ENLARGED SWPPP - PHASE 2

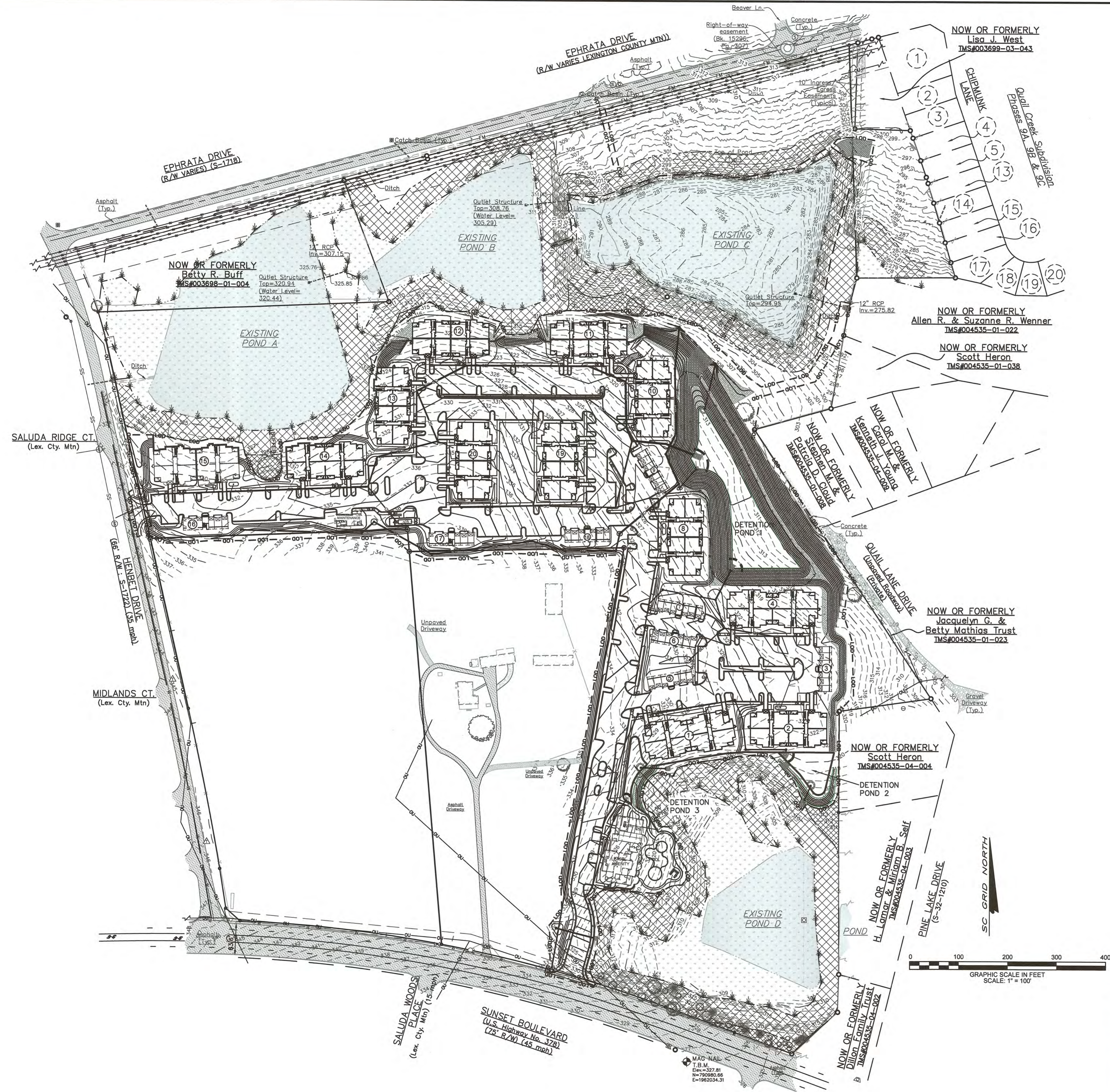
TMS 03699-03-11, 04535-01-14,
04597-09-21, -22, -26, & -27

BOOK 68G-42

DATE JANUARY 14, 2022

SHEET NO. **C14C** of 48

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LEGEND

--- LOD	--- LOD	LIMITS OF DISTURBANCE	[Pattern]	RIPRAP
---	---	PROPOSED INDEX CONTOUR	[Pattern]	EMERGENCY SPILLWAY
---	---	PROPOSED INTERMEDIATE CONTOUR	[Pattern]	VEGETATIVE MATTING - NORTH AMERICAN GREEN SC-150 OR APPROVED EQUAL TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS
---	---	EXISTING INDEX CONTOUR	[Pattern]	
---	---	EXISTING INTERMEDIATE CONTOUR	[Pattern]	

CONSTRUCTION SEQUENCE : PHASE 3

1-2 MONTHS AFTER SWPPP - PHASE II

1. REMOVE ACCUMULATED SEDIMENT IN DETENTION PONDS AND STORM DRAINAGE SYSTEM. RE-GRADE DETENTION PONDS TO MEET ORIGINAL DESIGN CAPACITY WITH PERMANENT FOREBAYS.
2. PERFORM AS-BUILT SURVEY OF THE DETENTION PONDS AND CERTIFY THAT IT HAS BEEN INSTALLED PER PLANS AND DETAILS. SURVEY SHALL BE PERFORMED BY A LICENSED SURVEYOR.
3. IT IS RECOMMENDED THAT PERMANENT GRASSING NOT BE DONE UNTIL IT HAS BEEN CERTIFIED TO DESIGN CAPACITY.
4. REMOVE TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES ONLY AFTER ENTIRE AREA DRAINAGE TO THE STORM DRAINAGE STRUCTURE IS STABILIZED TO A MINIMUM OF 80% AND IS APPROVED BY THE ENGINEER AND AHI.

2-3 MONTHS AFTER SWPPP - PHASE II

5. PERMANENTIAL STABILIZATION OF DETENTION PONDS AND ALL AREAS, INCLUDING REMOVAL OF BAFFLES AND SKIMMER. RECEIVE FINAL APPROVAL FROM LEXINGTON COUNTY AND SUBMIT O-H PLAN.
6. SUBMIT NOTICE OF TERMINATION TO LEXINGTON COUNTY.

NOTE TO CONTRACTOR REGARDING PHASED SWPPP

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NOTE TO CONTRACTOR REGARDING PHASED SWPPP

TOTAL DISTURBED AREA 18.2 ACRES

MAINTENANCE NOTES

POND MAINTENANCE:

ROUTINE MAINTENANCE: THE MAINTENANCE WILL OCCUR DURING DAYLIGHT, WEEK DAY HOURS. ROUTINE MAINTENANCE WILL INCLUDE BUT NOT BE LIMITED TO:

1. MOWING OF THE BANK SLOPES AND AREA AROUND THE POND ON A MONTHLY BASIS DURING THE GROWING SEASON AND AS NEEDED DURING THE COOLER MONTHS.
2. THE OUTFALL STRUCTURE FROM THE POND, OUTFALL PIPE, AND OTHER AREAS WILL BE INSPECTED MONTHLY FOR DEBRIS WHICH COULD INHIBIT THE PROPER FLOW OF DISCHARGE. ANY DEBRIS WILL BE REMOVED IMMEDIATELY AND DISPOSED OF OR PLACED IN A LOCATION TO PREVENT FUTURE MAINTENANCE AND TO NOT CAUSE IMPACT UP OR DOWNSTREAM OF THE STRUCTURE.
3. TRASH WILL BE REMOVED FROM AROUND THE PONDS TO PREVENT ENTERING THE PONDS. GENERALLY, THE SITE SHOULD BE KEPT FREE OF LOOSE TRASH WHICH COULD BE CARRIED OFF SITE BY WIND OR RAIN.
4. INSPECT THE PONDS AND OUTFALL STRUCTURES FOR NON-ROUTINE MAINTENANCE NEEDS.

PERIODIC OR NON-ROUTINE MAINTENANCE:

THE ROUTINE INSPECTION OF THE POND AREA AND DISCHARGE/OUTFALL STRUCTURES WILL IDENTIFY NEEDED REPAIRS AND NON-ROUTINE MAINTENANCE. THESE ITEMS MAY INCLUDE BUT ARE NOT LIMITED TO:

1. GROWTH OF TREES OR GRASS AROUND THE POND BANK. THESE SHOULD BE CUT AND REMOVED FROM THE POND AREA.
2. SEDIMENT FROM THE SITE MAY ACCUMULATE IN THE POND BOTTOM AND REDUCE THE PONDS TO BELOW DESIGN VOLUME REQUIREMENTS. THE POND SHOULD BE EXCAVATED IF THE POND BOTTOM ELEVATION REACHES A LEVEL THAT LOWERS EXCESSIVE AQUATIC GROWTH OR REDUCES THE POND EFFICIENCY SUCH THAT INFILTRATION RATES ARE REDUCED.
3. STABILIZATION OR RE-GRADE OF SIDE SLOPES MAY BE REQUIRED PERIODICALLY OR AFTER EXCESSIVE RAIN EVENTS. ANY DISTURBANCE OF SLOPES SHOULD BE RESEEDED OR MAY REQUIRE INSTALLATION OF EROSION CONTROL MATERIALS UNTIL SEEDING CAN REESTABLISH ADEQUATE GRASSES TO PREVENT FUTURE EROSION.
4. ANY OTHER MAINTENANCE OR REPAIRS WHICH WOULD MINIMIZE OTHER MAINTENANCE TO THE POND OR OUTFALL STRUCTURE.

REFERENCES:

1. REFERENCES ALTANSPS LAND TITLE SURVEY PREPARED FOR FICKLING & COMPANY DATED FEBRUARY 25, 2021 BY COX AND DINKINS, INC.

GENERAL NOTES:

1. THE SUBJECT PROPERTY IS IDENTIFIED AS LEXINGTON COUNTY TAX MAP PARCELS 03699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27.
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6. THIS PROPERTY IS LOCATED IN FLOOD ZONE X PER FLOOD INSURANCE RATE MAP NUMBER 45063C0144J & 45063C0163I. REVISED JULY 5, 2018, BY SCALED LOCATION AND GRAPHIC PLOTTING ONLY.
7. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT THEY AND THEIR SUBCONTRACTORS HAVE THE CORRECT/MOST UP-TO-DATE PLANS AVAILABLE.
8. ALL SIDEWALKS, STRIPING AND SIGNAGE SHALL BE ADA AND MUTCD COMPLIANT.
9. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

PROJECT NO.	U3699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27
BOOK	88G-42
DATE	JANUARY 14, 2022
SHEET NO.	C15 of 48

COX AND DINKINS
ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
724 BELTLINE BLVD.
COLUMBIA, SC 29205
803.254.0518
COXANDINKINS.COM

Professional Engineer
No. 27748
3/11/2022

Professional Engineer
No. 27748

Professional Engineer
No. 27748

Professional Engineer
No. 27748

Professional Engineer
No. 27748

Professional Engineer
No. 27748

CERTIFICATE OF AUTHORIZATION SEAL

REVISIONS	DESCRIPTION
	Revised per Lexington County Comments.

DATE	DESCRIPTION
03/11/2022	

PRIMARY PERMITTEE:
TODD ANDERSEN
COLUMBIA APARTMENT RESIDENCES, LLC
1545 PEACHTREE ST. NW, SUITE 260
ATLANTA, GA 30309
(404) 815-1234
email: tandersen@novaregroup.com

PROJECT: **LULLWATER AT WEST COLUMBIA**
SUNSET BLVD. @ HENBET DR.
LOCATED IN THE CITY OF WEST COLUMBIA,
LEXINGTON COUNTY, SOUTH CAROLINA

SWPPP - PHASE 3

TMS U3699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27
BOOK 88G-42
DATE JANUARY 14, 2022
SHEET NO. C15 of 48

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G:\Proj\2238 West Columbia Multifamily\DRAWINGS\2238_Erosion.dwg, Plotted By: LMB, Plotted: Mar 11, 2022 - 3:31pm

COMPOSITE UTILITIES

- PROPOSED WATER MAIN
- EXISTING WATER MAIN
- PROPOSED SEWER MAIN
- PROPOSED SEWER SERVICE
- PROPOSED SEWER FORCE MAIN
- EXISTING SEWER MAIN
- EXISTING SEWER FORCE MAIN
- PROPOSED STORM DRAINAGE LINE
- PROPOSED ELECTRIC LINE
- EXISTING ELECTRIC LINE

EXCLUSIVE PROPOSED WATER EASEMENT

THIS PLAN IS PROVIDED FOR COORDINATION PURPOSES ONLY

COX AND DINKINS
ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
724 BELTLINE BLVD.
COLUMBIA, SC 29206
803.254.0518
COXANDDINKINS.COM

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 27748
3/11/2022
Laura M. Bate
Laura M. Bate
LICENSED PROFESSIONAL ENGINEER
No. 27748

SOUTH CAROLINA PROFESSIONAL SURVEYOR
No. C00294
COX AND DINKINS, INC.
No. C00294
CERTIFICATE OF AUTHORIZATION SEAL

NO.	DATE	DESCRIPTION

PRIMARY PERMITTEE:
TODD ANDERSEN
COLUMBIA
APARTMENT
RESIDENCES, LLC
1545 PEACHTREE ST., NW, SUITE 280
ATLANTA, GA 30309
(404) 815-1234
email: tandersen@novaregroup.com

PROJECT: **LULLWATER AT WEST COLUMBIA**
SUNSET BLVD. @ HENBET DR.
LOCATED IN THE CITY OF WEST COLUMBIA,
LEXINGTON COUNTY, SOUTH CAROLINA

PROJECT NO. 2238
SF NO. 144-12

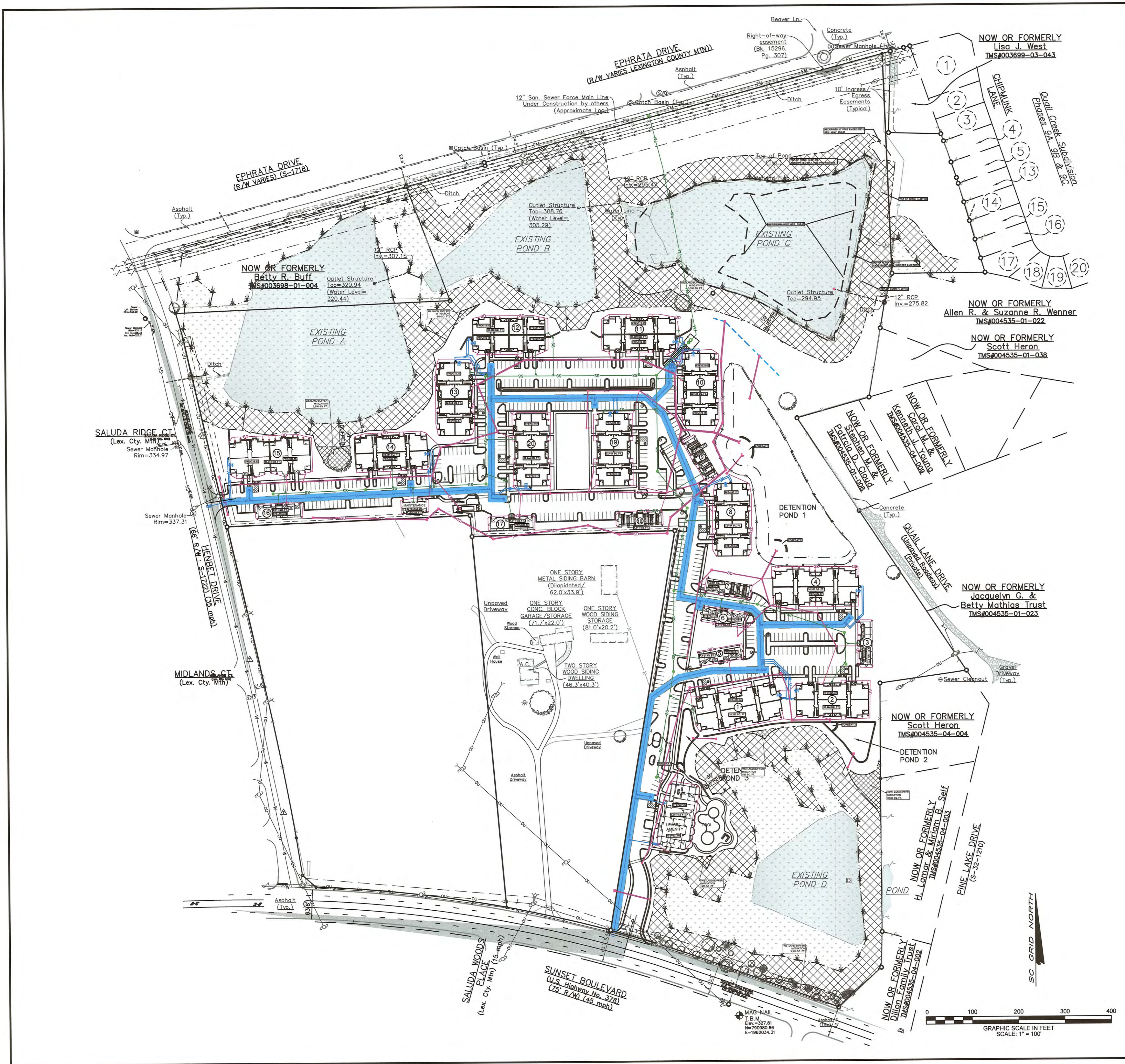
COMPOSITE UTILITIES PLAN

TMS: U3699-03-11, U4535-1-14, U4597-09-21, -22, -26, & -27
BOOK: 68G-42
DATE: JANUARY 14, 2022
SHEET NO. **C16** of 48

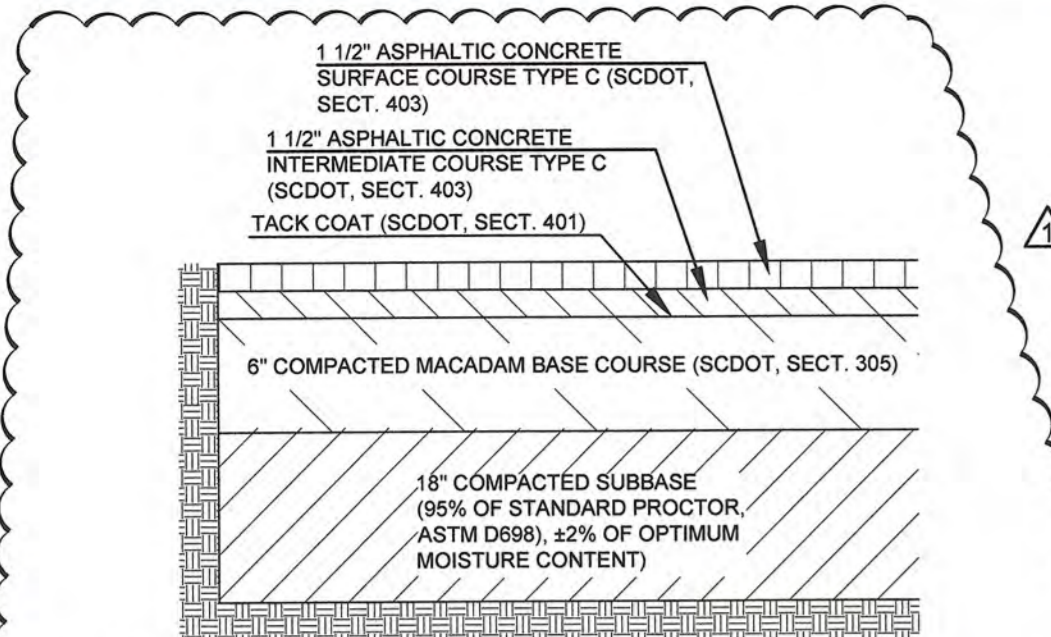
NOTE: INFORMATION REGARDING THE SHOWN UTILITIES, SIZE, CHARACTER AND LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES SHOWN ON THESE PLANS HAVE BEEN PROVIDED TO COX AND DINKINS, INC. FROM LOCAL UTILITY COMPANIES. THERE IS NO CERTAINTY OF THE ACCURACY OF THE INFORMATION AND IT SHALL BE CONSIDERED AT THE RISK OF THE USER OF THESE PLANS. COX AND DINKINS, INC. HAS NO NOTICE OR KNOWLEDGE OF ANY FACTS THAT WOULD CAUSE US TO CONCLUDE THAT THE INFORMATION IS NOT ACCURATE. FURTHERMORE, OTHER UTILITIES AND STRUCTURES NOT SHOWN ON THESE PLANS MAY BE PRESENT. THE USER SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES NOT SHOWN ON THESE PLANS MAY BE PRESENT. THE USER SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES NOT SHOWN ON THESE PLANS MAY BE PRESENT. THE USER SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES NOT SHOWN ON THESE PLANS MAY BE PRESENT.

The Palmetto Utility Protection Service, Inc.
South Carolina 811
3 DAYS BEFORE DIGGING IN SOUTH CAROLINA
CALL 811
CONTRACTOR SHALL CONTACT THE UNDERGROUND LOCATORS EVERY 15 DAYS FOR AN UPDATE TO UTILITY LOCATIONS.

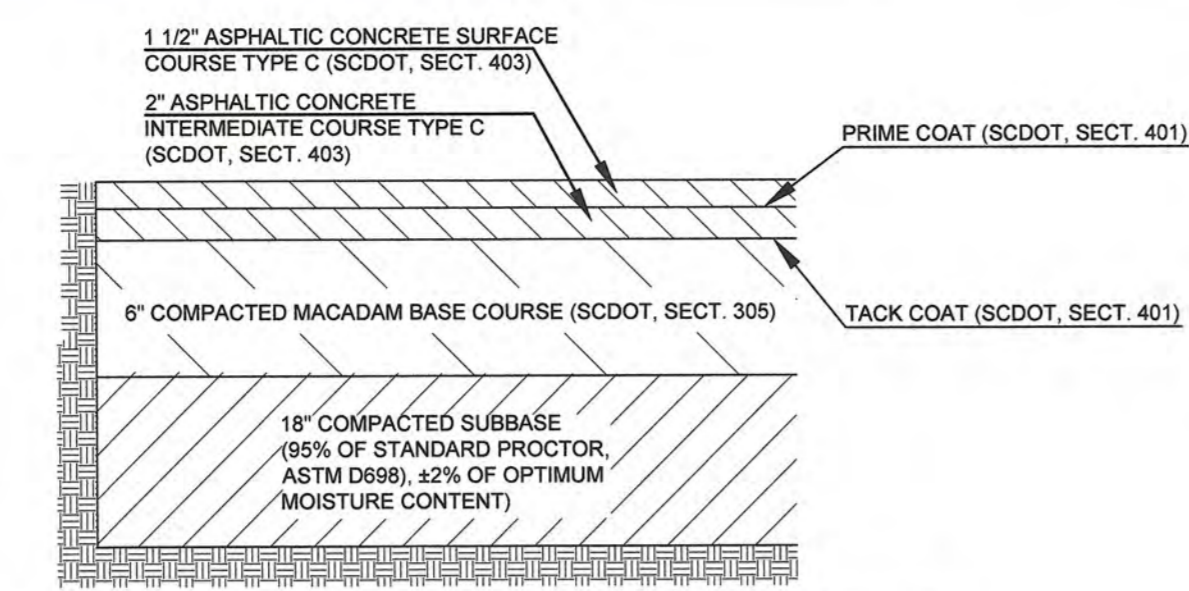
- REFERENCES:**
- REFERENCES
ALTANSPS LAND TITLE SURVEY PREPARED FOR FICKLING & COMPANY DATED FEBRUARY 25, 2021 BY COX AND DINKINS, INC.
- GENERAL NOTES:**
- THE SUBJECT PROPERTY IS IDENTIFIED AS LEXINGTON COUNTY TAX MAP PARCELS 03699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27.
 - TOTAL AREA OF SUBJECT PROPERTY IS 52.95 ACRES.
 - THE SUBJECT PARCELS 03699-03-11, 04535-01-14, 04597-09-21, -22, -26, & -27 ARE IN THE CITY OF WEST COLUMBIA AND ZONED AS "D (DEVELOPMENT)".
 - CONTOUR INTERVAL ELEVATIONS ARE ONE (1) FOOT. ELEVATIONS SHOWN ARE NAVD 88 DATUM.
 - THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE. THE LOCATIONS OF OTHER UNDERGROUND UTILITIES AND THEIR SERVICES ARE UNKNOWN. CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
 - THIS PROPERTY IS LOCATED IN FLOOD ZONE X PER FLOOD INSURANCE RATE MAP NUMBER 45063C0144J & 45063C0163J, REVISED JULY 5, 2018, BY SCALED LOCATION AND GRAPHIC PLOTTING ONLY.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THEY AND THEIR SUBCONTRACTORS HAVE THE CORRECTMOST UP-TO-DATE PLANS AVAILABLE.
 - ALL SIDEWALKS, STRIPING AND SIGNAGE SHALL BE ADA AND MUTCD COMPLIANT.
 - ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.



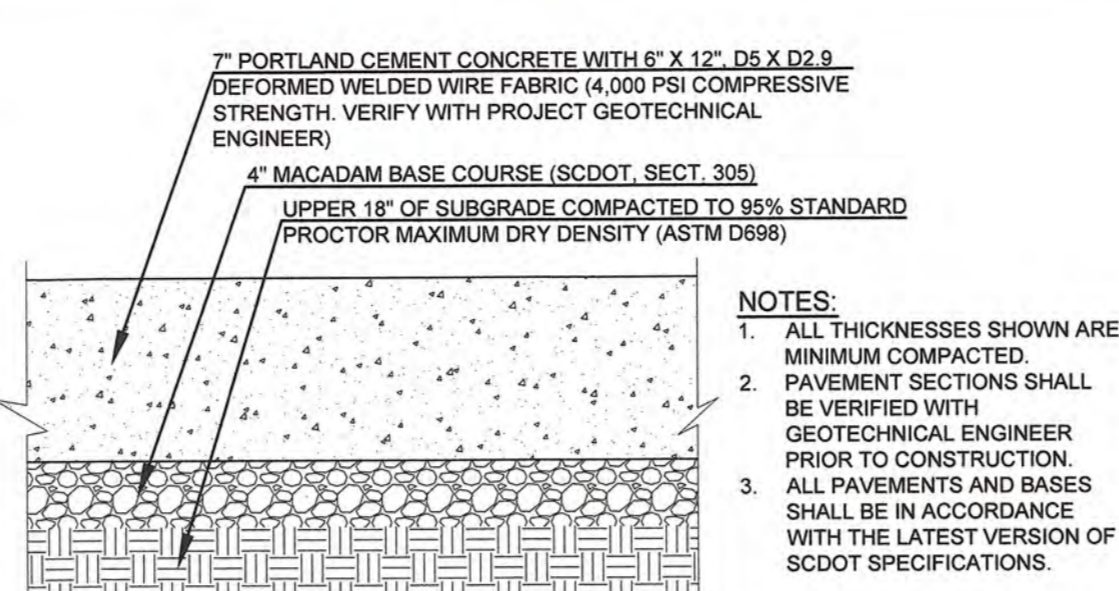
COPYRIGHT © 2022 COX AND DINKINS, INC. ALL RIGHTS RESERVED.
G:\Proj\22338 West Columbia Multifamily\DRAWINGS\22338_Composite Utilities.dwg, Plotted By: SNN, Plotted: Mar 11, 2022 4:15pm



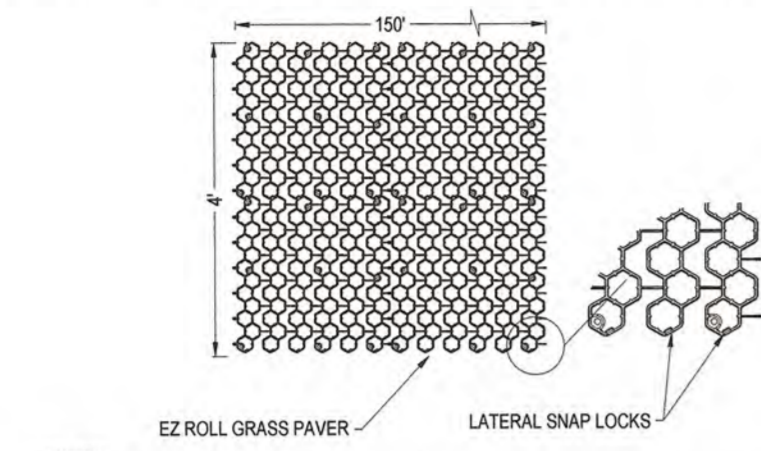
STANDARD DUTY ASPHALT PAVEMENT
VERIFY WITH PROJECT GEOTECHNICAL REPORT
NTS



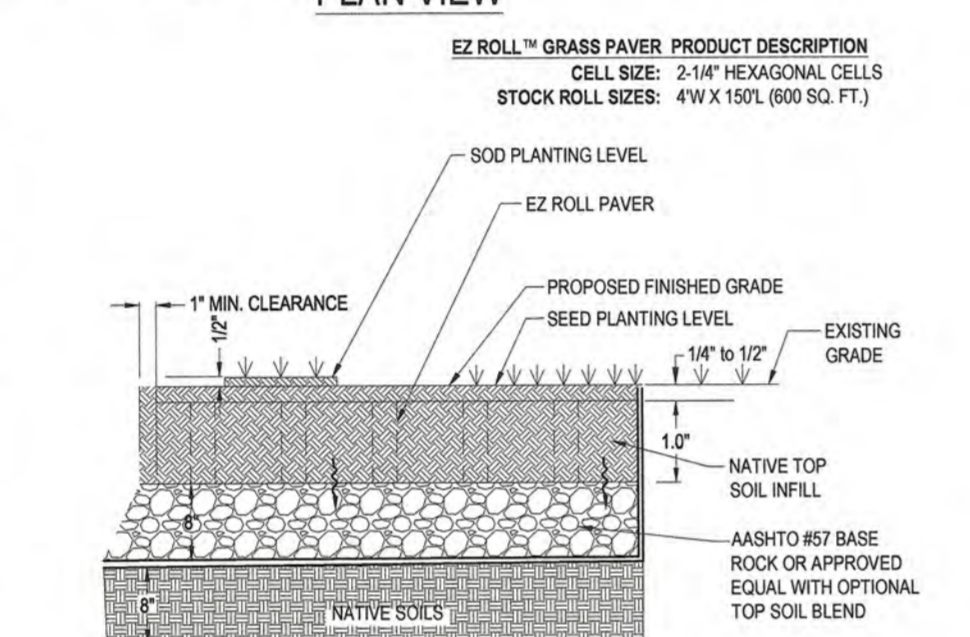
HEAVY DUTY ASPHALT PAVEMENT
VERIFY WITH PROJECT GEOTECHNICAL REPORT
NTS



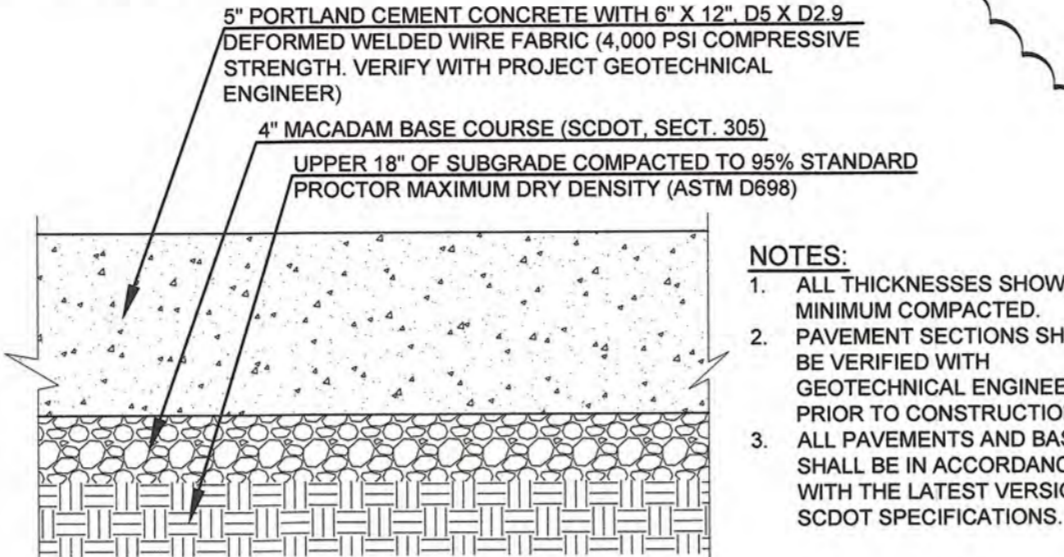
HEAVY DUTY CONCRETE PAVEMENT
VERIFY WITH PROJECT GEOTECHNICAL REPORT
NTS



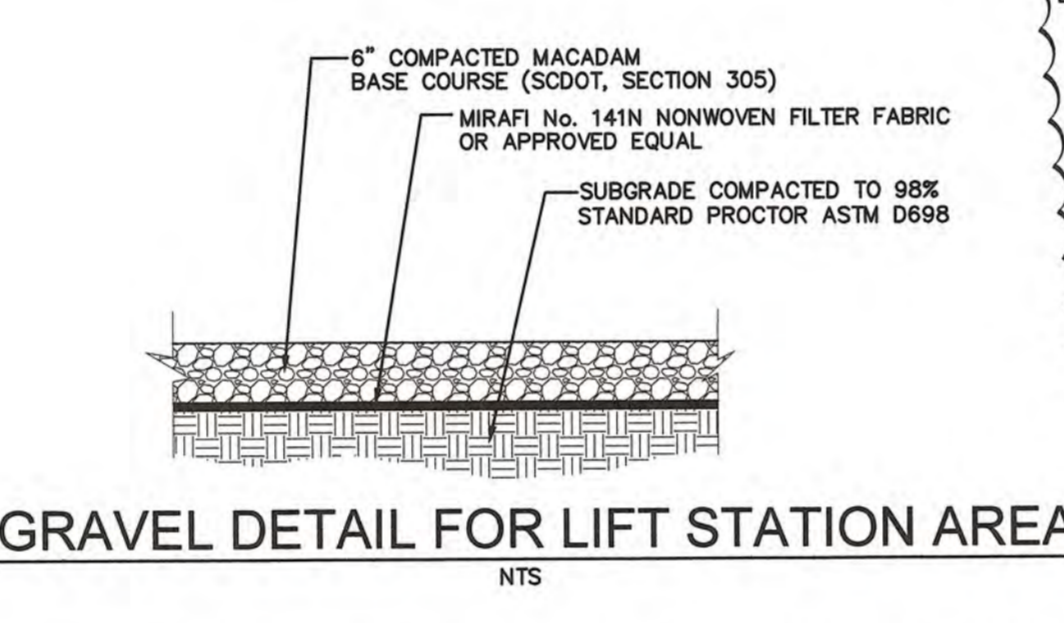
- NOTES:**
- SEE PLANS FOR REINFORCED TURF LOCATIONS.
 - INSTALLATION SHALL BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 - SEE LANDSCAPE PLANS FOR SOI TYPE.
 - COMPOSITION OF SOI INFILL WILL BE DETERMINED BASED ON EXISTING SOI TYPE AND CONDITIONS. SUBMIT SOI MIX FOR APPROVAL.
- MANUFACTURER:
NDS, INC.
851 NORTH HARVARD AVE
LINDSEY, CA 92527
WWW.NCSPRO.COM



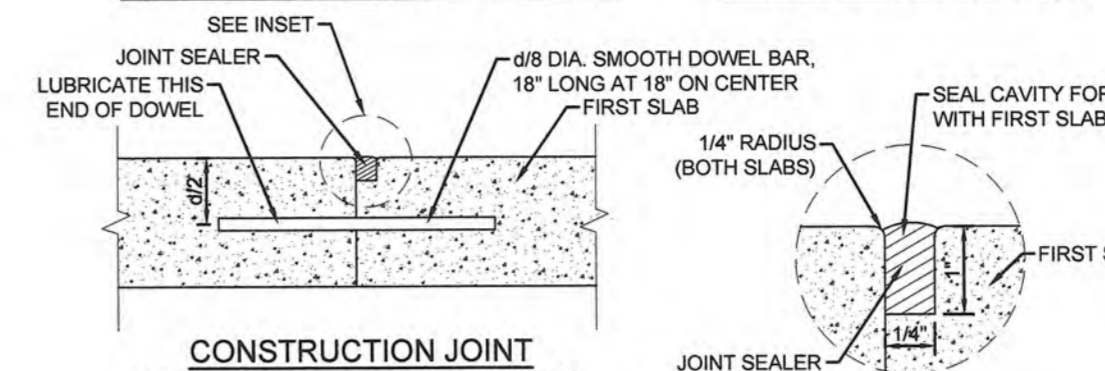
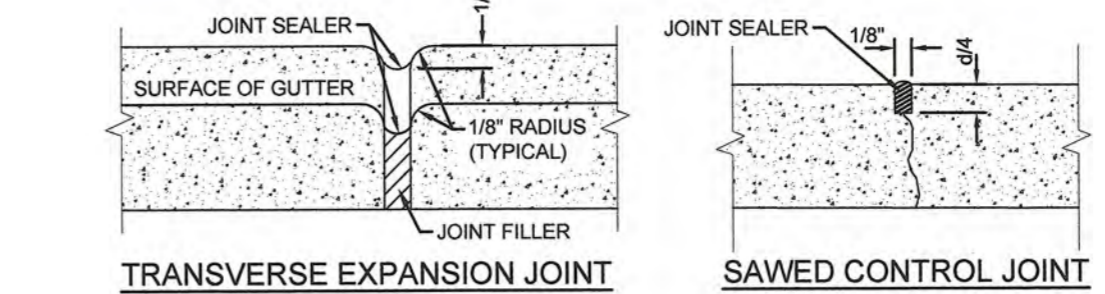
GRASS PAVERS DETAIL FOR ACCESS DRIVE TO LIFT STATION AREA
NTS



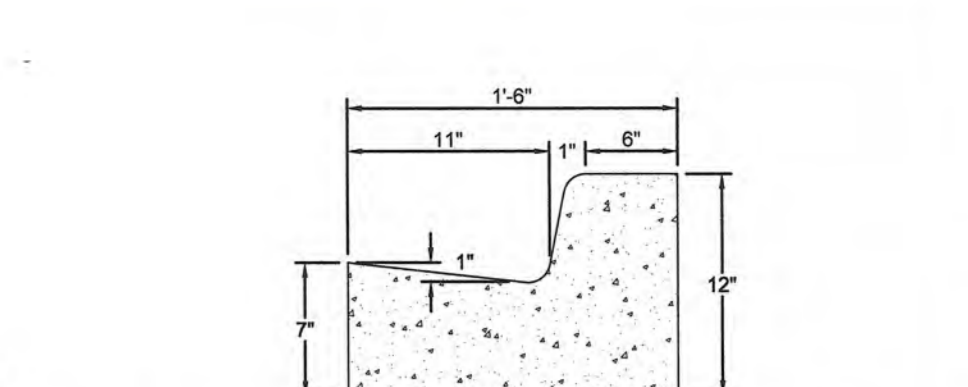
LIGHT DUTY CONCRETE PAVEMENT
VERIFY WITH PROJECT GEOTECHNICAL REPORT
NTS



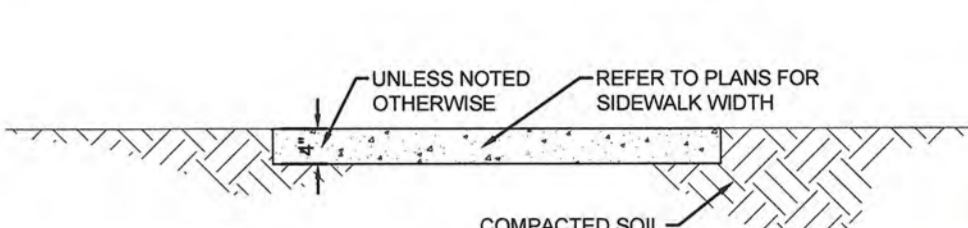
GRAVEL DETAIL FOR LIFT STATION AREA
NTS



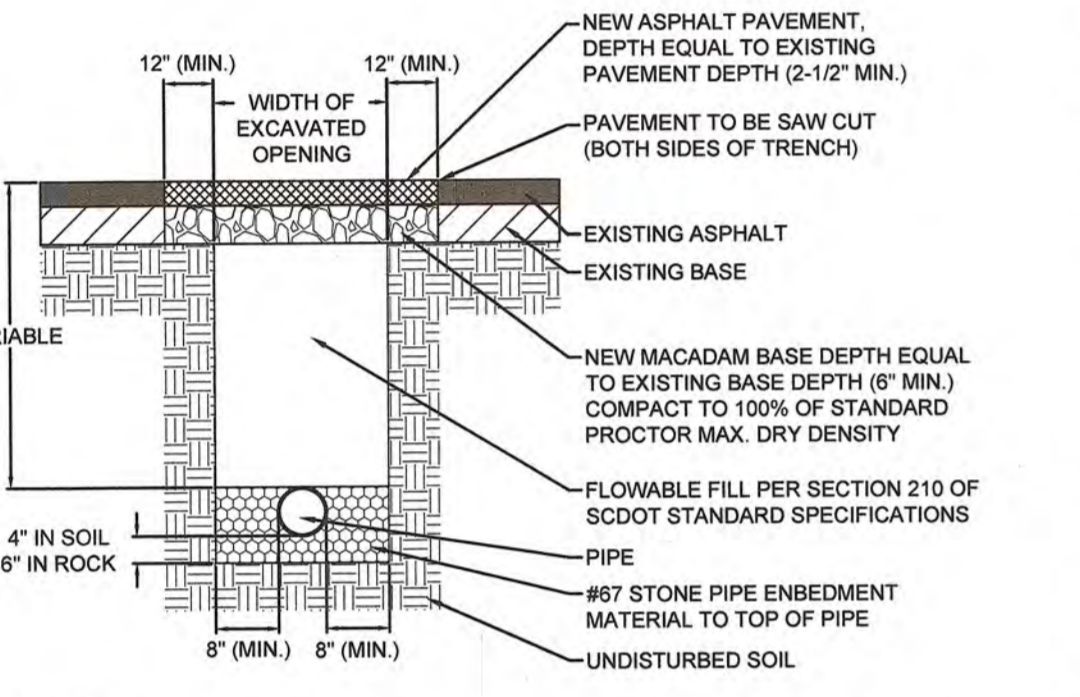
CONCRETE JOINT DETAILS
NTS



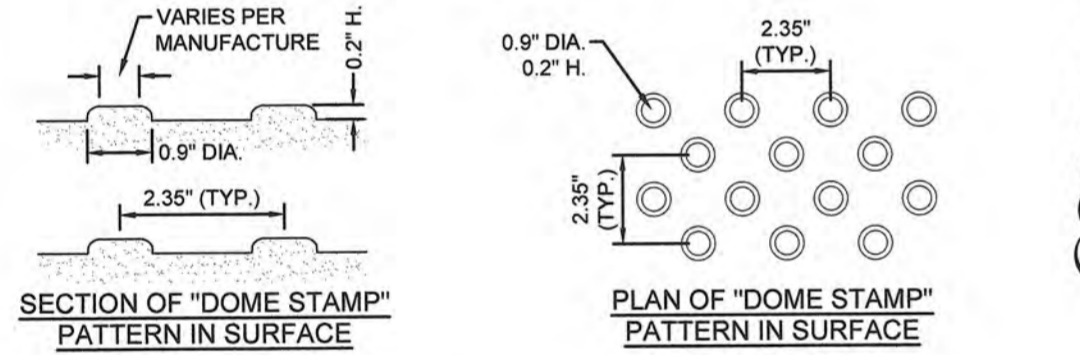
"L" TYPE CURB AND GUTTER
NTS
MIN. CONCRETE STRENGTH = 3,000 P.S.I.



CONCRETE SIDEWALK DETAIL
NTS



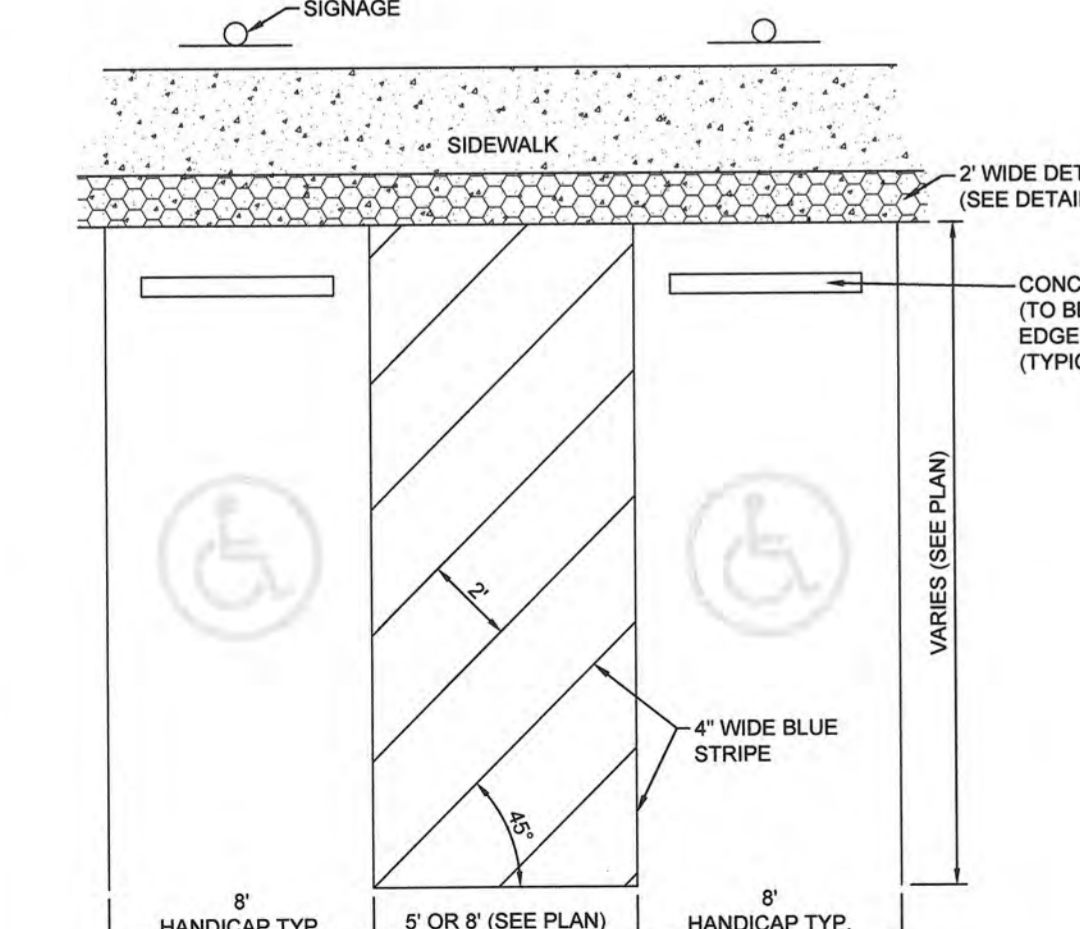
PAVEMENT REPAIR
NTS



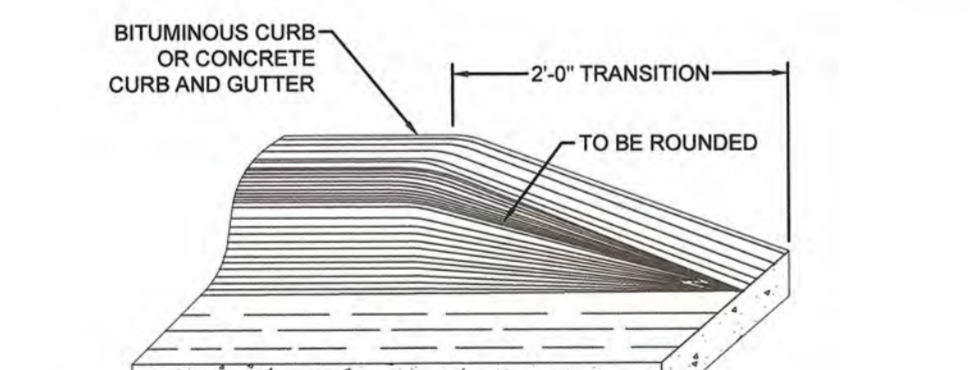
SECTION OF "DOME STAMP" PATTERN IN SURFACE
PLAN OF "DOME STAMP" PATTERN IN SURFACE
NOTES:

- CURB RAMPS HAVE A MAXIMUM RISE OF 6" AND DO NOT REQUIRE HANDRAILS. ANY RAMP WITH GRATER THAN A 6" RISE SHALL HAVE HANDRAILS ON BOTH SIDES AND CURBED EDGE PROTECTION ON BOTH SIDES. EDGE PROTECTION CONSISTS OF CURBS, WALLS, RAILINGS, OR PROJECTION SURFACES THAT PREVENT PEOPLE FROM SLIPPING OF THE RAMP.
- CURB RAMPS MUST HAVE A DETECTABLE WARNING FEATURE EXTENDING THE FULL WIDTH AND DEPTH OF THE RAMP INCLUDING AND FLARES. THE DETECTABLE SURFACE MUST CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCHES, A HEIGHT OF NOMINAL 0.2 INCHES AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCHES. THE TEXTURE OF THE DETECTABLE WARNING FEATURE MUST CONTRAST WITH THE SURROUNDING SURFACES (EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT). SEE ABOVE.

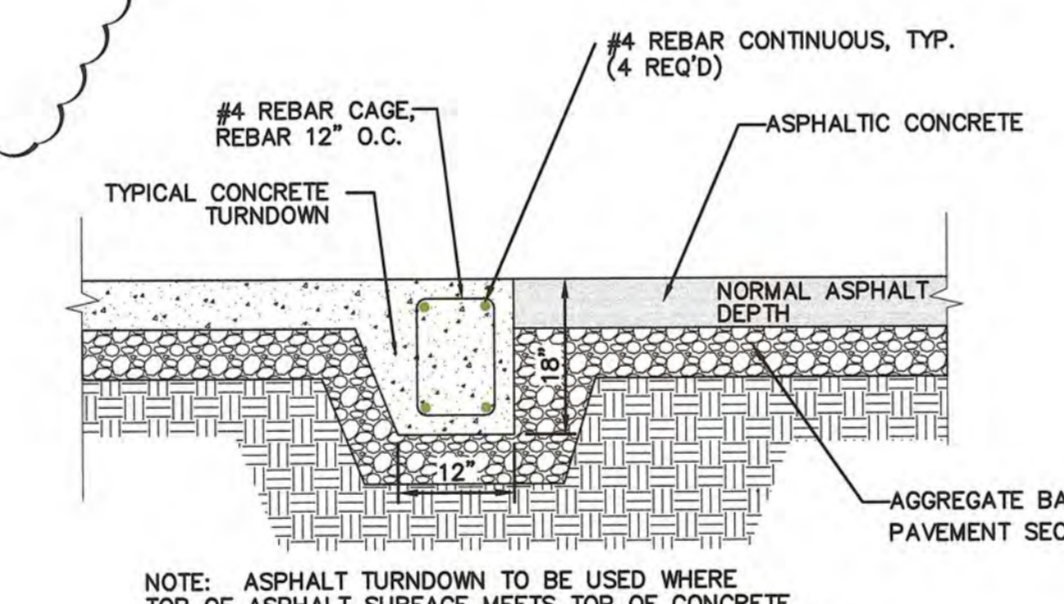
DETECTABLE WARNING DETAIL
NTS



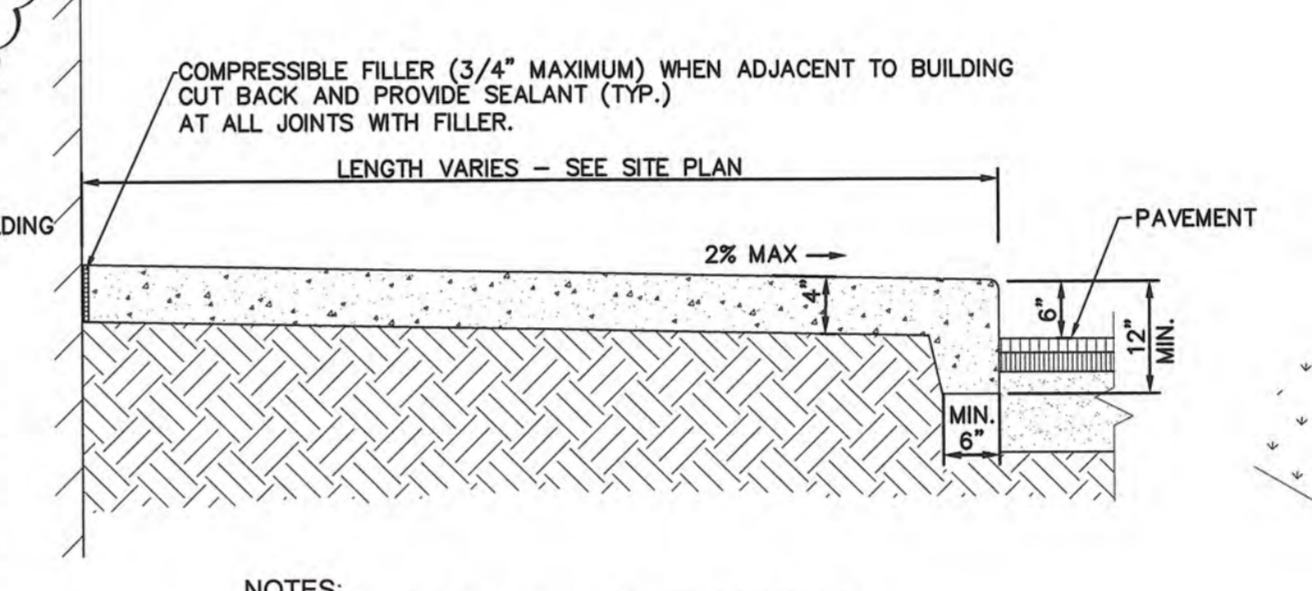
HANDICAP ACCESSIBLE PARKING STALLS
NTS



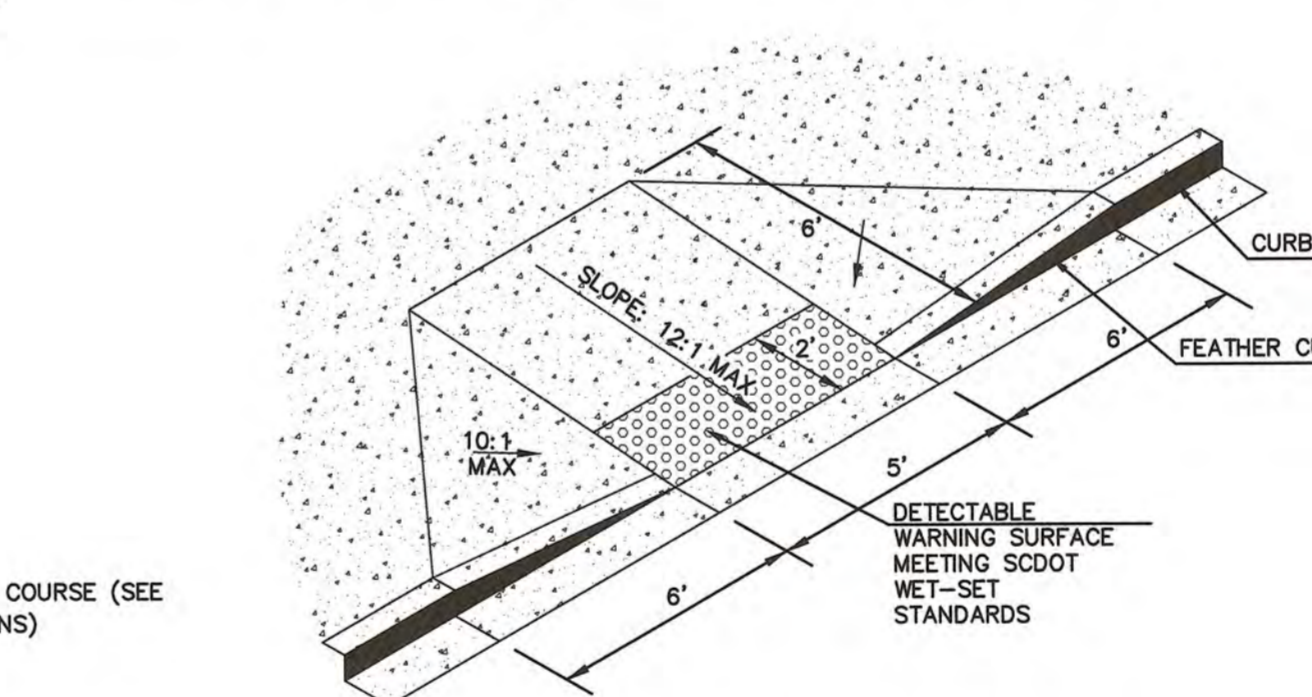
FEATHERING CURB AND GUTTER
NTS



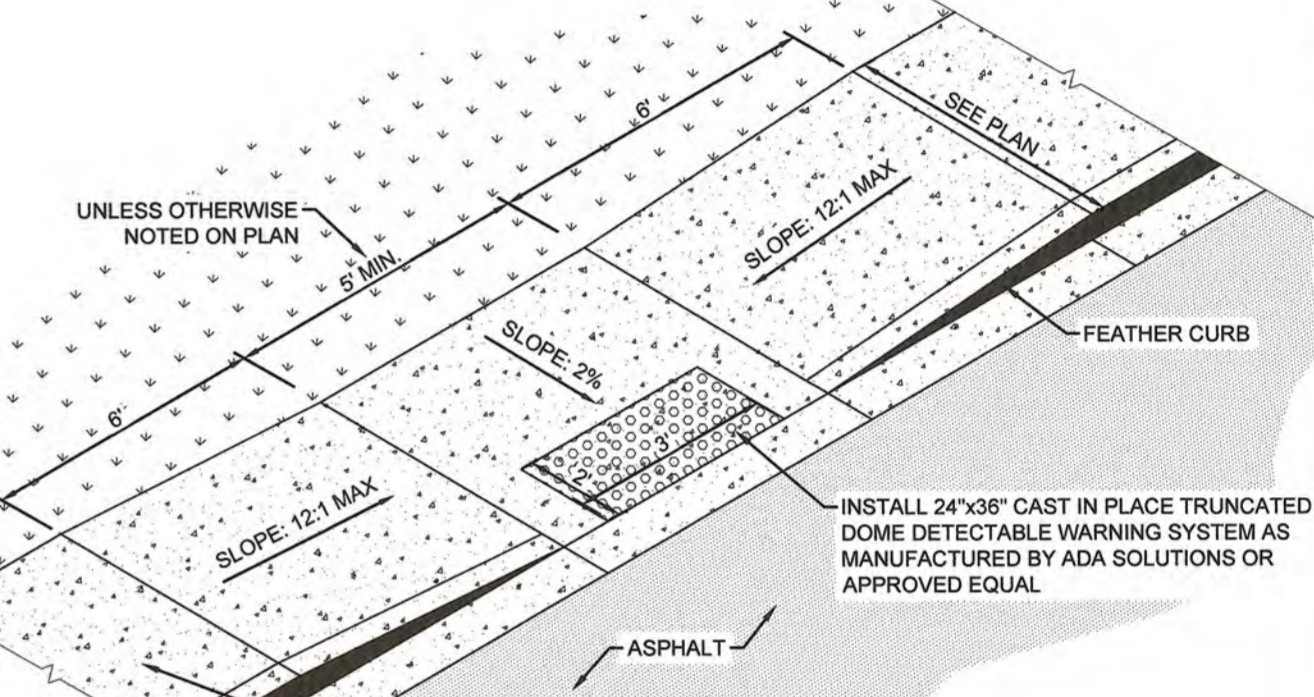
ASPHALT TURNDOWN DETAIL
NTS



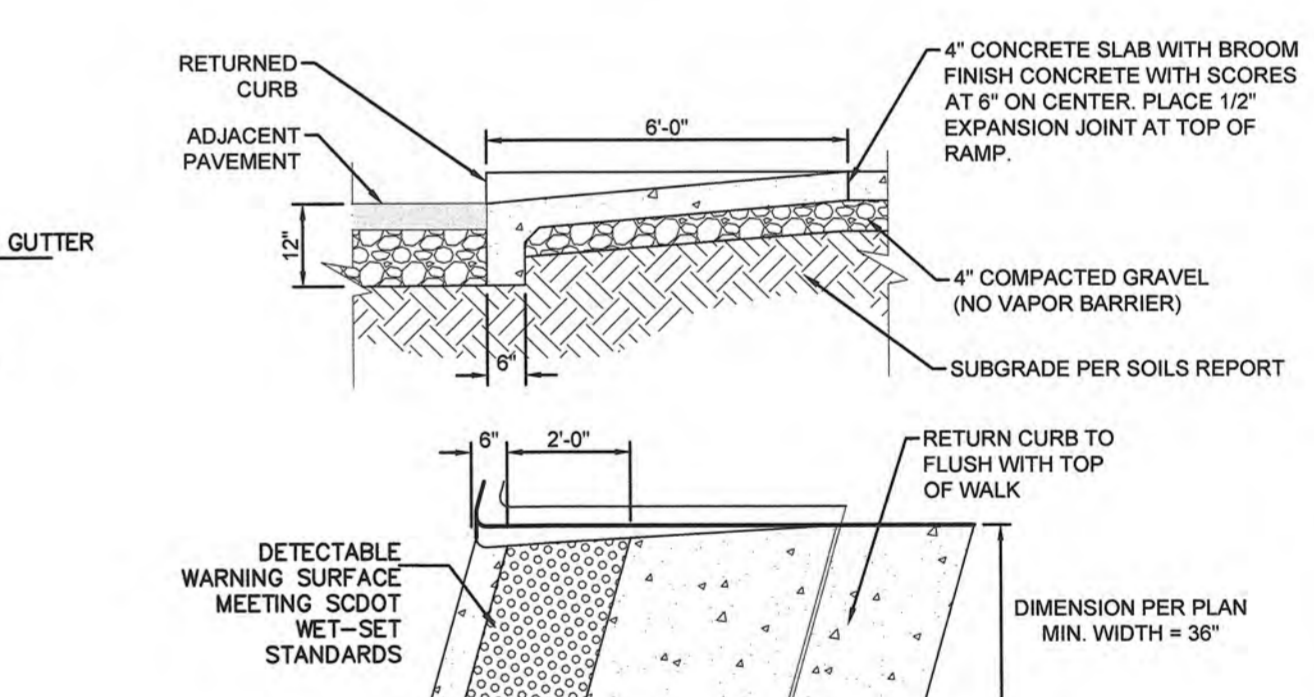
CONCRETE SIDEWALK & JOINT DETAILS ADJACENT TO BUILDING AND/OR PAVEMENT
NTS



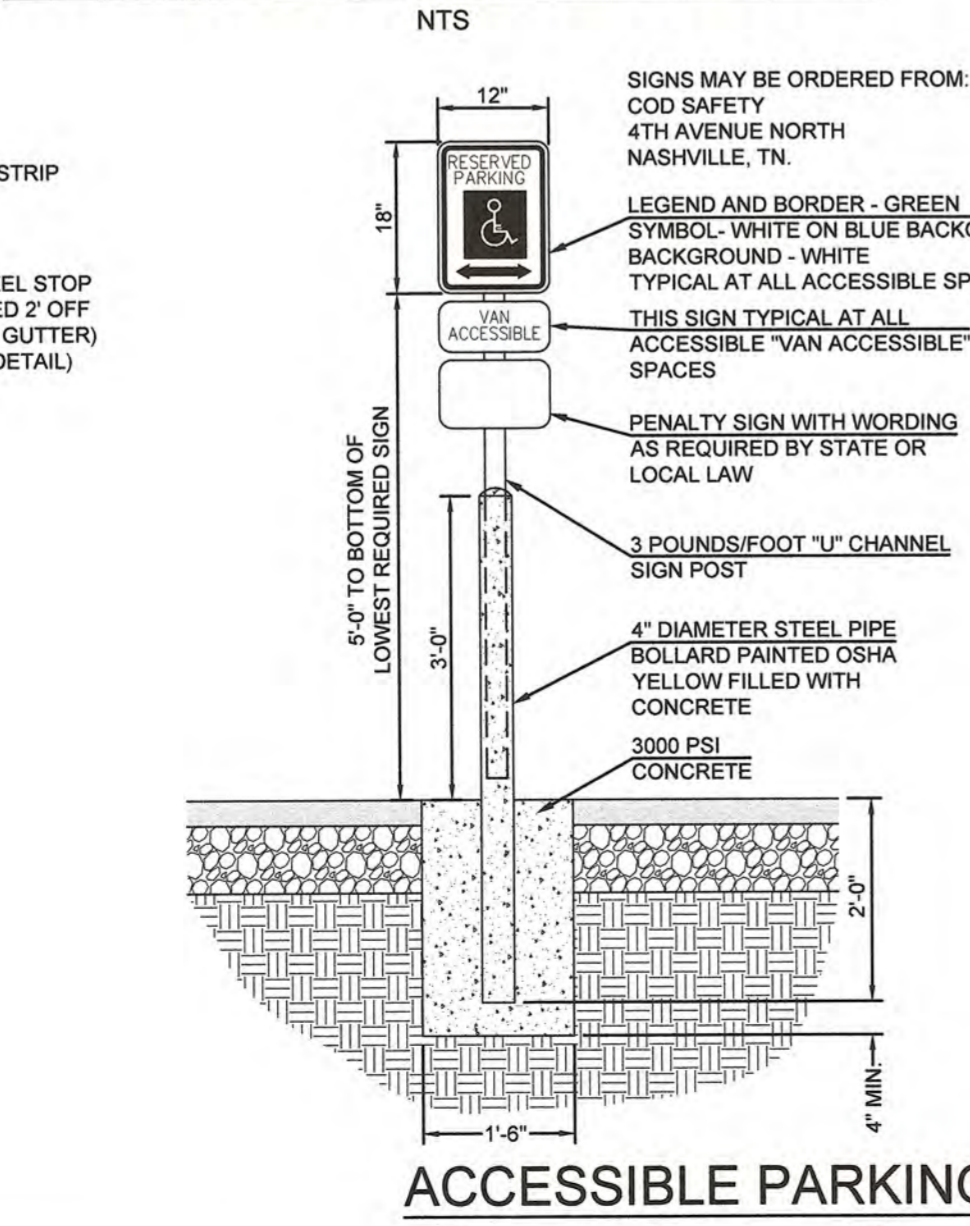
SIDE FLARE HANDICAP RAMP
NTS



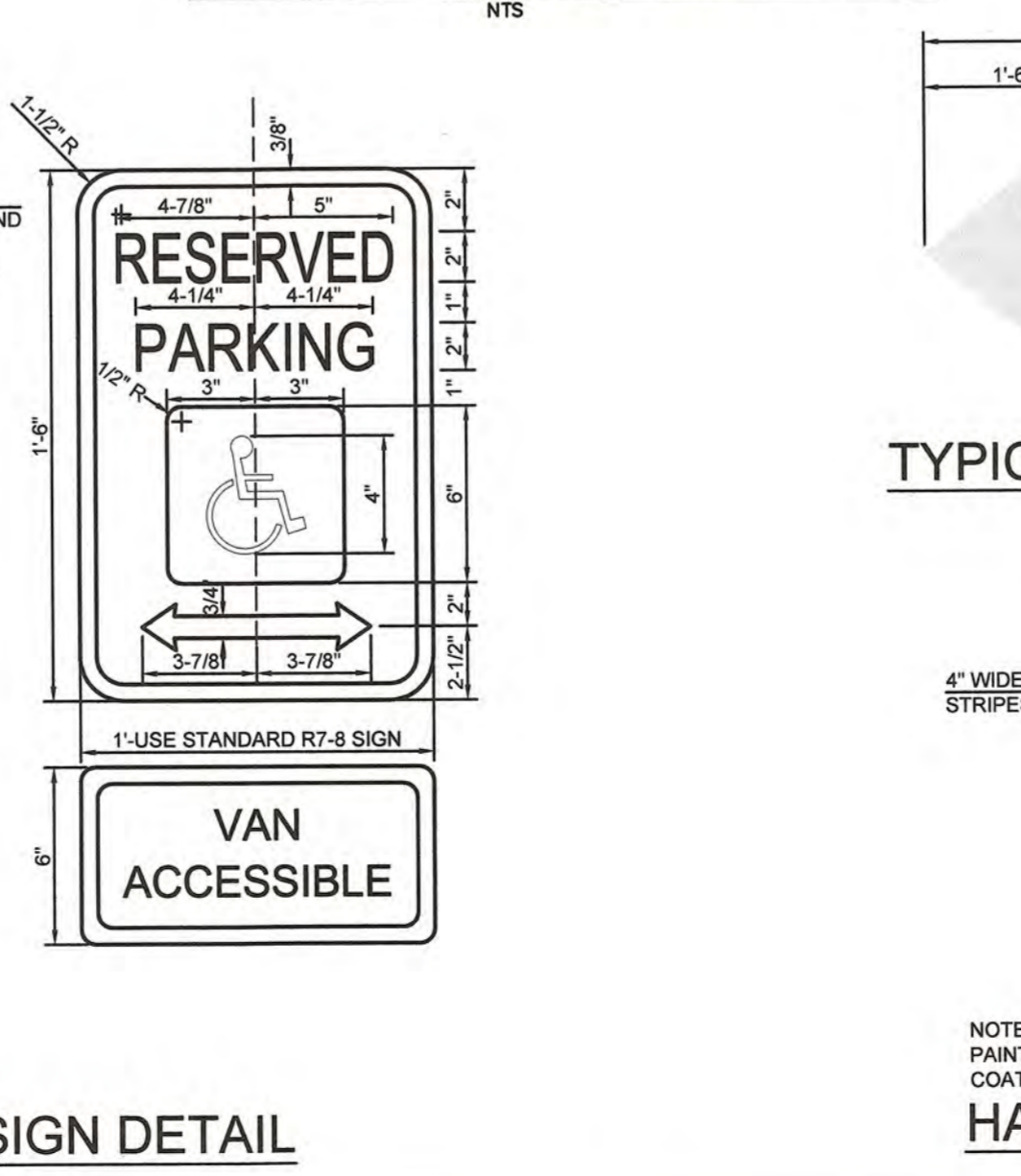
DROP DOWN HANDICAP RAMP
NTS



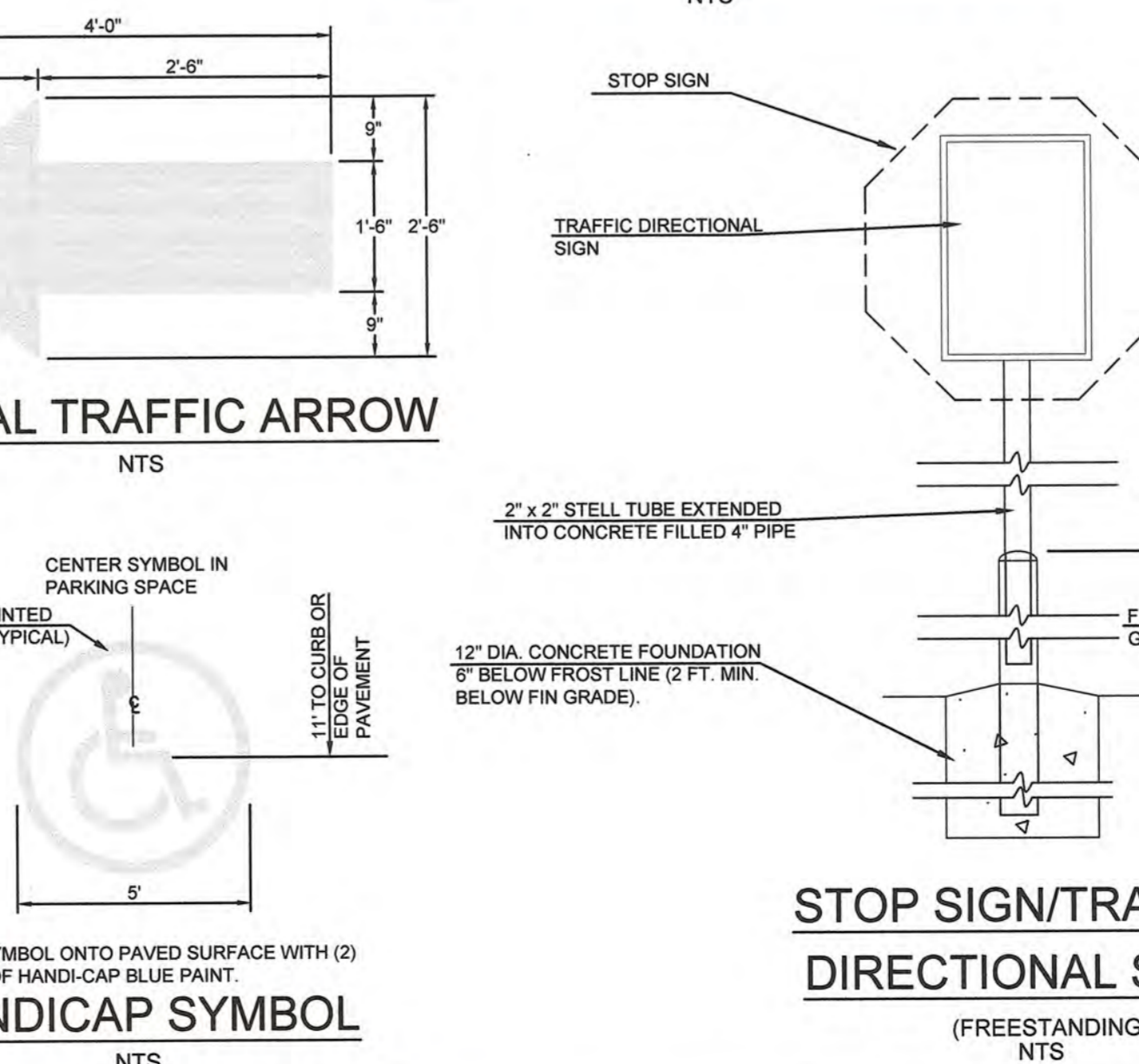
ACCESSIBLE CURB RAMP
NTS



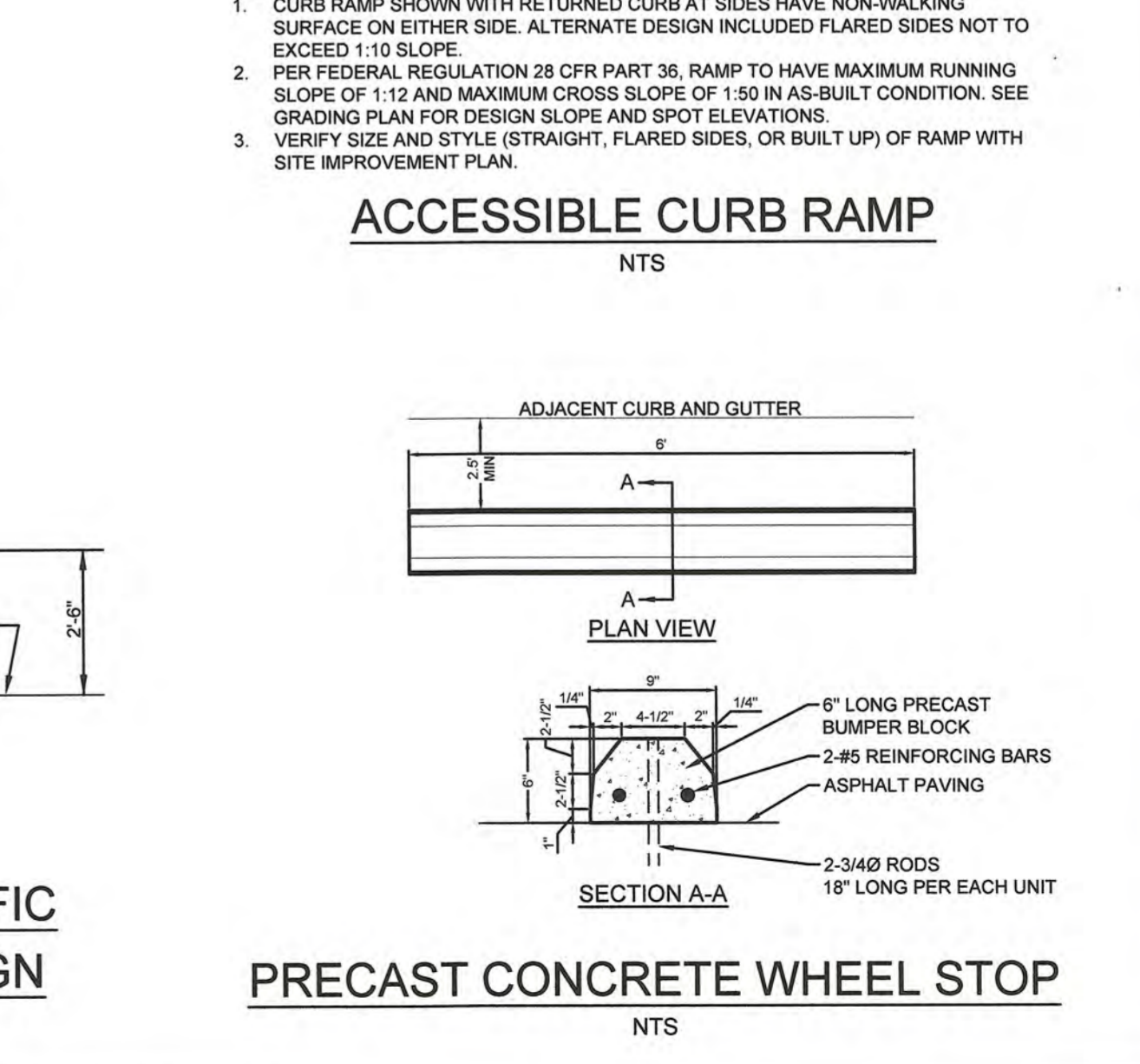
ACCESSIBLE PARKING SIGN DETAIL
NTS



TYPICAL TRAFFIC ARROW
NTS
HANDICAP SYMBOL
NTS



STOP SIGN/TRAFFIC DIRECTIONAL SIGN
NTS



PRECAST CONCRETE WHEEL STOP
NTS

COX AND DINKINS
ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
724 BELTLINE BLVD.
COLUMBIA, SC 29205
803.254.0518
COXANDDINKINS.COM

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 27748
3/11/2022
LURA M. BAKER
Licensed Professional Engineer
No. 27748

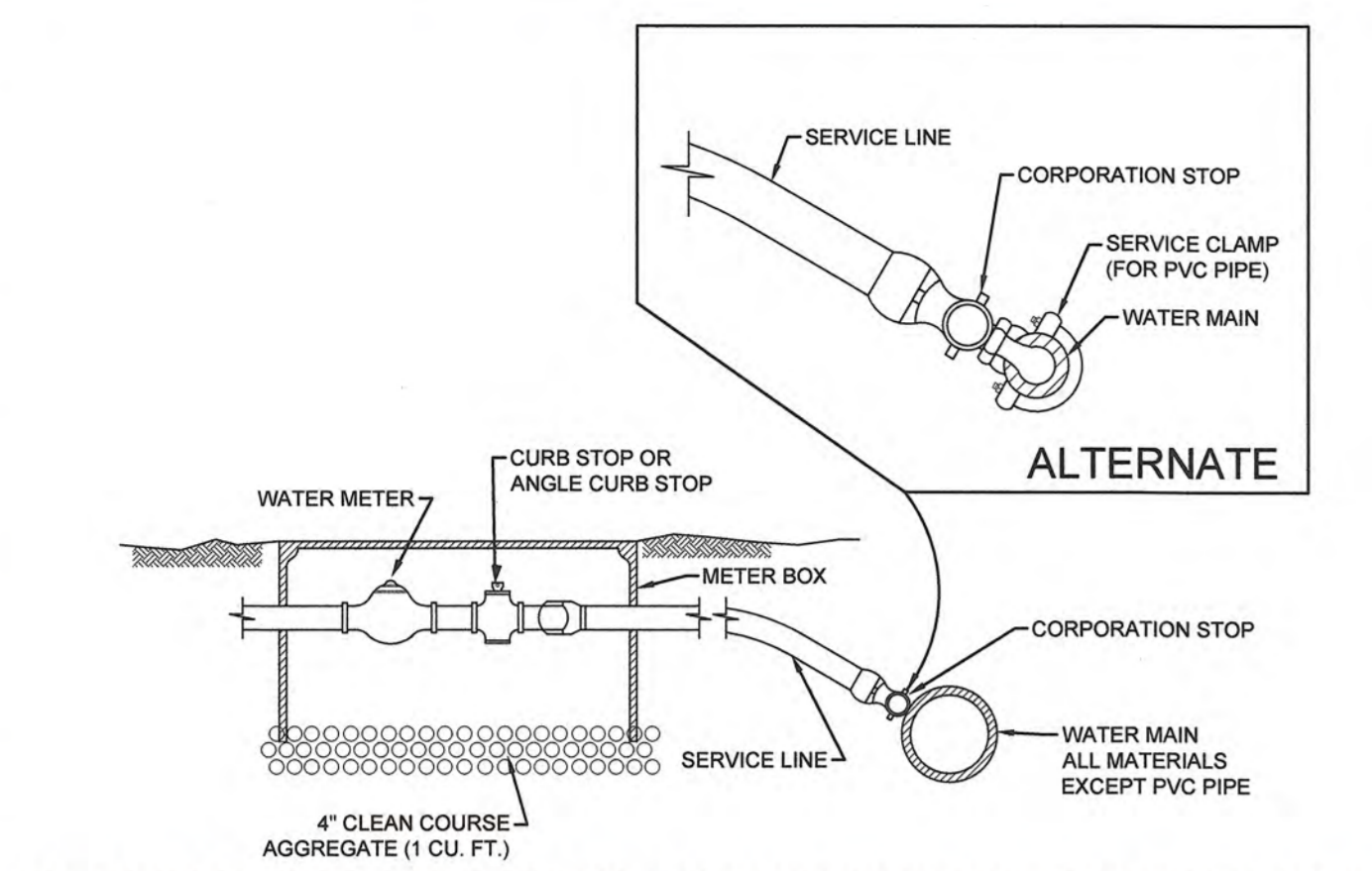
SOUTH CAROLINA PROFESSIONAL ENGINEER
No. C00294
COX AND DINKINS, INC.
CERTIFICATE OF AUTHORIZATION SEAL

REVISIONS	DESCRIPTION	DATE
No. 1	Revised per Owner Comments.	3/11/2022

PRIMARY PERMITTEE:
TODD ANDERSEN
COLUMBIA APARTMENT RESIDENCES, LLC
1545 PEACHTREE ST. NW, SUITE 260
ATLANTA, GA 30309
(404) 815-1234
email: tandersen@novaregroup.com

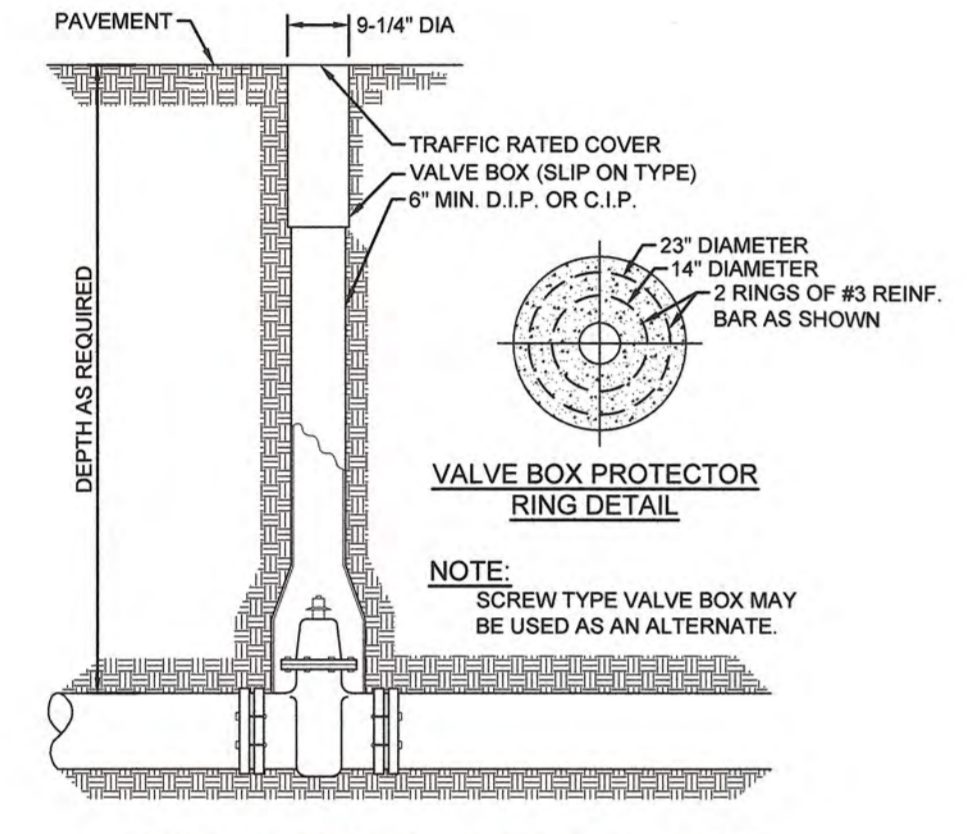
PROJECT: **LULLWATER AT WEST COLUMBIA**
SUNSET BLVD. @ HENBET DR.
LOCATED IN THE CITY OF WEST COLUMBIA,
LEXINGTON COUNTY, SOUTH CAROLINA
PROJECT NO. 2238
SF NO. 144-12
TMS 03699-03-11, 04535-1-14,
04597-09-21, -22, -26, & -27
BOOK 68G-42
DATE JANUARY 14, 2022
SHEET NO. **C17** of 48

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**SERVICE CONNECTION, 2" AND UNDER ON PVC PIPE;
3" AND UNDER ON OTHER MATERIALS.**

NTS



GATE VALVE BOX DETAIL

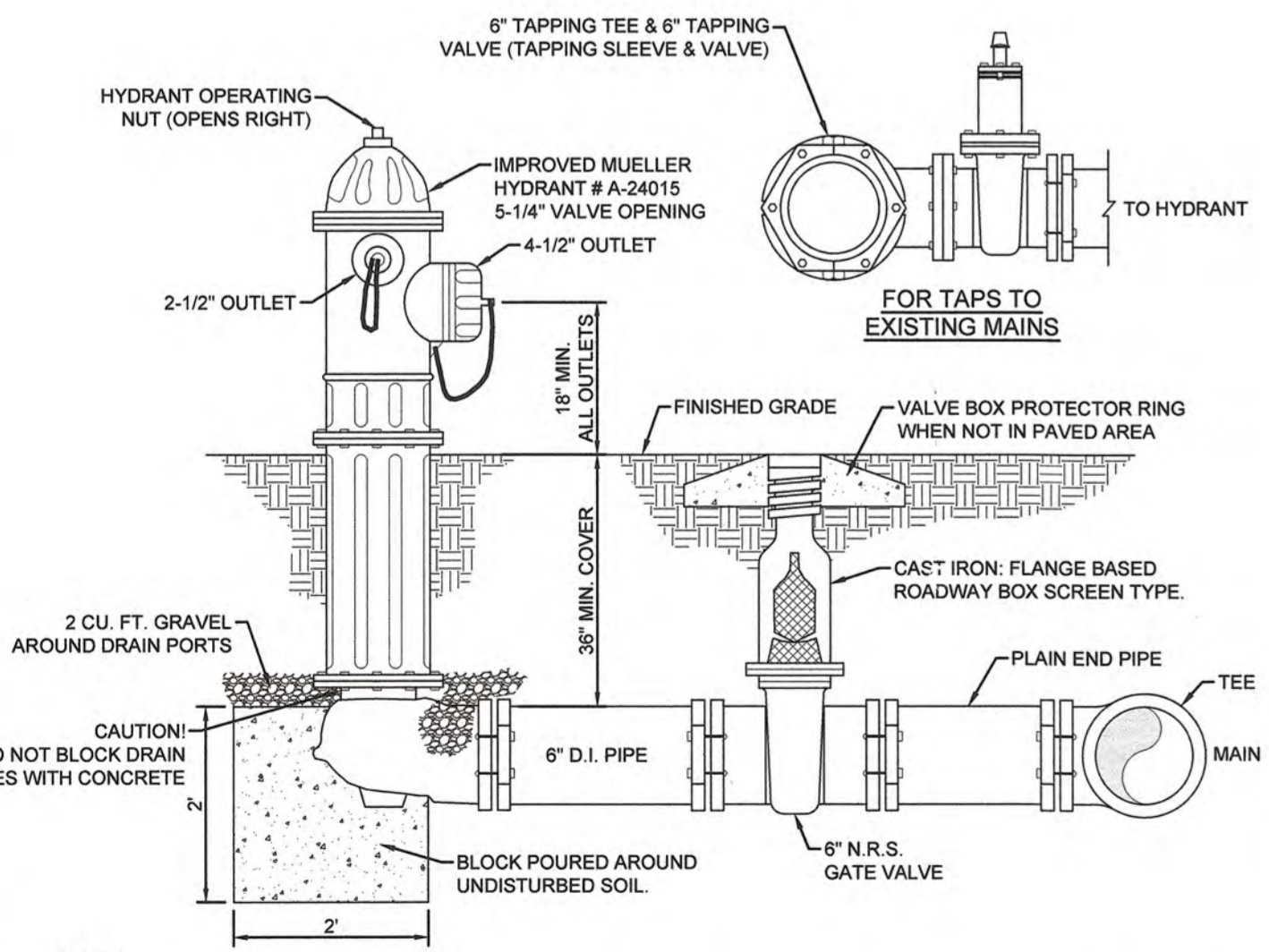
NTS

PIPE SIZE (N.)	FLOW RATE (GPM)
4	390
6	880
8	1,560
10	2,440
12	3,520

(FLOW REQUIRED TO PRODUCE A VELOCITY OF 10 FT/SEC)

FLUSHING TABLE FOR FIRE SERVICE MAINS

- NOTES:**
- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 24-6.5 REQUIRES THE PIPE BETWEEN THE CHECK VALVE AND THE OUTSIDE HOSE COUPLING SHALL BE EQUIPPED WITH AN APPROVED AUTOMATIC DRIP, ARRANGED TO DISCHARGE TO A PROPER PLACE.
 - NFPA 24 7-2 REQUIRES ALL FERROUS PIPE SHALL BE LINED.
 - FLUSHING AND TESTING OF PRIVATE FIRE SERVICE MAINS AND LEAD-IN CONNECTIONS TO SYSTEM RISERS MUST BE PERFORMED PER NFPA 24 SECTIONS 9-1 AND 9-2. A COPY OF THE COMPLETED AND SIGNED "CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING" MUST BE SUBMITTED PER NFPA 24 9-2.1 BEFORE FINAL APPROVAL OF THE INSTALLATION IS REQUESTED.
 - PER NFPA 24 10.10.2.2.1, ALL PIPING AND ATTACHED APPURTENANCES SUBJECT TO SYSTEM WORKING PRESSURE SHALL BE HYDROSTATICALLY TESTED AT 200 PSI OR 50 PSI IN EXCESS OF THE SYSTEM WORKING PRESSURE, WHICHEVER IS GREATER, AND SHALL MAINTAIN THAT PRESSURE WITHOUT LOSS FOR 2 HOURS.



- NOTES:**
- ALL JOINTS TO BE MECHANICAL.
 - HYDRANTS SHALL NOT BE LESS THAN 3' NOR MORE THAN 6' FROM THE CURB OR THE EDGE OF A HARD SURFACE STREET OR ACCESS ROAD, EXCEPT THAT ALONG RURAL ROADS THROUGH UNDEVELOPED AREAS THE MAXIMUM DISTANCE MAY BE INCREASED TO 10'.
 - HYDRANT MUST BE LOCATED SO AS TO BE UNOBSTRUCTED FOR 15' EITHER SIDE AS MEASURED ALONG THE CURB OR THE EDGE OF A HARD SURFACE STREET OR ACCESS ROAD. THIS AREA MUST BE FREE OF GROWTH AND OTHER OBSTRUCTIONS WHICH WOULD HINDER ACCESS TO THE HYDRANT.
 - MINIMUM DISTANCE BETWEEN VALVE AND HYDRANT SHALL BE 3'.
 - BENDS MAY BE USED IN HYDRANT LEAD TO FACILITATE HYDRANT LOCATION.
 - GATE VALVES TO OPEN TO THE LEFT.

FIRE HYDRANT DETAIL

NTS

Assumptions:
Soil type is assumed to be SM - silty sands, sand silt mixtures
Test pressure is assumed to be 200 PSI
Factor of Safety is 1.5
Trench type is 3 (Pipe bedded in 4 inches minimum loose soil. Backfill lightly consolidated to top of the pipe.)

Horizontal Bends

Bend Angle	Pipe Material	Nominal Size	Restraint Length
90 DI	6"	27 LF	
45 DI	6"	11 LF	
22.5 DI	6"	6 LF	
11.25 DI	6"	3 LF	
90 DI	4"	19 LF	
45 DI	4"	8 LF	
22.5 DI	4"	4 LF	
11.25 DI	4"	2 LF	

Vertical Bends

Bend Angle	Pipe Material	Nominal Size	Low Side Depth (ft)	Restraint Length (Upper Bend)	Restraint Length (Lower Bend)
45 DI	6"	6"	6	14 LF	5 LF
45 DI	6"	6"	9	14 LF	3 LF
22.5 DI	6"	6"	6	7 LF	2 LF
22.5 DI	6"	6"	9	7 LF	2 LF
11.25 DI	6"	6"	6	4 LF	1 LF
11.25 DI	6"	6"	9	4 LF	1 LF

Reducers

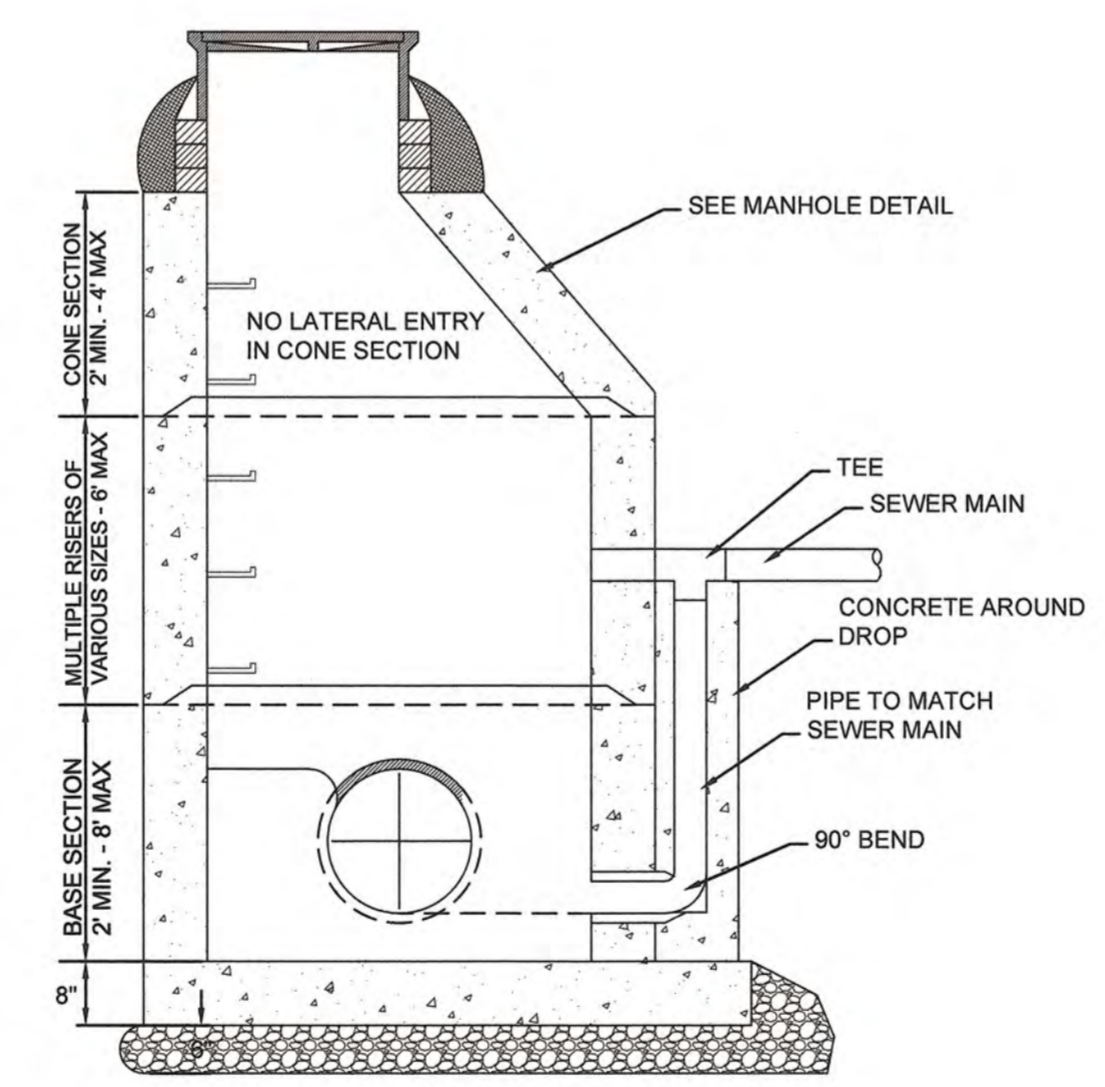
Pipe Material	Nominal Size (1)	Nominal Size (2)	Restraint Length (On Large Side)
DI	6"	4"	25 LF

Tees

Nominal Size (Line)	Nominal Size (Branch)	Length Along Line Without Joint or Fitting	Restraint Length (Branch)
6	6	20	1 LF
		15	12 LF
		10	24 LF
		5	36 LF
6	4	20	1 LF
		15	1 LF
		10	1 LF
		5	16 LF
		2	27 LF

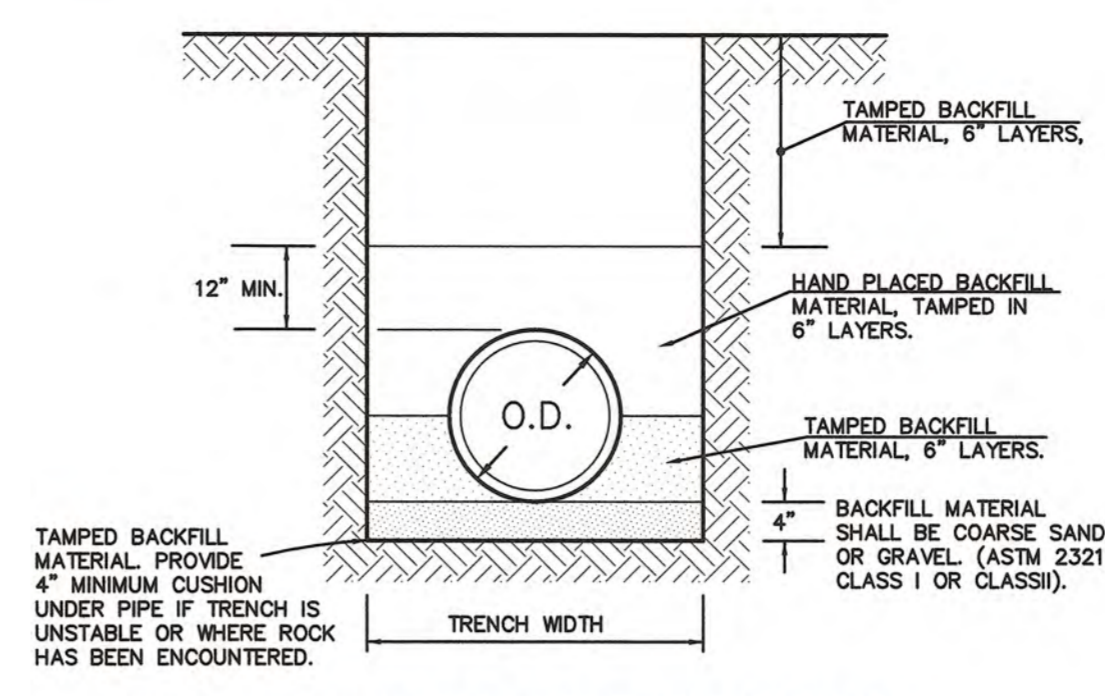
RESTRAINED JOINT DETAIL

NTS



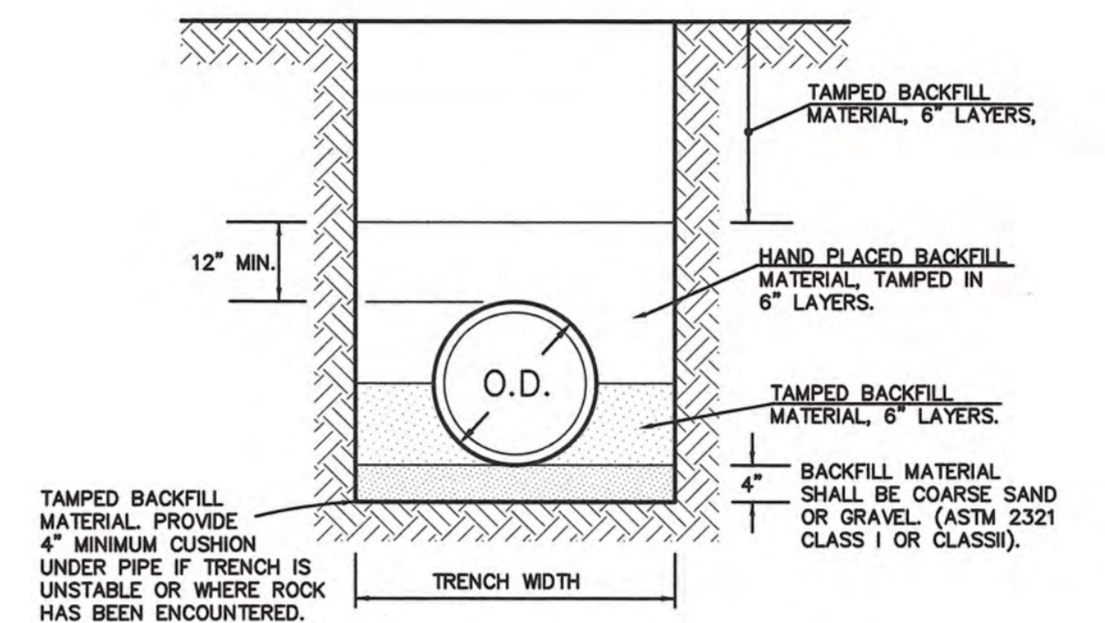
STANDARD OUTSIDE DROP MANHOLE

(OR ENGINEER APPROVED EQUAL)
NTS



DUCTILE IRON PIPE BEDDING AND BACKFILLING DETAIL

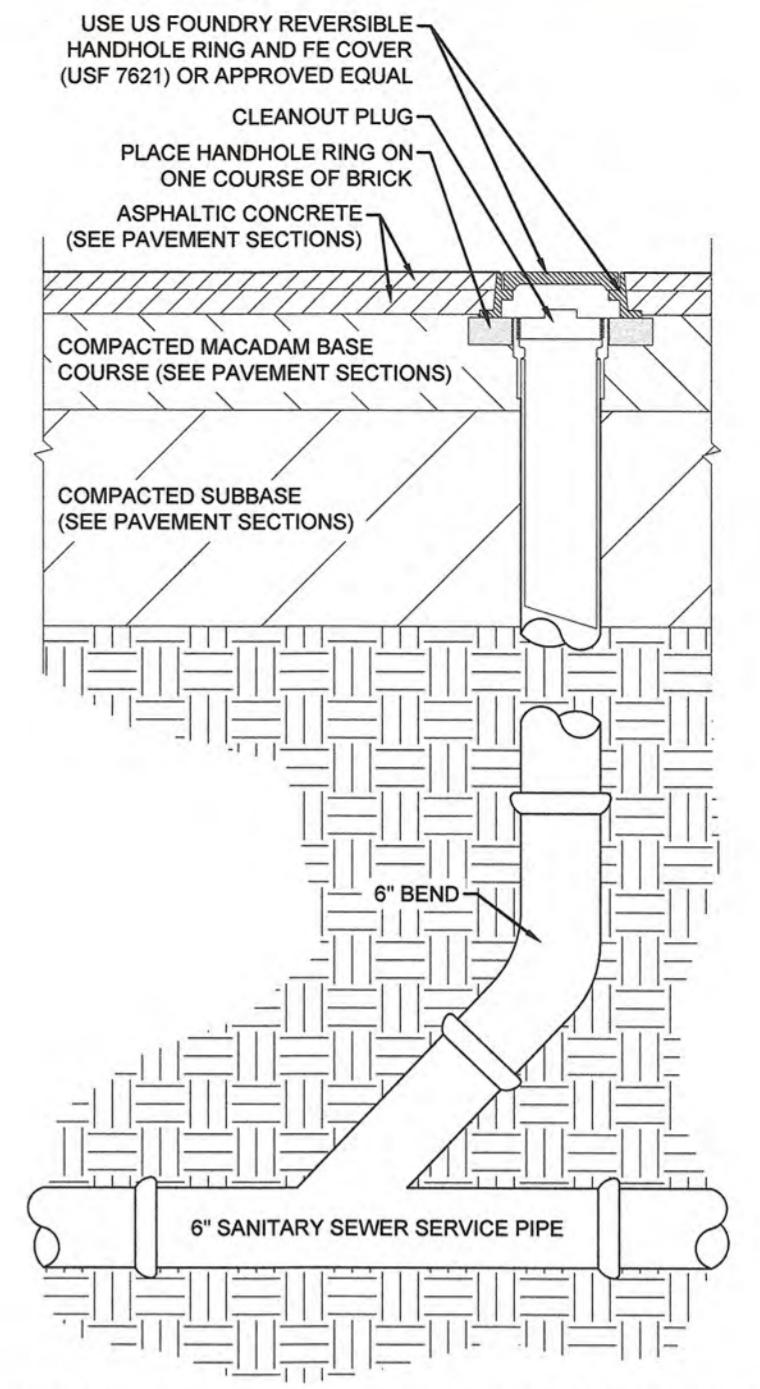
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PVC PIPE BEDDING AND BACKFILLING DETAIL

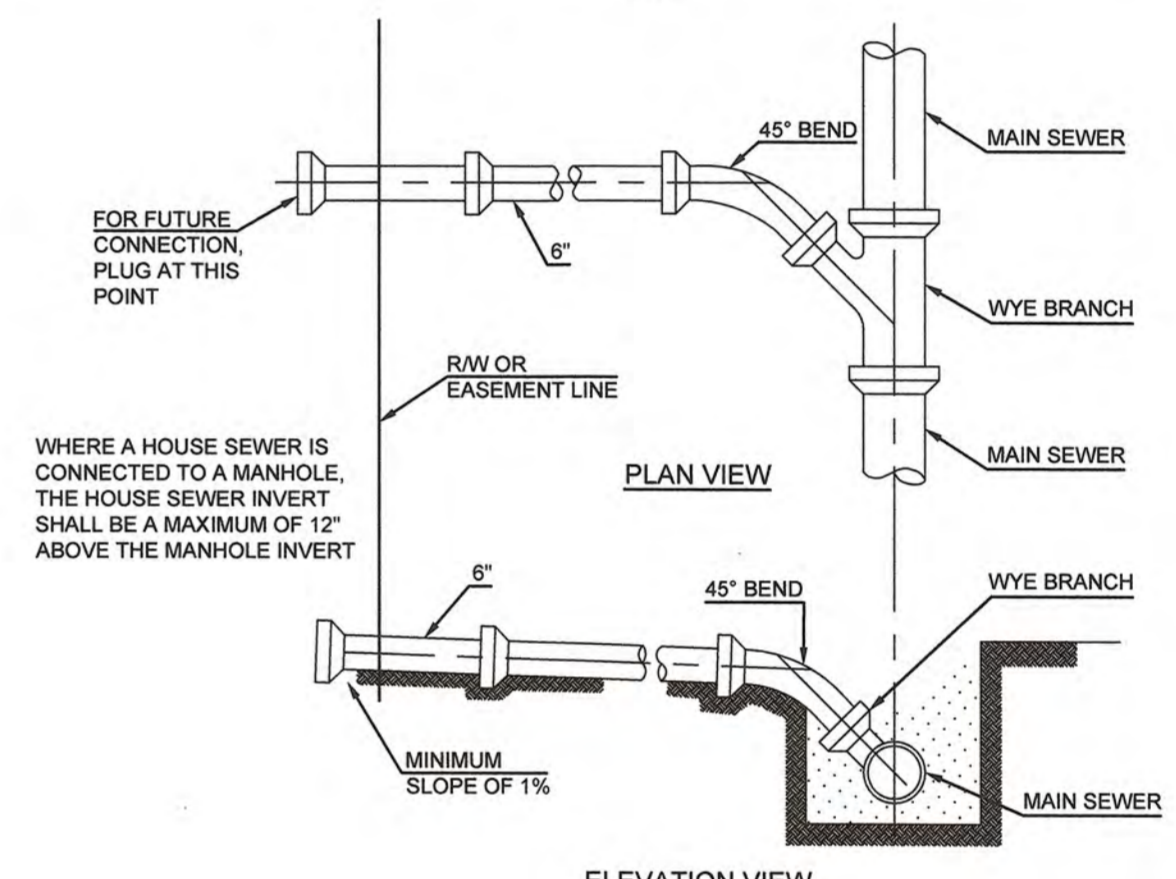
NTS

THE PIPE IS TO BE BEDDED IN COMPACTED 6" LAYERS TO THE SPRING LINE FIRST, THEN BACKFILLED WITH HAND PLACED MATERIAL COMPACTED IN 6" LAYERS TO A DEPTH OF 12" MINIMUM ABOVE THE PIPE.



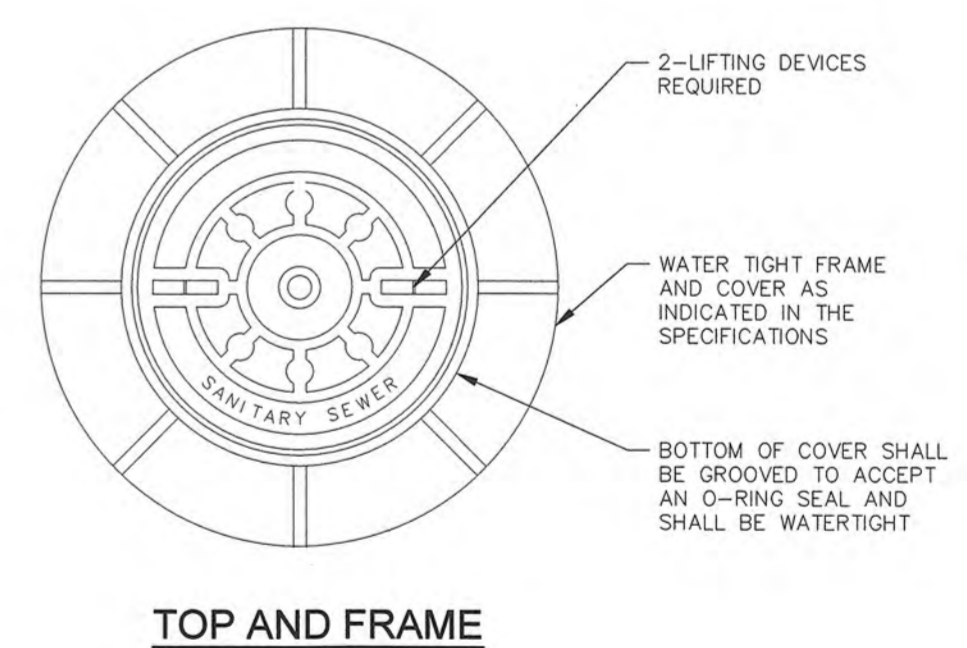
TRAFFIC RATED SANITARY SEWER SERVICE CLEANOUT DETAIL

NTS



TYPICAL SERVICE CONNECTION DETAIL

NTS



TOP AND FRAME

- NOTES:**
- BENCH CAN BE PRECAST, OR BRICK AND MORTAR TOWELED SMOOTH.
 - MANHOLE SHALL BE UNLINED UNLESS IT IS THE RECEIVING MANHOLE FOR A FORCE MAIN OR THE NEXT MANHOLE DOWNSTREAM.
 - MANHOLES OVER 12 FT. DEEP SHALL HAVE A 60° (5') MINIMUM INSIDE DIAMETER.
 - THE FRAME AND COVER AND GRADE RINGS SHALL BE SECURED TO THE CONE WITH GROUT ON BOTH THE INTERIOR & EXTERIOR.
 - IF MANHOLE DEPTH IS GREATER THAN 12 FEET, BASE THICKNESS SHALL BE A MINIMUM OF 8 INCHES.

- NOTES:**
- SEE SPECIFICATIONS FOR MANHOLE RING AND COVER.
 - SEAL ALL EXTERNAL JOINTS WITH MASTIC SEALANT. SEE SPECIFICATIONS.

TYPICAL PRECAST MANHOLE

NTS

COX AND DINKINS
ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
724 BELTLINE BLVD.
COLUMBIA, SC 29205
803.254.0518
COXANDDINKINS.COM

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 27748
James M. Baker
LICENSED PROFESSIONAL ENGINEER
No. 27748

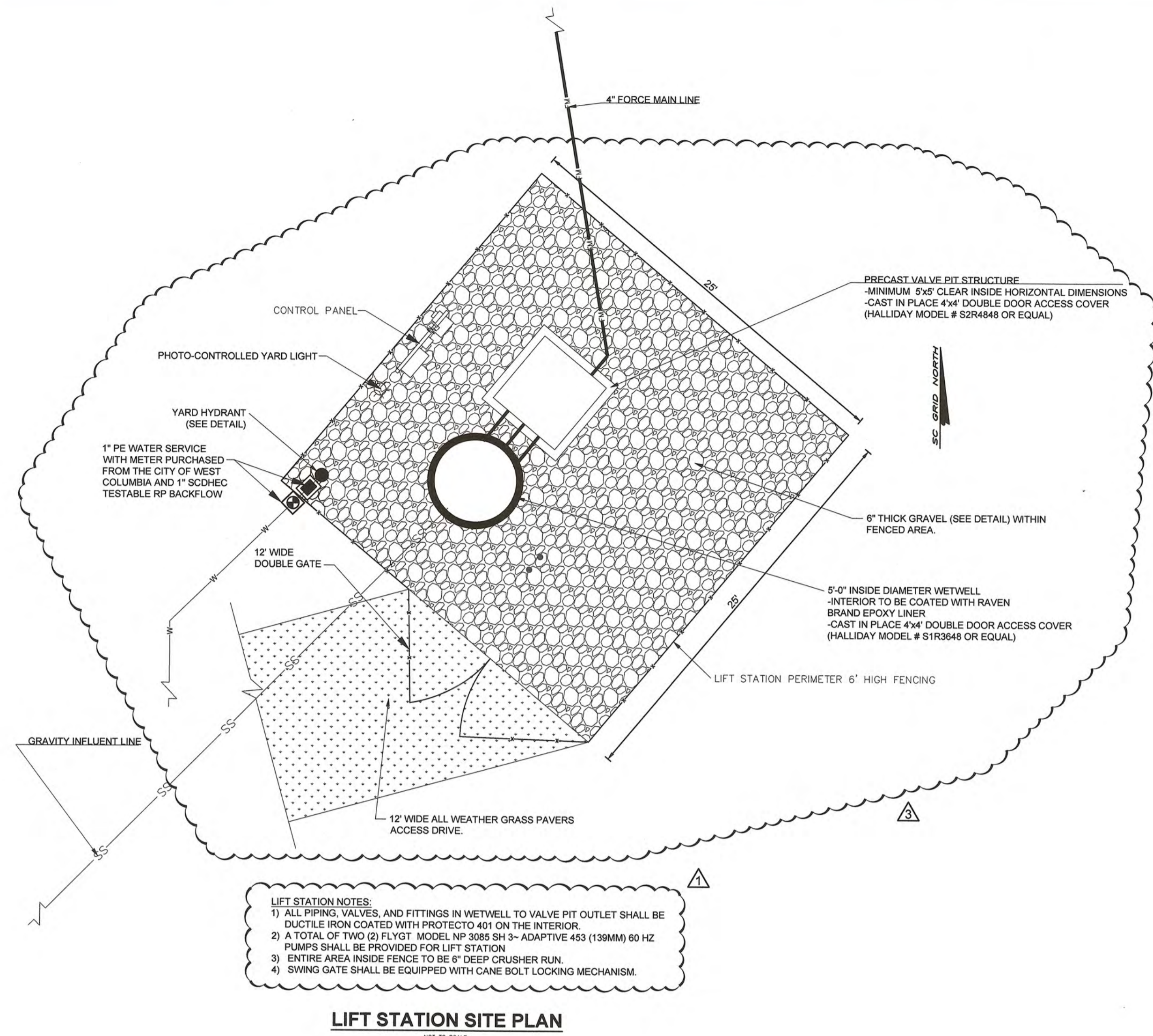
SOUTH CAROLINA PROFESSIONAL ENGINEER
No. C00294
COX AND DINKINS, INC.
CERTIFICATE OF AUTHORIZATION SEAL

NO.	DATE	DESCRIPTION
1	03/11/2022	Remove Thrust Blocking Detail. Add Restrainted Joint Detail per West Columbia.

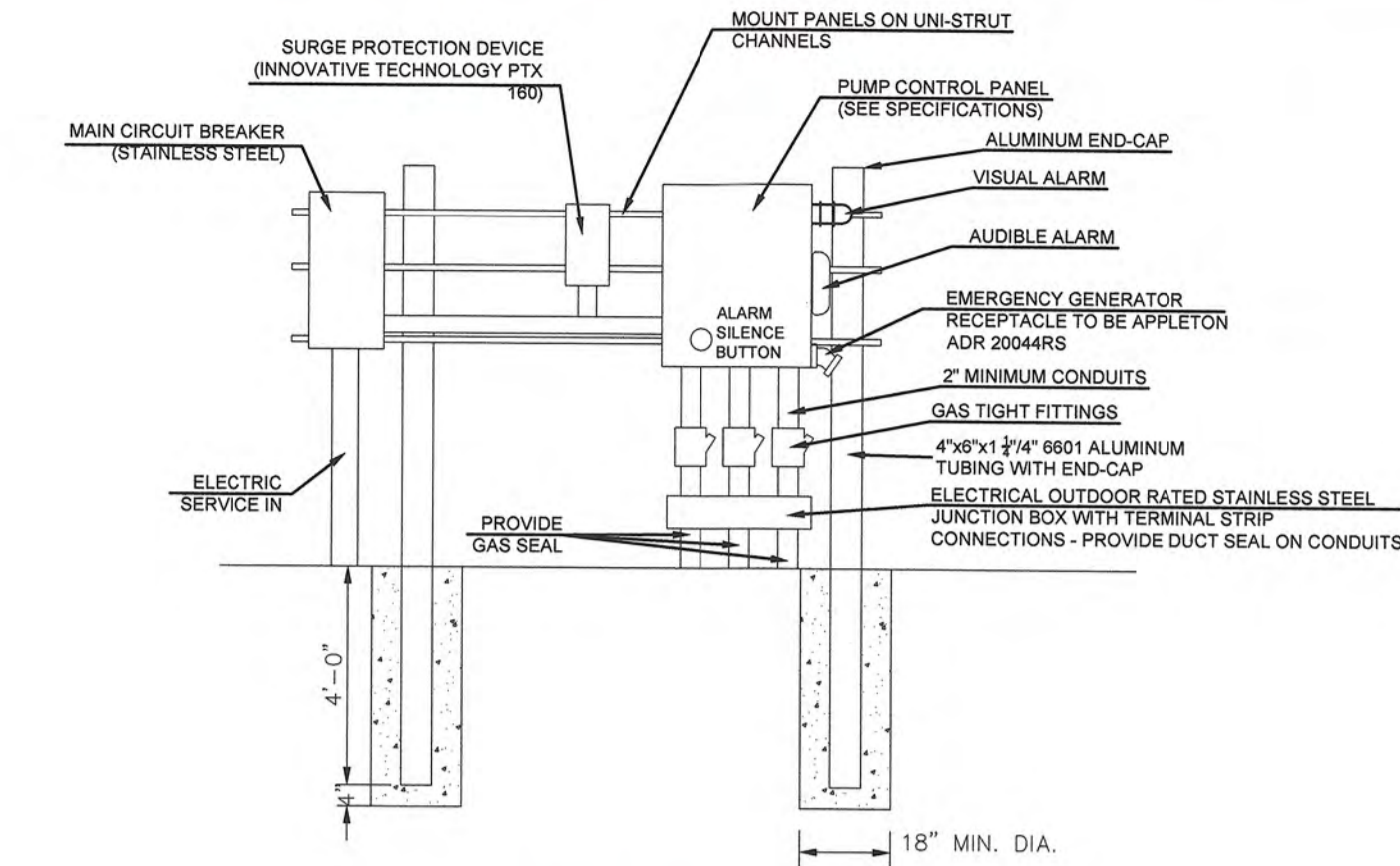
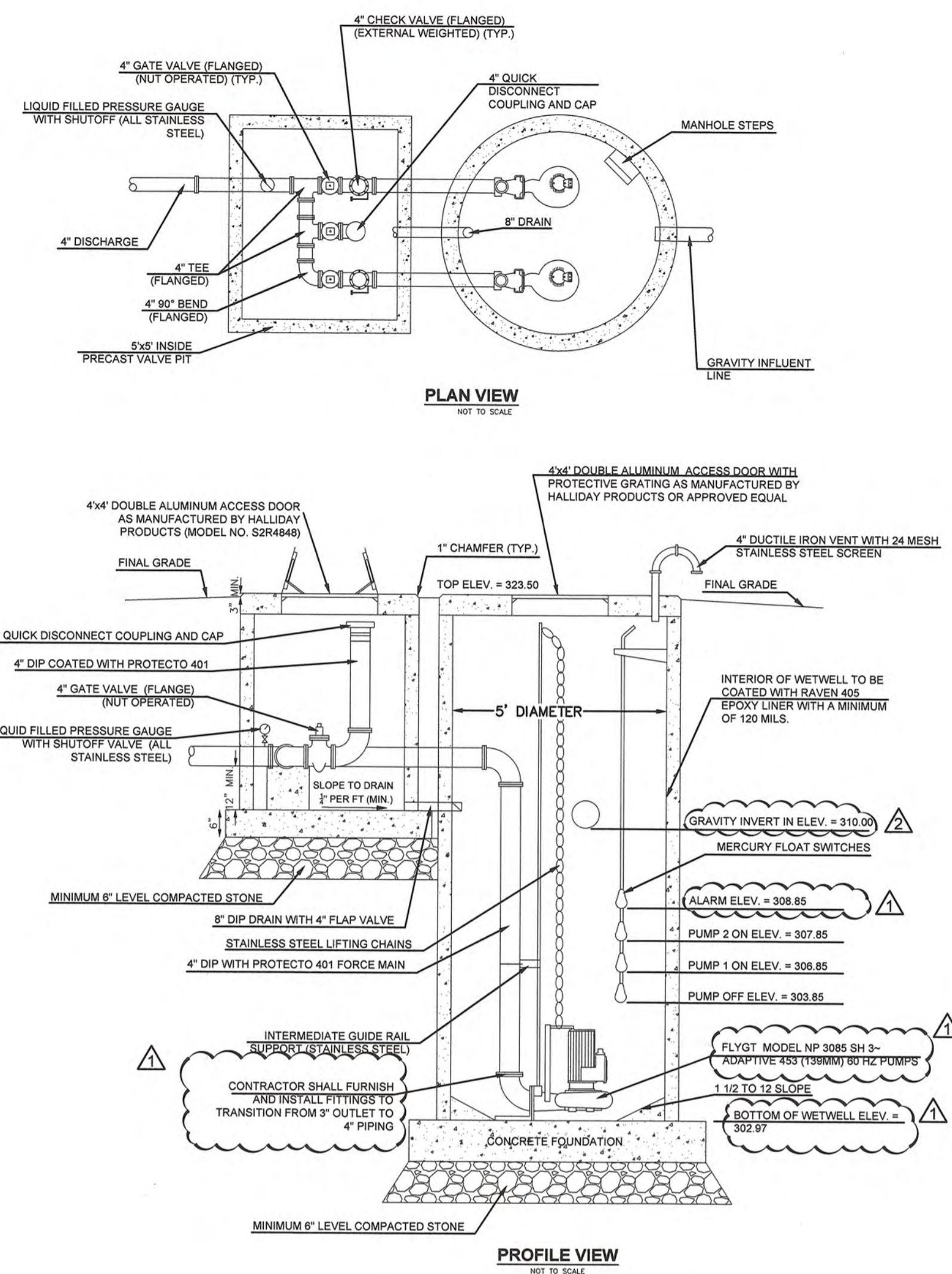
PRIMARY PERMITTEE:
TODD ANDERSEN
COLUMBIA APARTMENT RESIDENCES, LLC
1545 PEACHTREE ST. NW, SUITE 280
ATLANTA, GA 30309
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email: tandersen@novaregroup.com

PROJECT
LULLWATER AT WEST COLUMBIA
SUNSET BLVD. @ HENBET DR.
LOCATED IN THE CITY OF WEST COLUMBIA,
LEXINGTON COUNTY, SOUTH CAROLINA
PROJECT NO. 2238
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WATER AND SANITARY SEWER DETAILS
17/03-03-11; 04/25-1-14; 04/29-08-21; -22, -26, & -27
BOOK 68G-42
DATE JANUARY 14, 2022
SHEET NO. **C18 of 48**

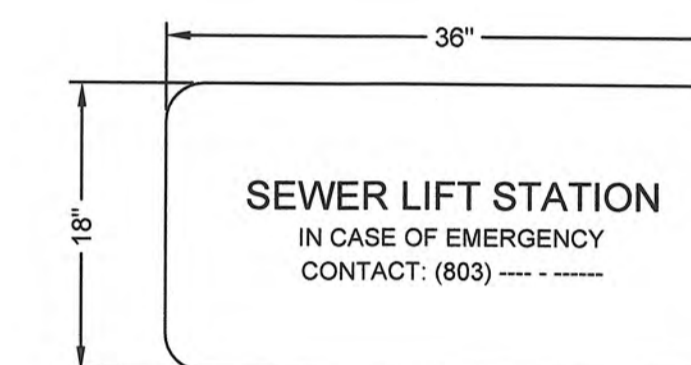
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LIFT STATION SITE PLAN
NOT TO SCALE



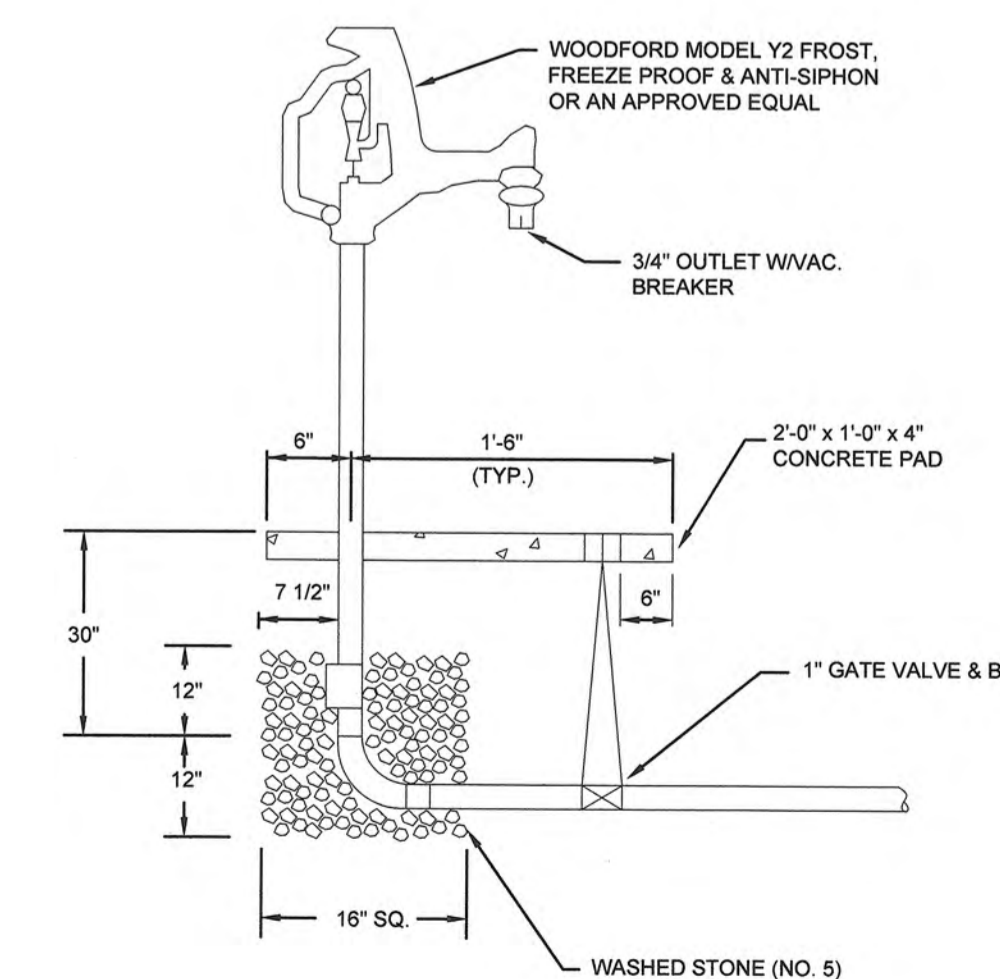
CONTROL PANEL DETAIL
NOT TO SCALE



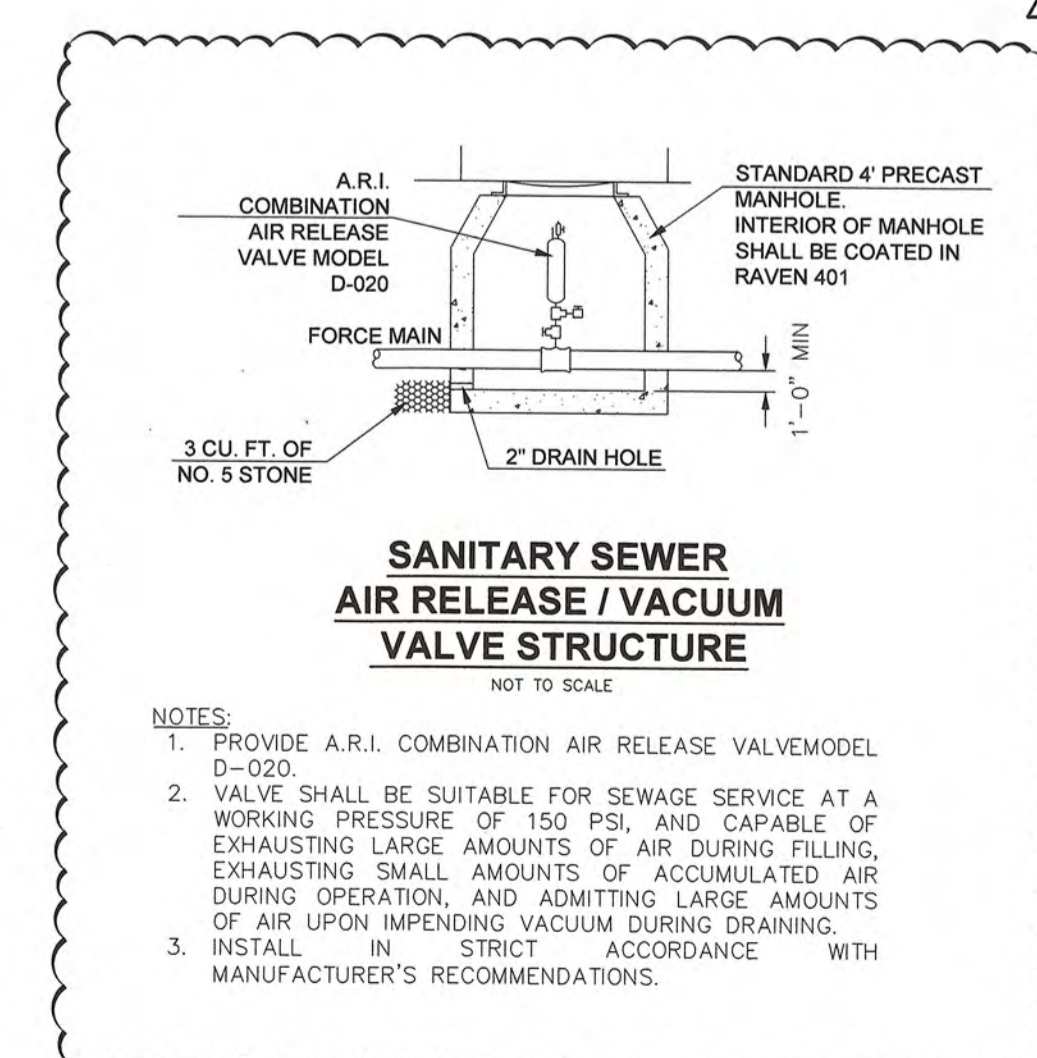
EMERGENCY SIGN NOTES:

1. SIGNS TO BE 1/8" THICK ALUMINUM
2. BACKGROUND TO BE REFLECTIVE WHITE
3. LETTERING TO BE BLACK BLOCK STYLE
4. MINIMUM TEXT DIMENSIONS SHALL BE 4" FOR ADDRESS, 1-1/2" FOR ALL OTHER TEXT. MINIMUM TEXT THICKNESS TO BE 1/4"

EMERGENCY SIGN DETAIL
NOT TO SCALE



YARD HYDRANT DETAIL
NOT TO SCALE



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COLUMBIA, SC 29205
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COXANDDINKINS.COM

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 27748
3/11/2022
Laura M. Baker
LICENSED PROFESSIONAL ENGINEER
No. 27748

SOUTH CAROLINA PROFESSIONAL ENGINEER
COX AND DINKINS, INC.
No. C00294
CERTIFICATE OF AUTHORIZATION SEAL

NO.	DATE	DESCRIPTION
1	01/18/2022	REVISED LIFT STATION PUMP MODEL
2	02/14/2022	Adjusted Invert in on Lift Station
3	03/11/2022	REVISED PER W. COLUMBIA COMMENTS

PRIMARY PERMITTEE:
TODD ANDERSEN
COLUMBIA APARTMENT
RESIDENCES, LLC
1545 PEACHTREE ST. NW, SUITE 260
ATLANTA, GA 30309
(404) 815-1234
email: tandersen@novaregroup.com

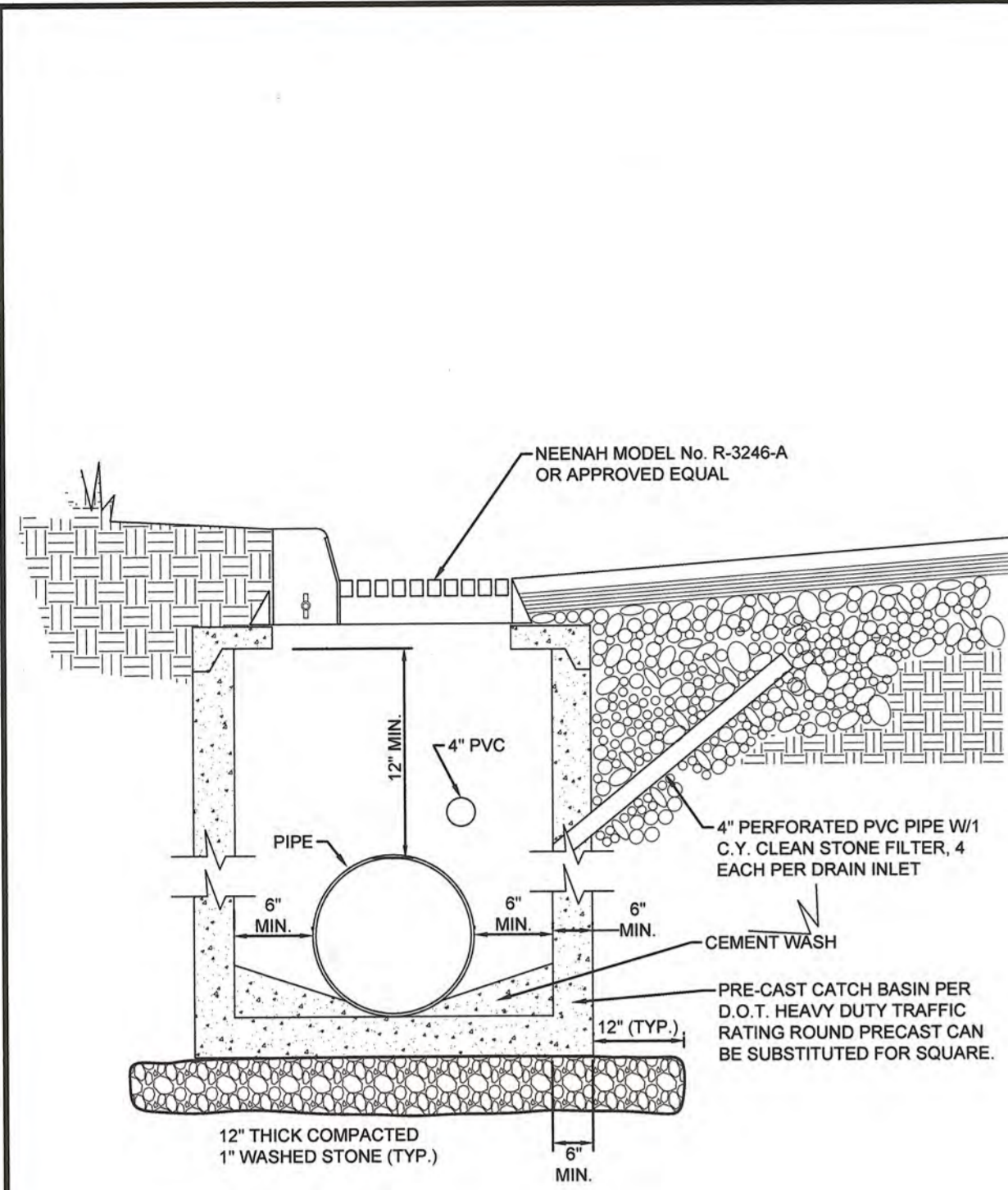
PROJECT: **LULLWATER AT WEST COLUMBIA**
SUNSET BLVD. @ HENBET DR.
LOCATED IN THE CITY OF WEST COLUMBIA,
LEXINGTON COUNTY, SOUTH CAROLINA

PROJECT NO. 2238
SF NO. 144-12

SANITARY SEWER LIFT STATION DETAILS

TMS 03899-03-11; 04535-1-14;
04597-09-21, -22, -26, & -27
BOOK 68G-42
DATE JANUARY 14, 2022
SHEET NO. **C19** of **48**

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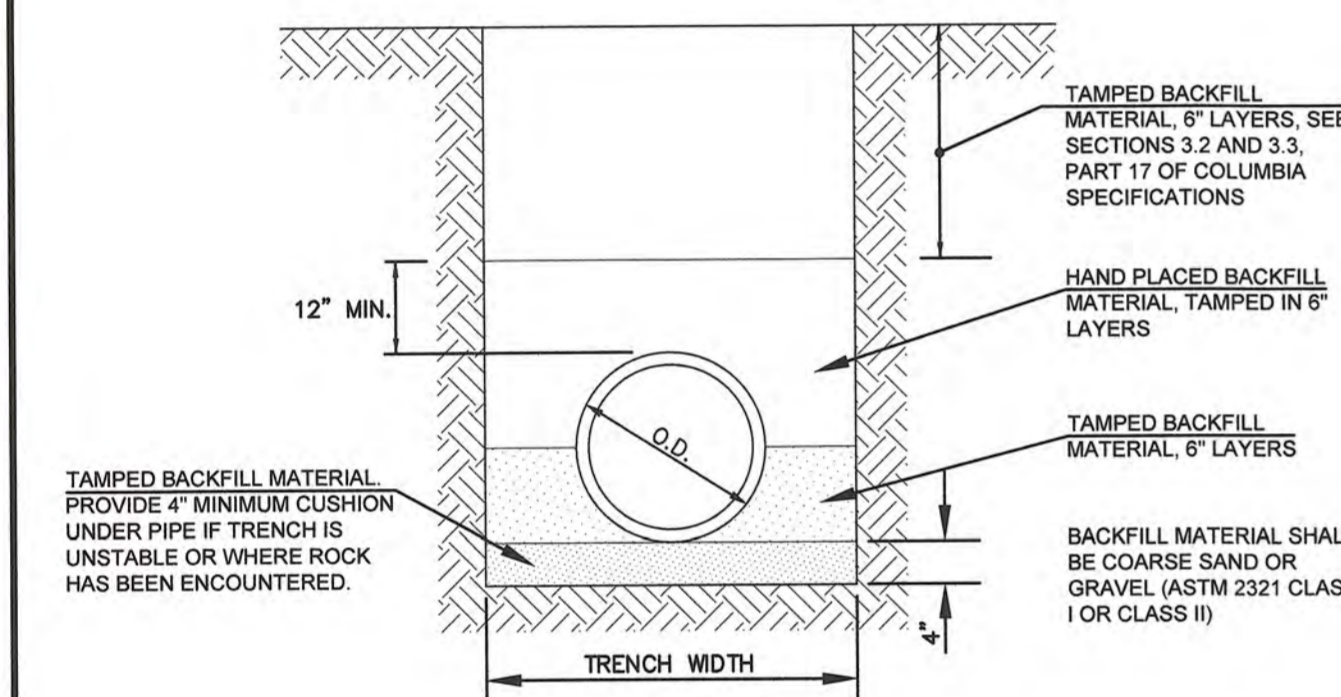


GRATE, FRAME AND HOOD DETAIL
NTS

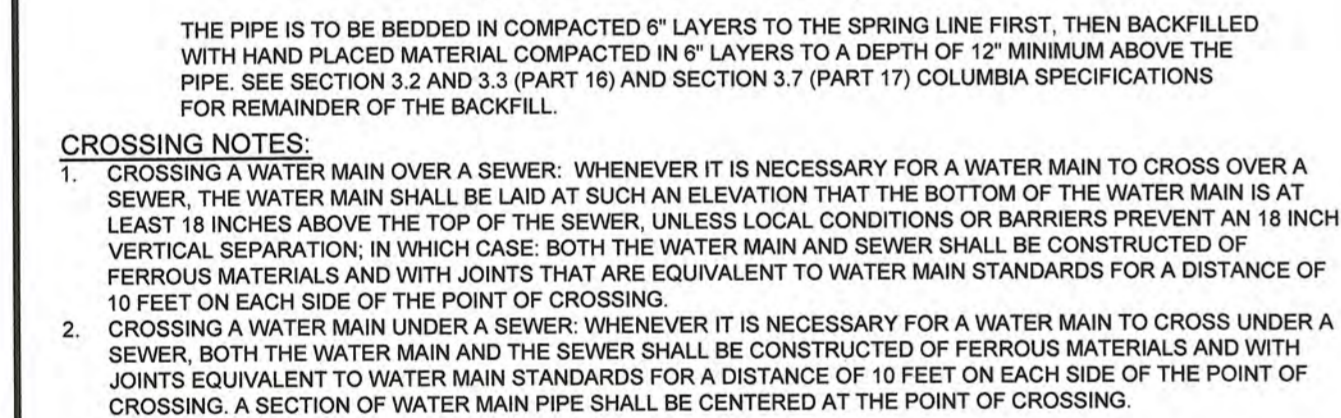
RA RIPRAP APRON OUTLET PROTECTION DETAIL
NTS

RIPRAP APRON SCHEDULE

OUTLET	Do (INCHES)	APRON MATERIAL (FILLING)	RIPRAP DIA. (INCHES)	RIPRAP DEPTH (d) (INCHES)	RIPRAP CLASS	Lo (MIN.) (FEET)	W1 (MIN.) (FEET)	W2 (MIN.) (FEET)
HW1	36"	LIGHT	6	12	B	18	10	10
HW2	15"	FINE	6	10	A	5	3	3
HW3	18"	MEDIUM	12	18	I	12	6	6
HW4	18"	LIGHT	6	12	B	9	5	5
HW5	15"	FINE	6	10	A	5	3	3
FES3	15"	LIGHT	6	12	B	8	4	4
FES4	15"	LIGHT	6	12	B	8	4	4

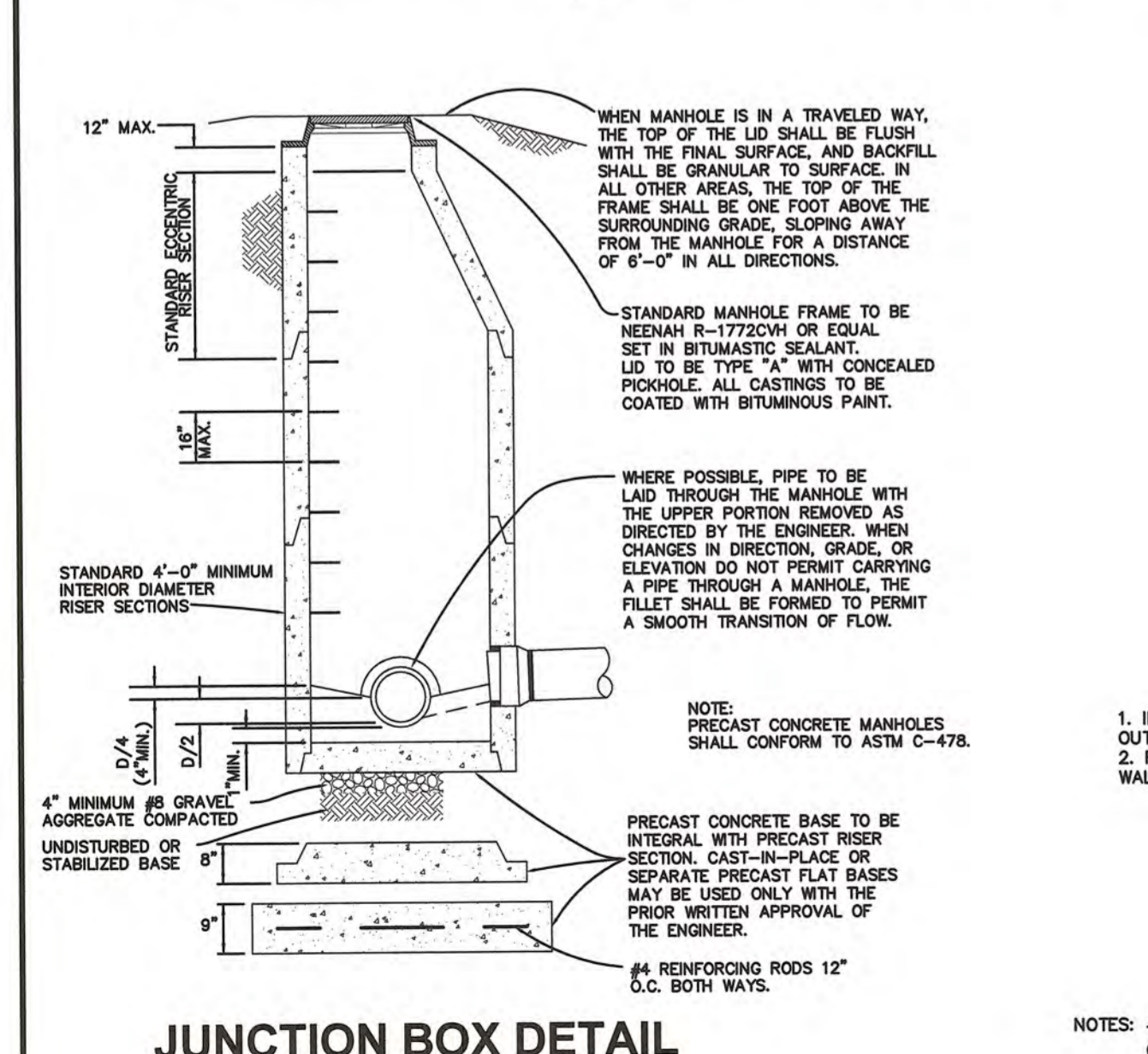


BEDDING DETAILS
NTS



GRATE AND FRAME CATCH BASIN WITH CONCRETE BASE
NTS

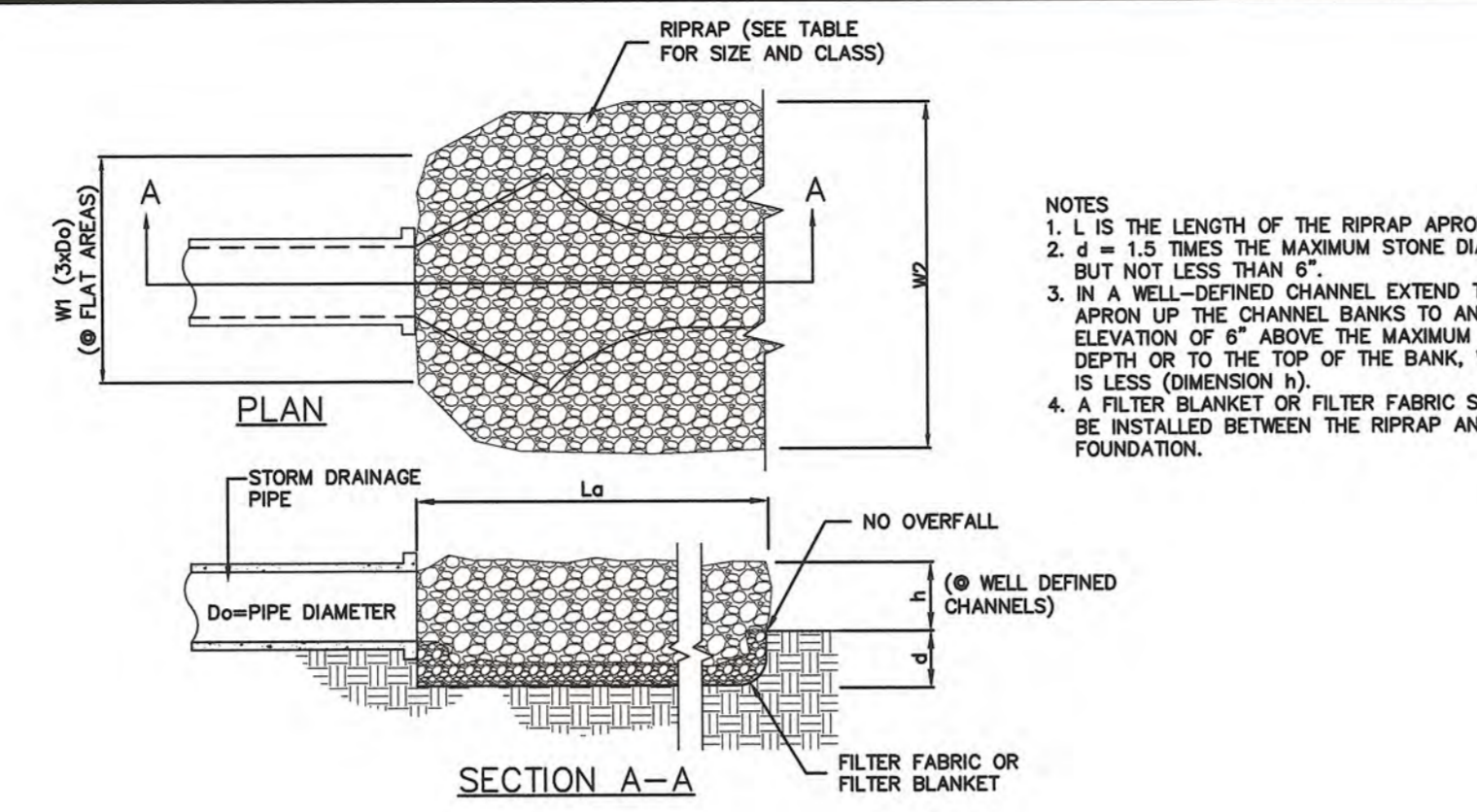
PIPE BEDDING AND BACKFILLING DETAIL
NTS



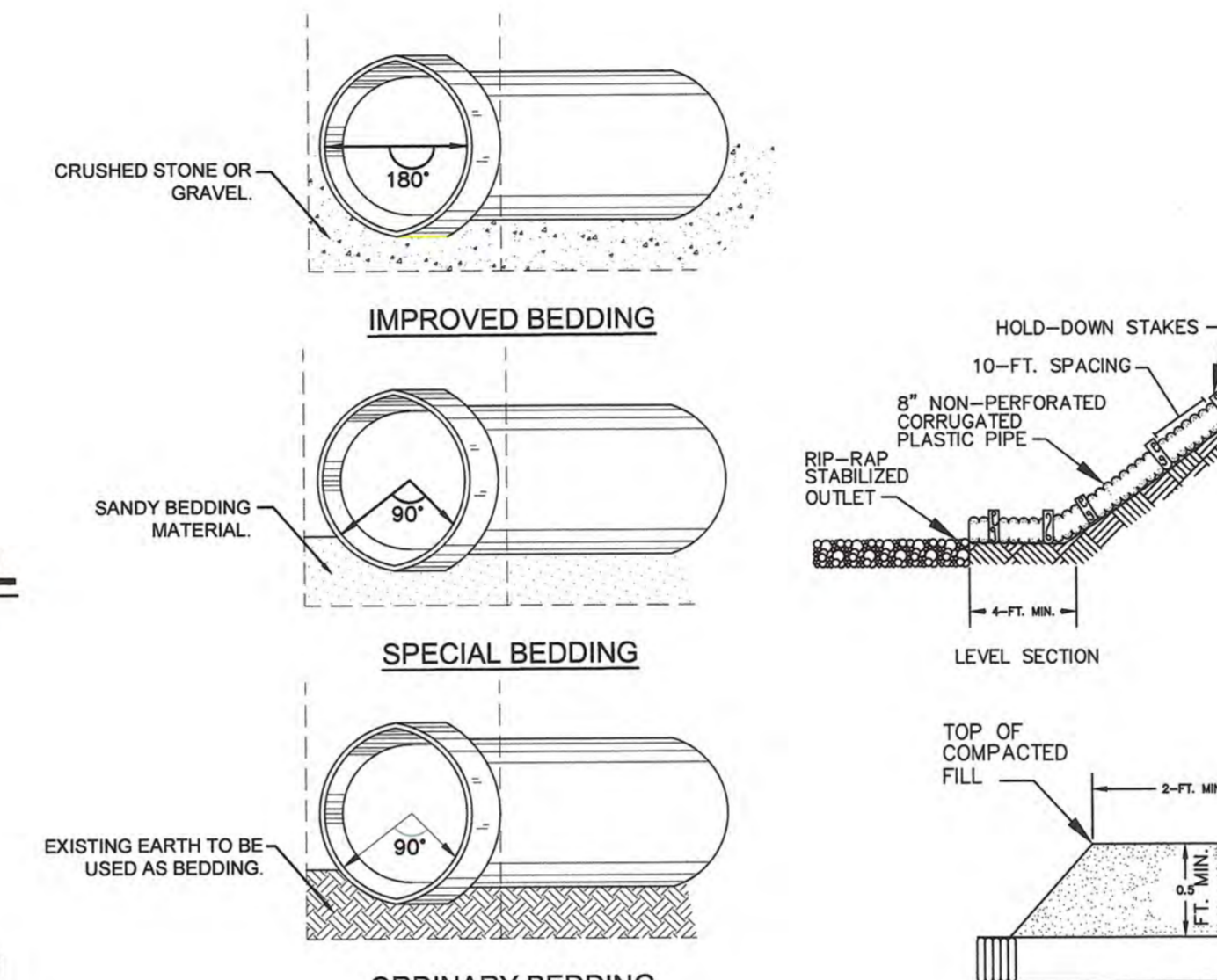
SLAB-TOP CATCH BASIN DETAIL
NTS

JUNCTION BOX DETAIL
NTS

NOTE: BRICK PRECAST OR CAST IN PLACE MAY BE AN OPTION USED BY THE CONTRACTOR. VERIFY WITH CIVIL ENGINEER PRIOR TO INSTALLATION.



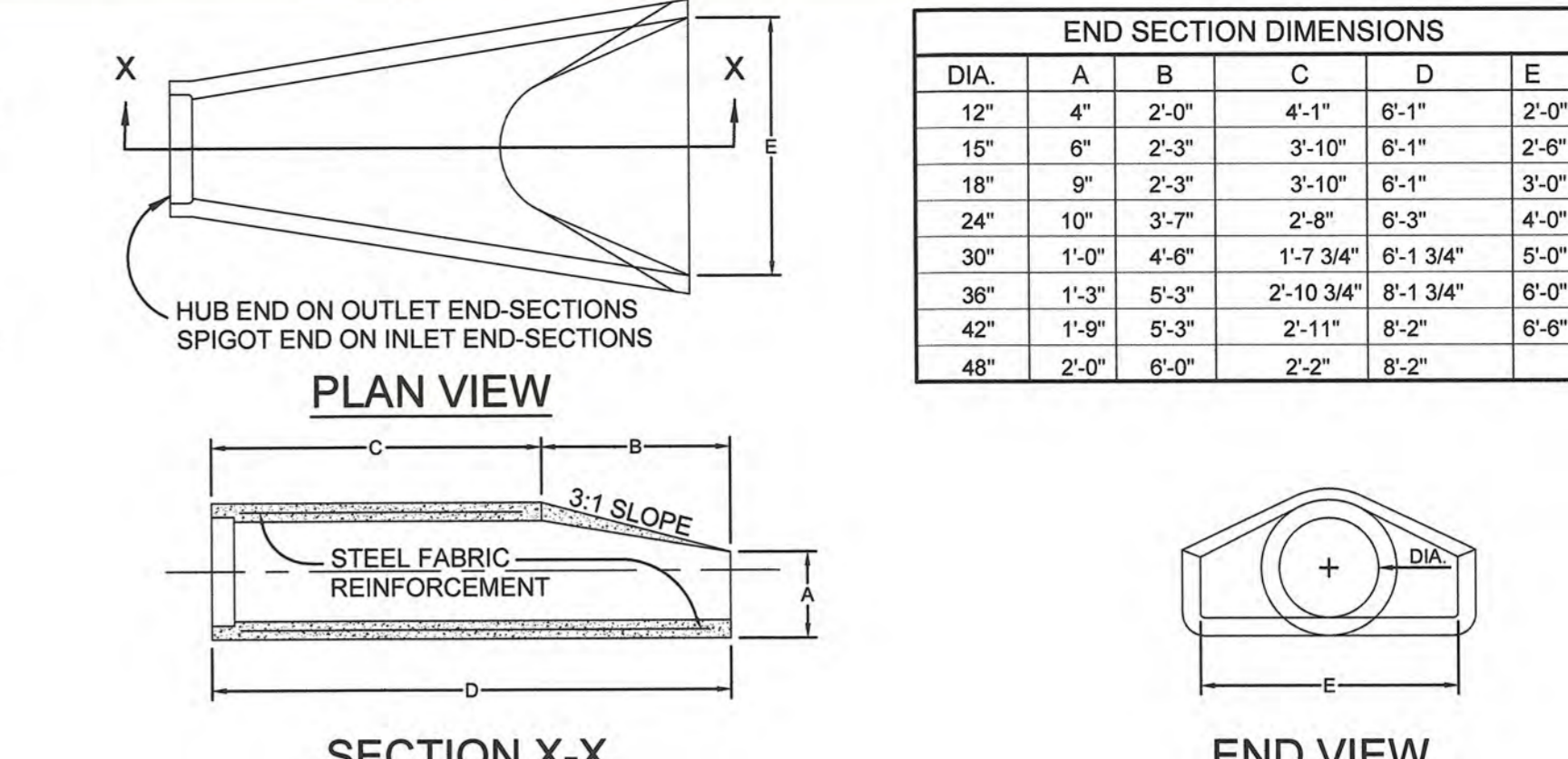
TRENCH DETAIL
NTS



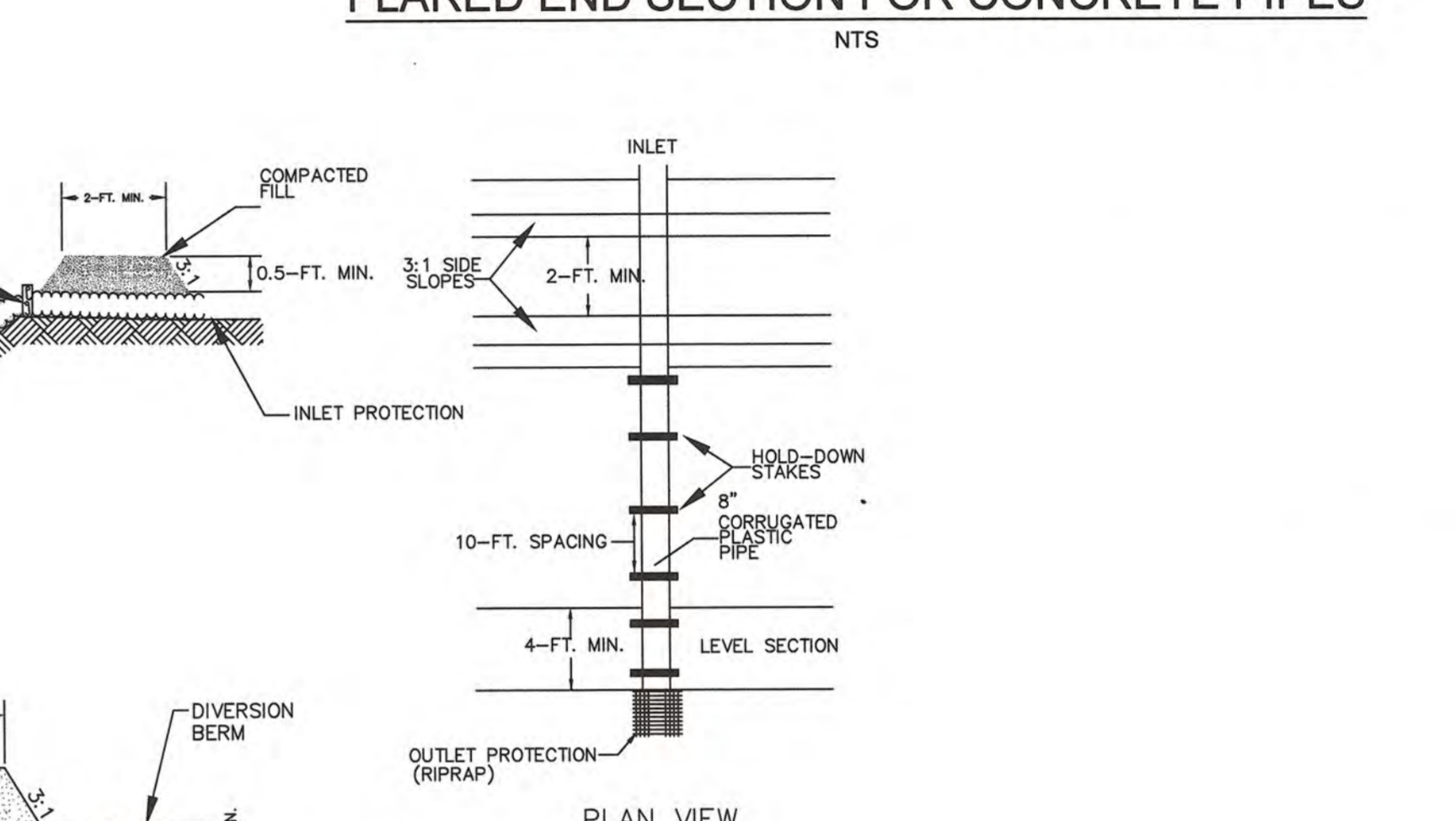
TYPICAL PIPE SLOPE DRAIN LAYOUT

- EXISTING EARTH TO BE USED AS BEDDING ONLY WITH GEOTECHNICAL ENGINEER'S APPROVAL.
- LOCAL SANDY BEDDING MATERIAL TO BE USED AS BEDDING ONLY WHEN APPROVED BY GEOTECHNICAL ENGINEER.
- CRUSHED STONE OR GRAVEL BEDDING MATERIAL TO BE USED IN ALL CASES UNLESS APPROVED BY GEOTECHNICAL ENGINEER AND EXTEND TO MIDPOINT ON DIAMETER AS SHOWN. BEDDING DEPTH = 6" AND EXTEND TO MIDPOINT ON DIAMETER AS SHOWN.

PSD PIPE SLOPE DRAIN DETAIL
NTS



FLARED END SECTION FOR CONCRETE PIPES
NTS



PIPE SLOPE DRAIN
When and Where to Use It
Pipe slope drains are used when it is necessary for water to flow down a slope without causing erosion, especially before a slope has been stabilized or before permanent drainage structures are installed.

Installation:
Typical pipe slope drains are made of non-perforated corrugated plastic pipe. Slope drain sections should be securely fastened together, have gasket watertight fittings, and be securely anchored into the soil.

Diversion berms or dikes should direct runoff to slope drains. The minimum depth of these dikes or berms should be 1.5-feet. The height of the berm around the pipe inlet should be a minimum of 1.5-feet high and at least 0.5-feet higher than the top of the pipe. The berm of the pipe inlet shall be compacted around the pipe. The area around the inlet shall be properly stabilized with ECBs, TRMs, riprap or other applicable stabilization techniques.

The area below the outlet must be properly stabilized with ECBs, TRMs, riprap or other applicable stabilization technique.

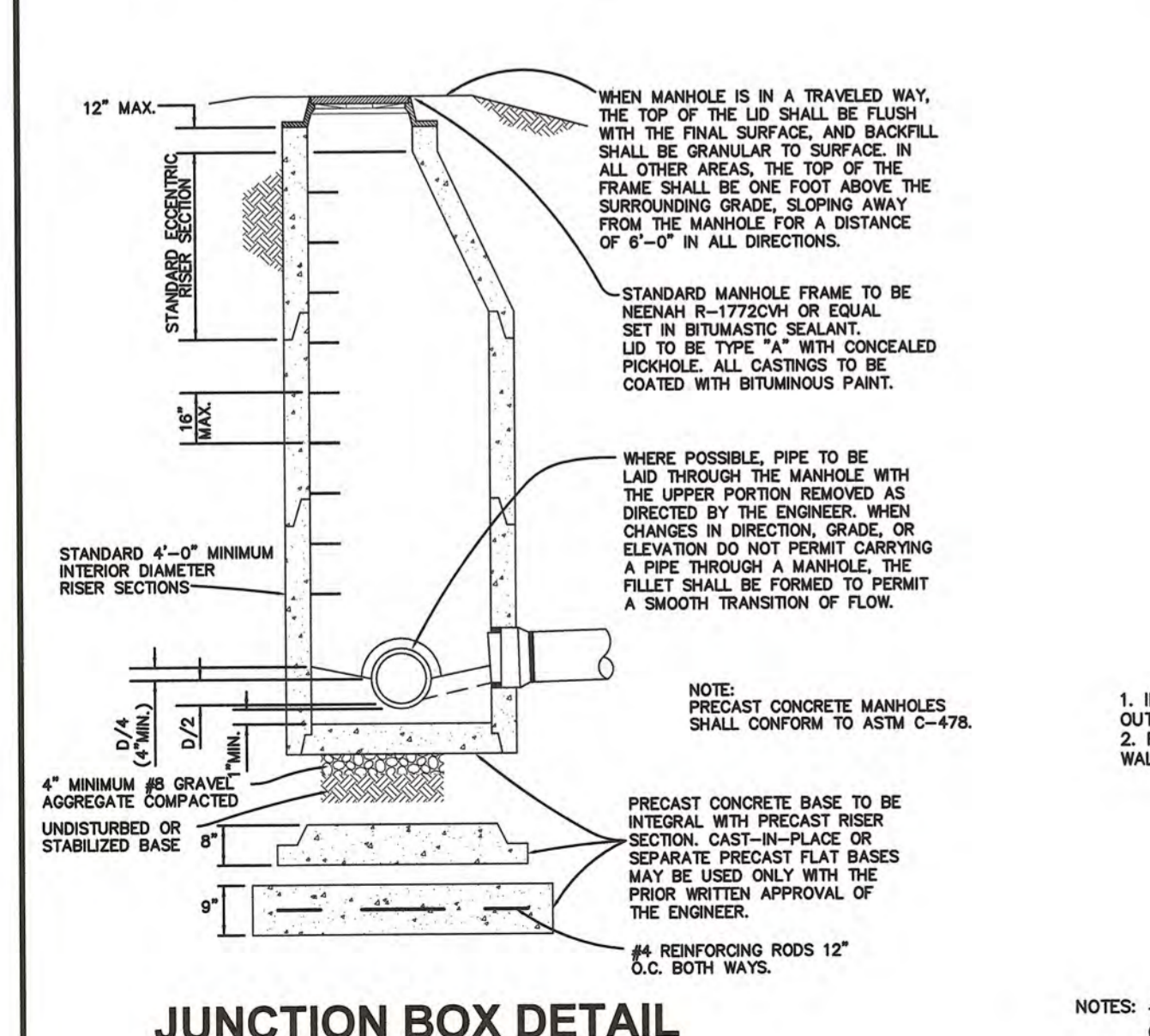
If the pipe slope drain is conveying sediment-laden water, direct all flows into the sediment trapping facility.

Permanent slope drains should be buried beneath the soil surface a minimum 1.5-feet.

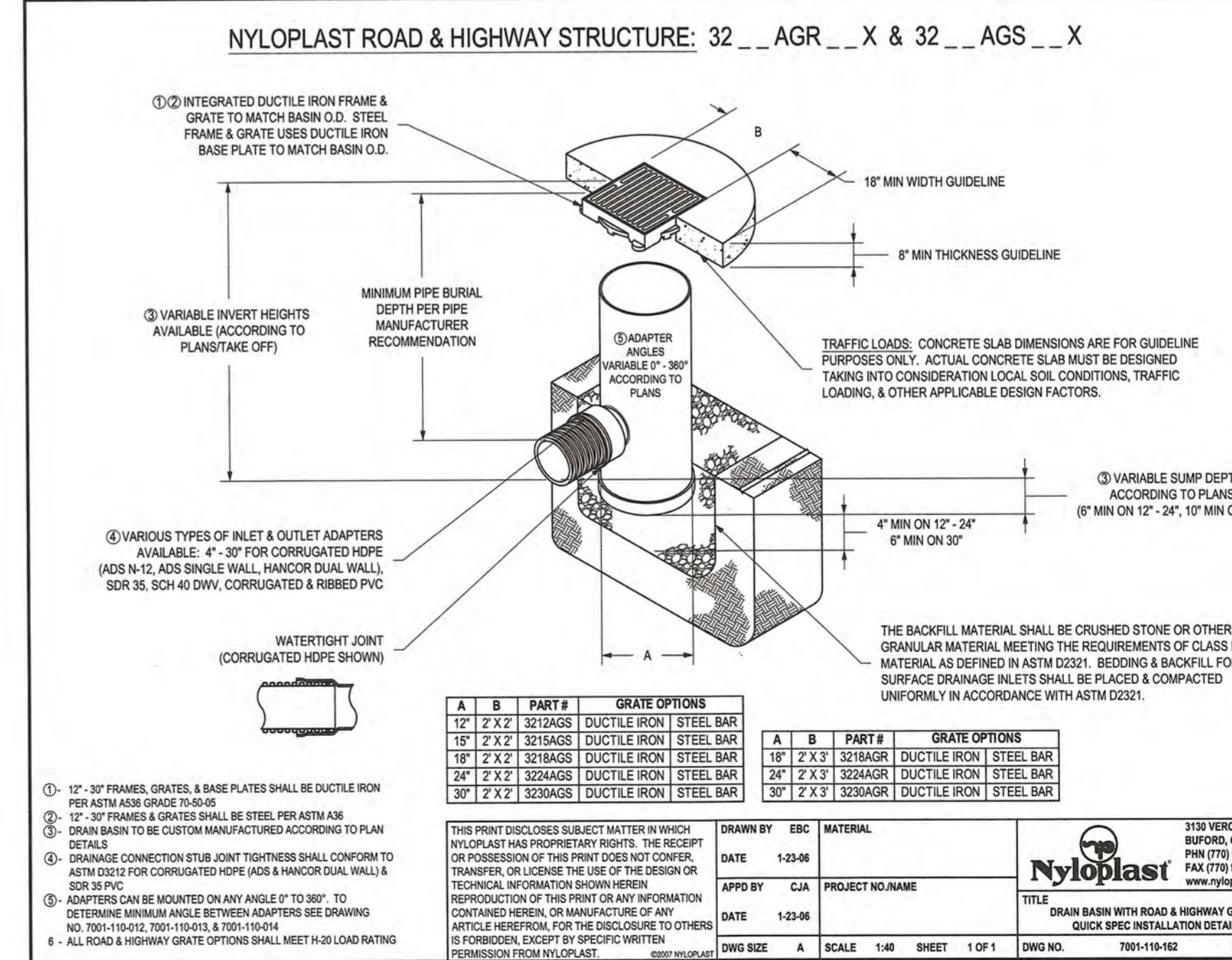
Inspection and Maintenance:
Inspect pipe slope drain inlet and outlet points every seven (7) calendar days and within 24-hours after each rainfall event that produces 1/4-inch or more of precipitation.

The inlet should be free from undercutting, and no water should be going around the point of entry. If there are problems, the headwall should be reinforced with compacted earth or sandbags. The outlet point should be free of erosion and installed with appropriate outlet protection.

All temporary pipe slope drains should be removed within 30 days after final site stabilization is achieved or after the temporary BMP is no longer needed. Disturbed soil areas resulting from removal should be permanently stabilized.



LEXINGTON COUNTY PUBLIC WORKS DEPARTMENT
MANHOLE LID
DATE: October 2008



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WWW.NYLOPLAST.COM

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COX AND DINKINS
ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
724 BELTLINE BLVD.
COLUMBIA, SC 29205
803.254.0518
COXANDINKINS.COM

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 27748
3/11/2022
LURA M. BAKER
James M. Baker
LICENSED PROFESSIONAL ENGINEER
NO. 27748

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. C00294
COX AND DINKINS, INC.
CERTIFICATE OF AUTHORIZATION SEAL

REVISIONS

NO.	DATE	DESCRIPTION
1	3/11/2022	Reissue Only. No revisions this sheet.

PRIMARY PERMITTEE:
TODD ANDERSEN
COLUMBIA APARTMENT RESIDENCES, LLC
1545 PEACHTREE ST. NW, SUITE 260
ATLANTA, GA 30309
(404) 815-1234
email: tandersen@novaregroup.com

PROJECT: LULLWATER AT WEST COLUMBIA
SUNSET BLVD. @ HENBET DR.
LOCATED IN THE CITY OF WEST COLUMBIA,
LEXINGTON COUNTY, SOUTH CAROLINA
PROJECT NO. 2238
SF NO. 144-12

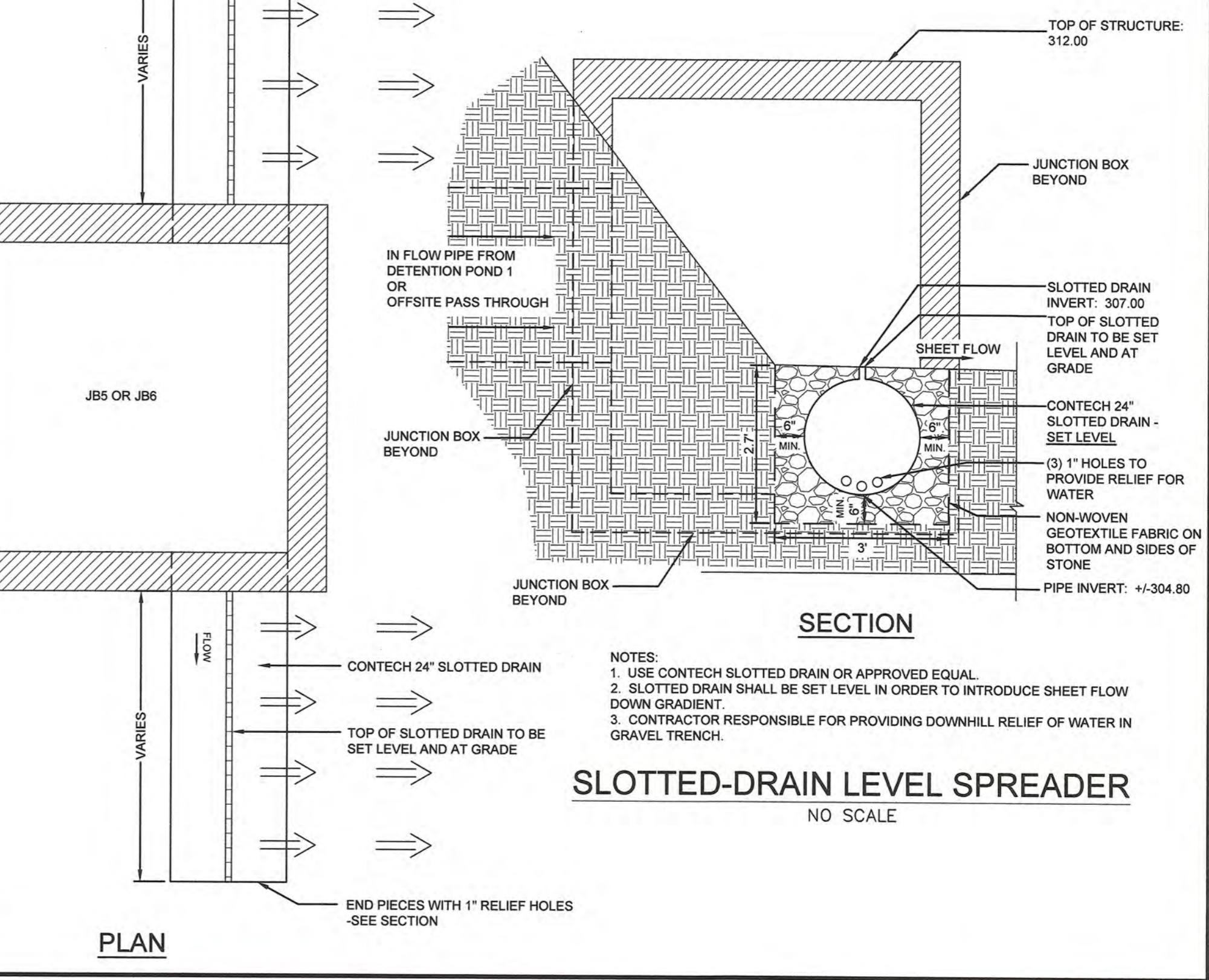
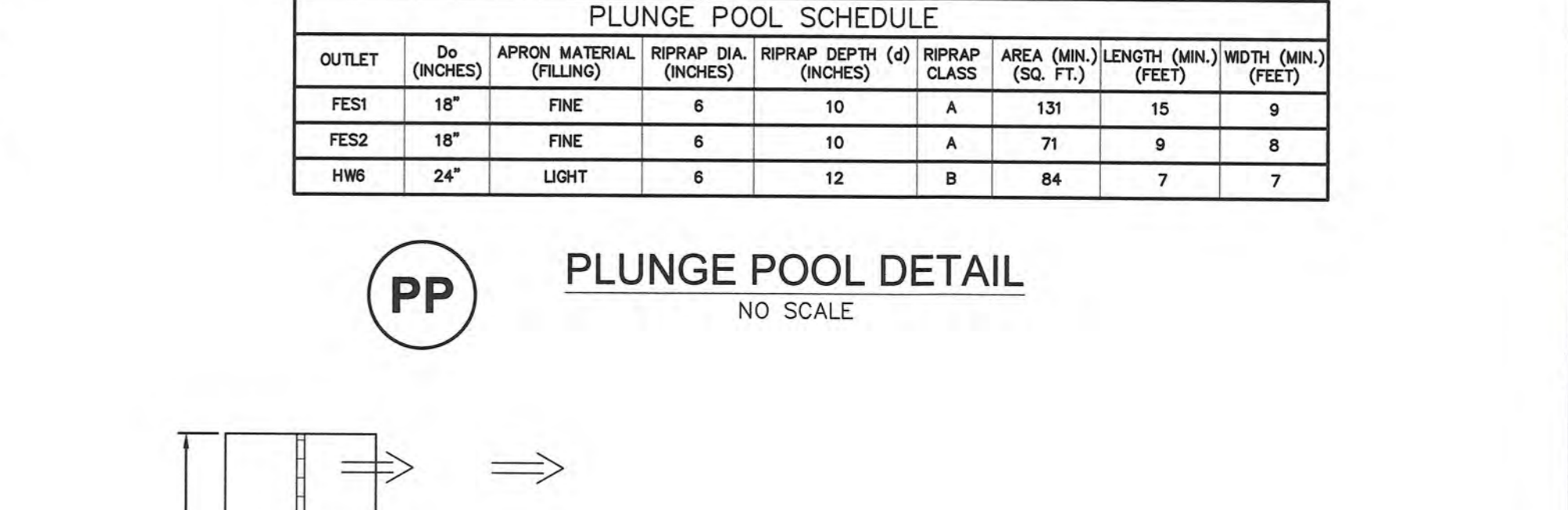
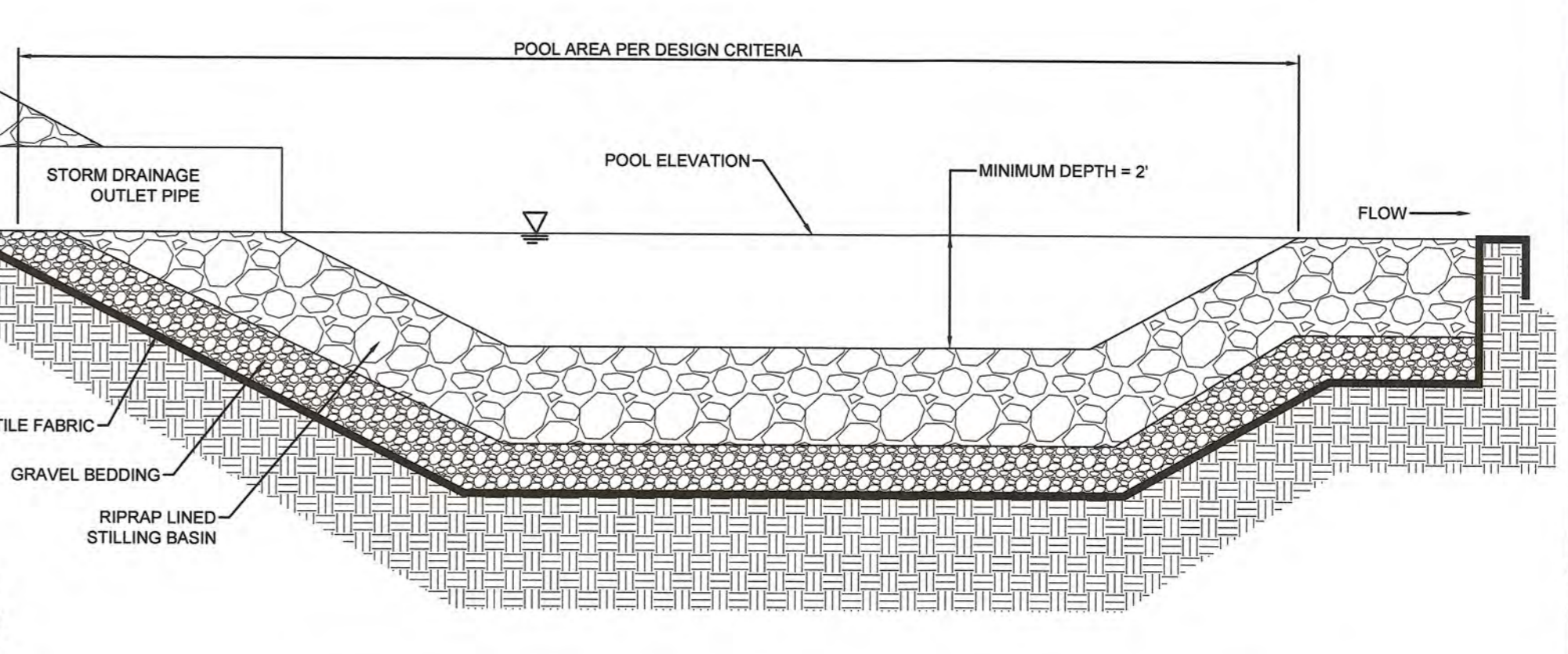
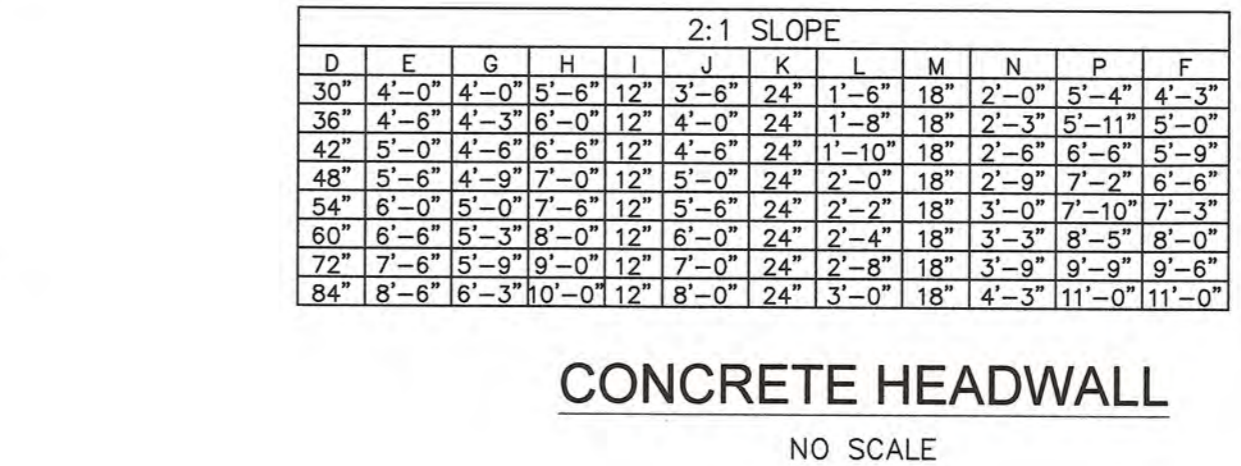
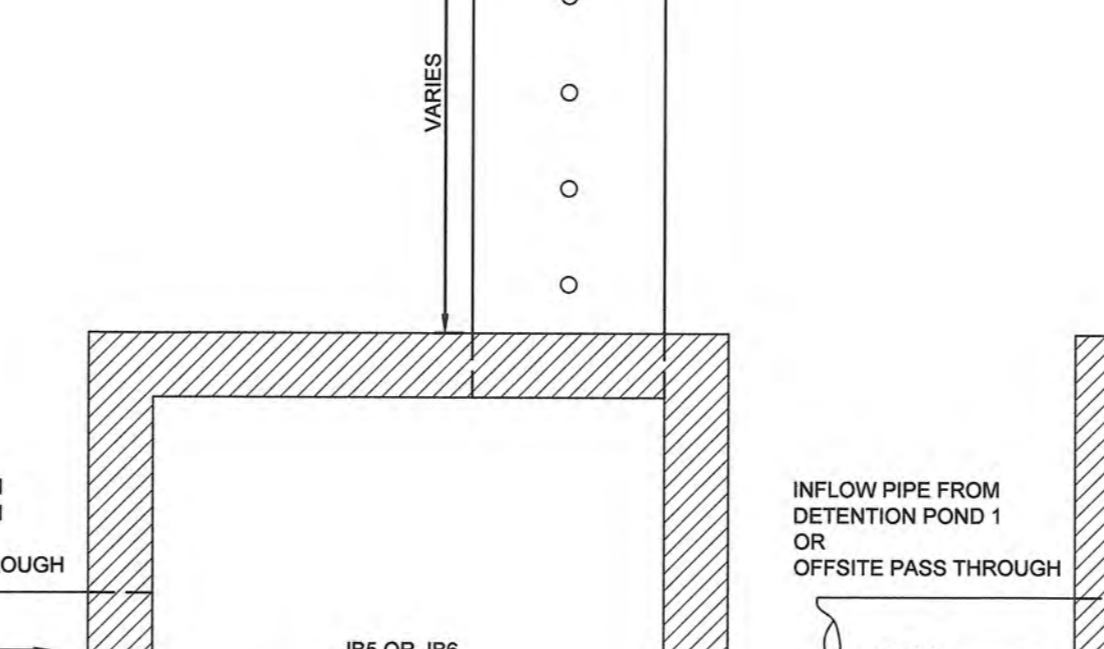
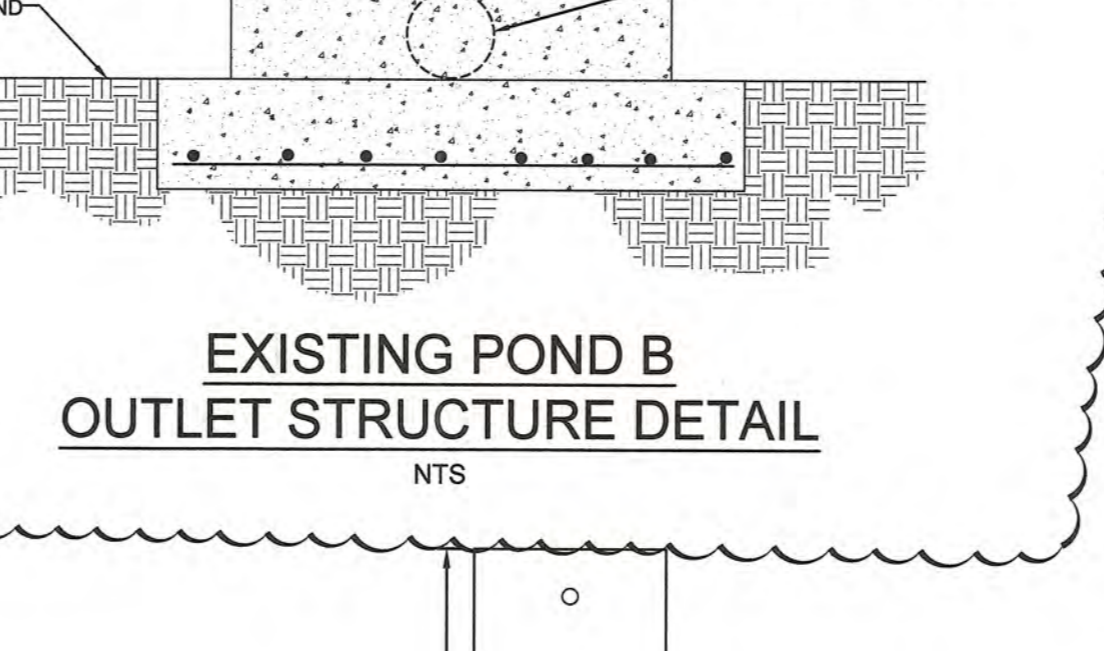
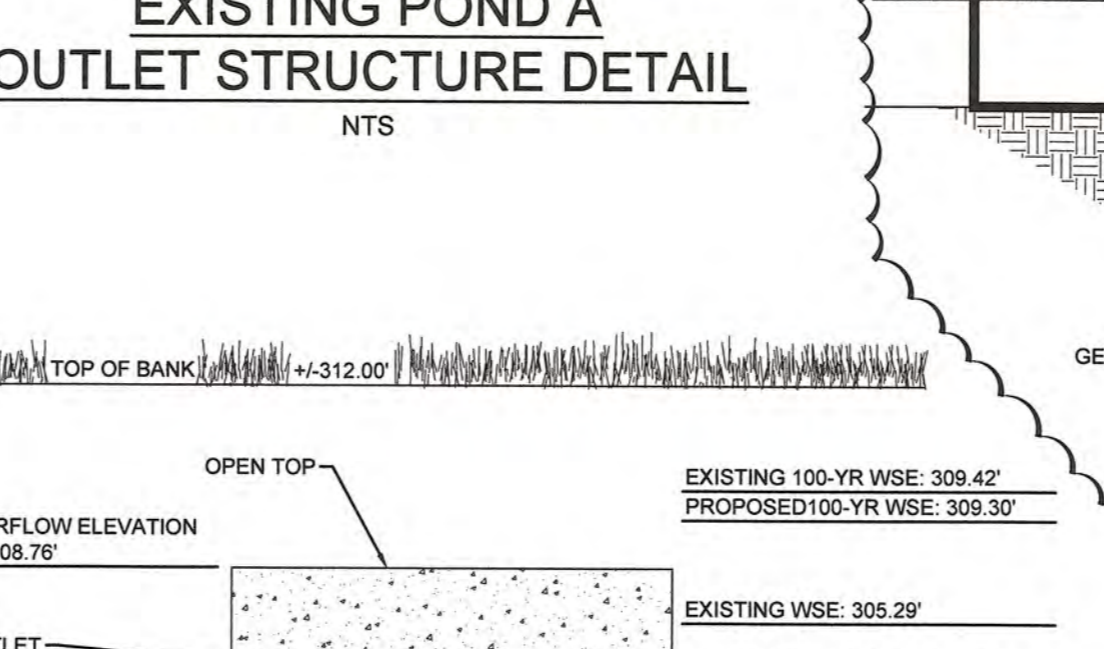
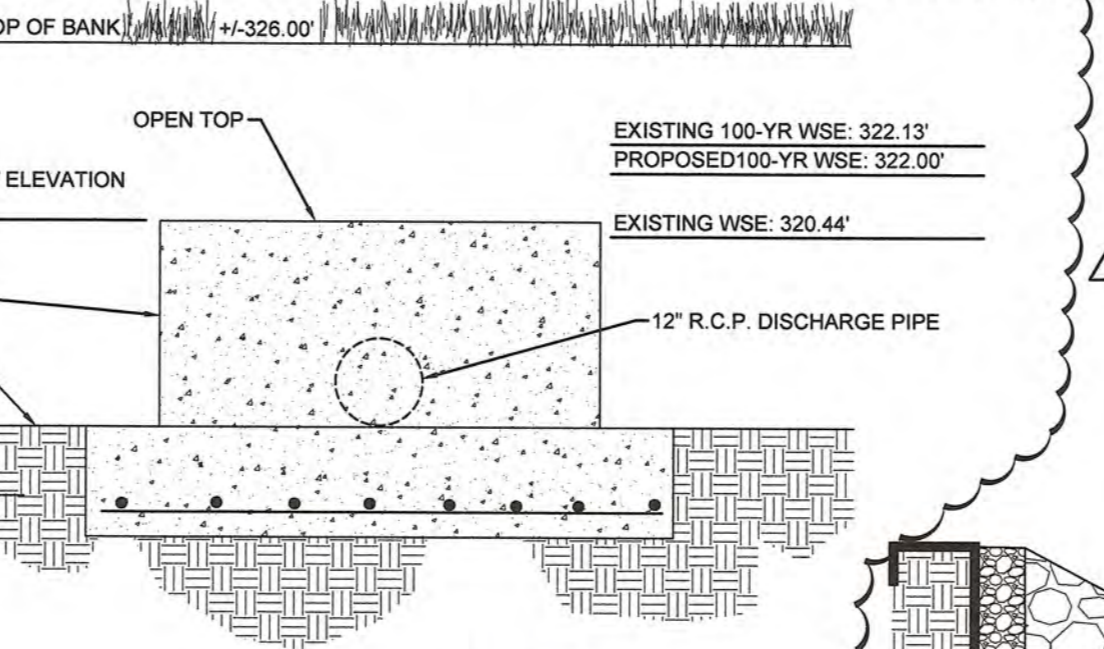
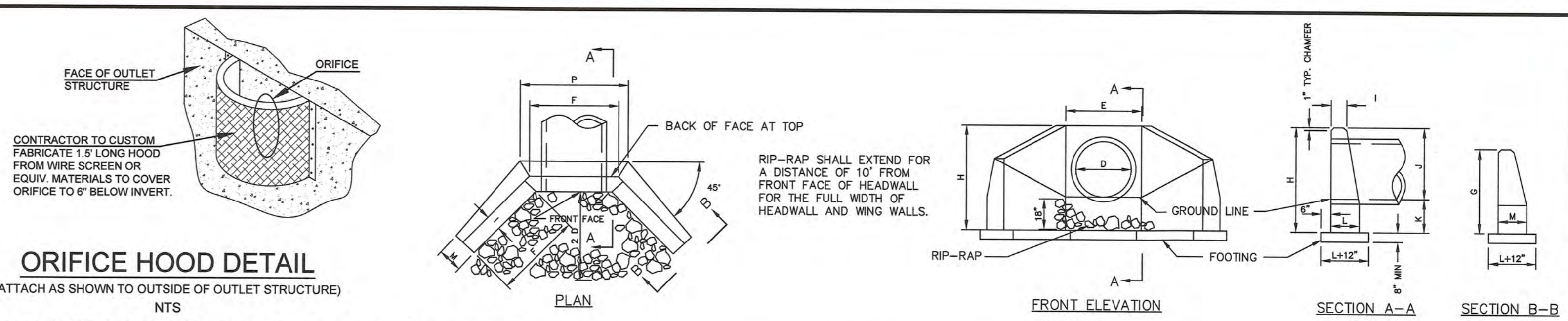
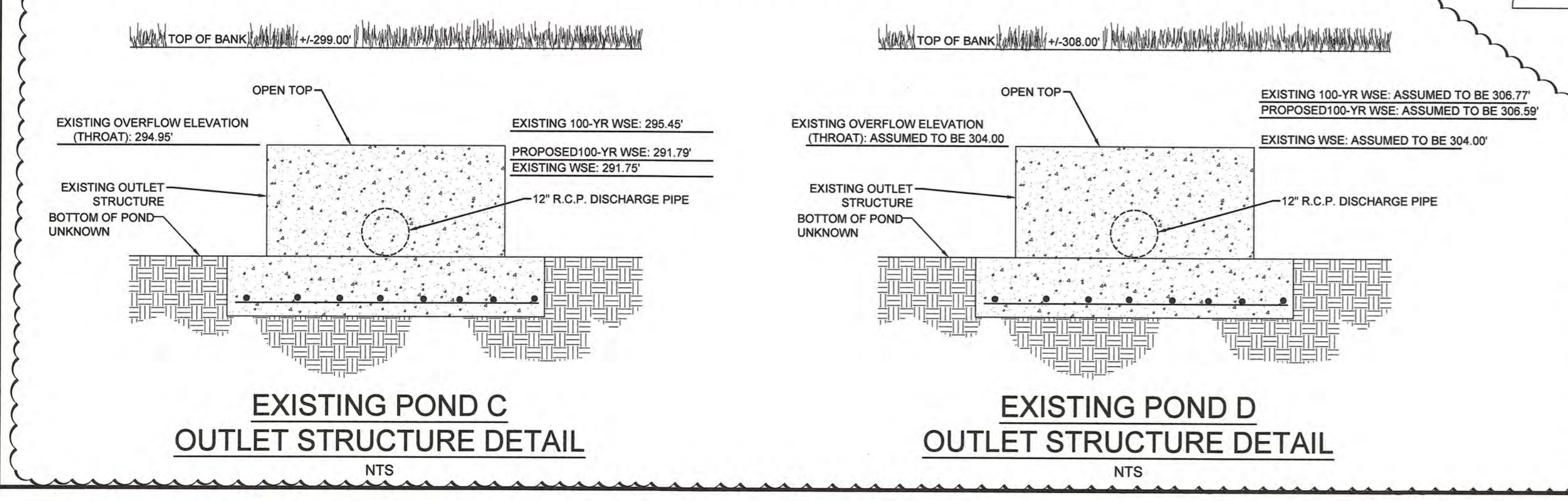
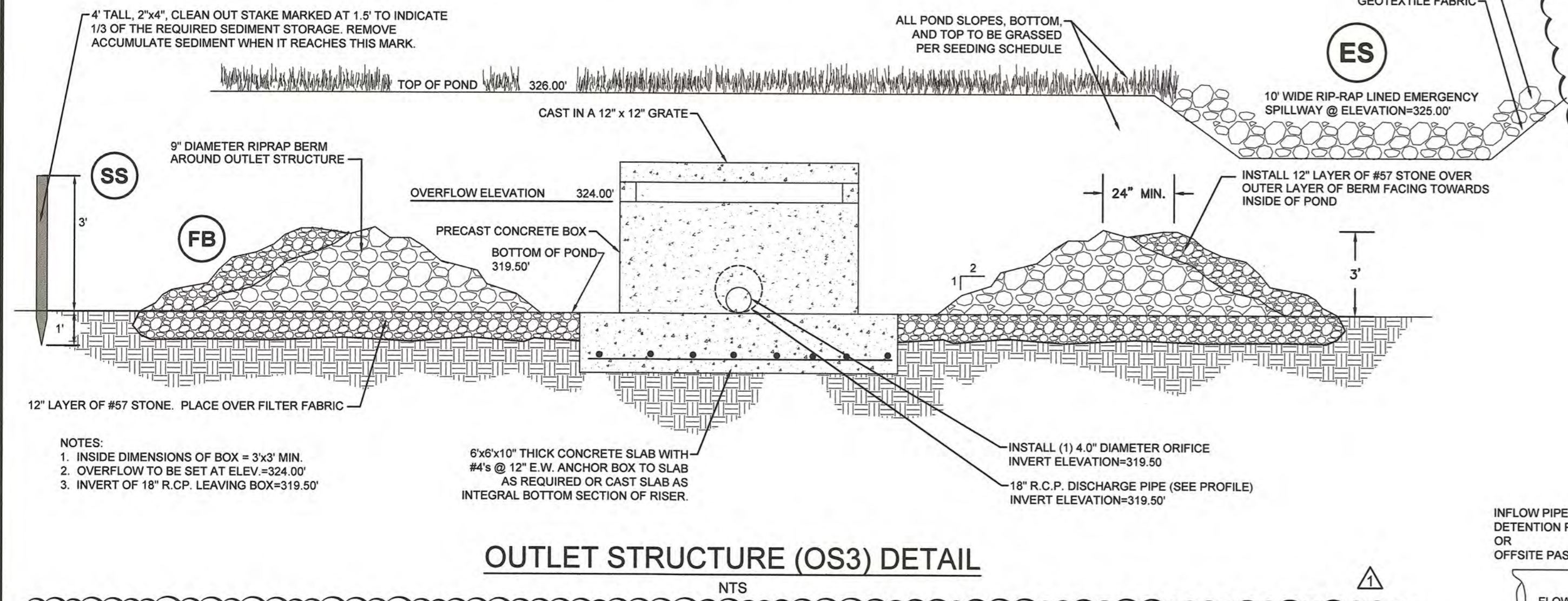
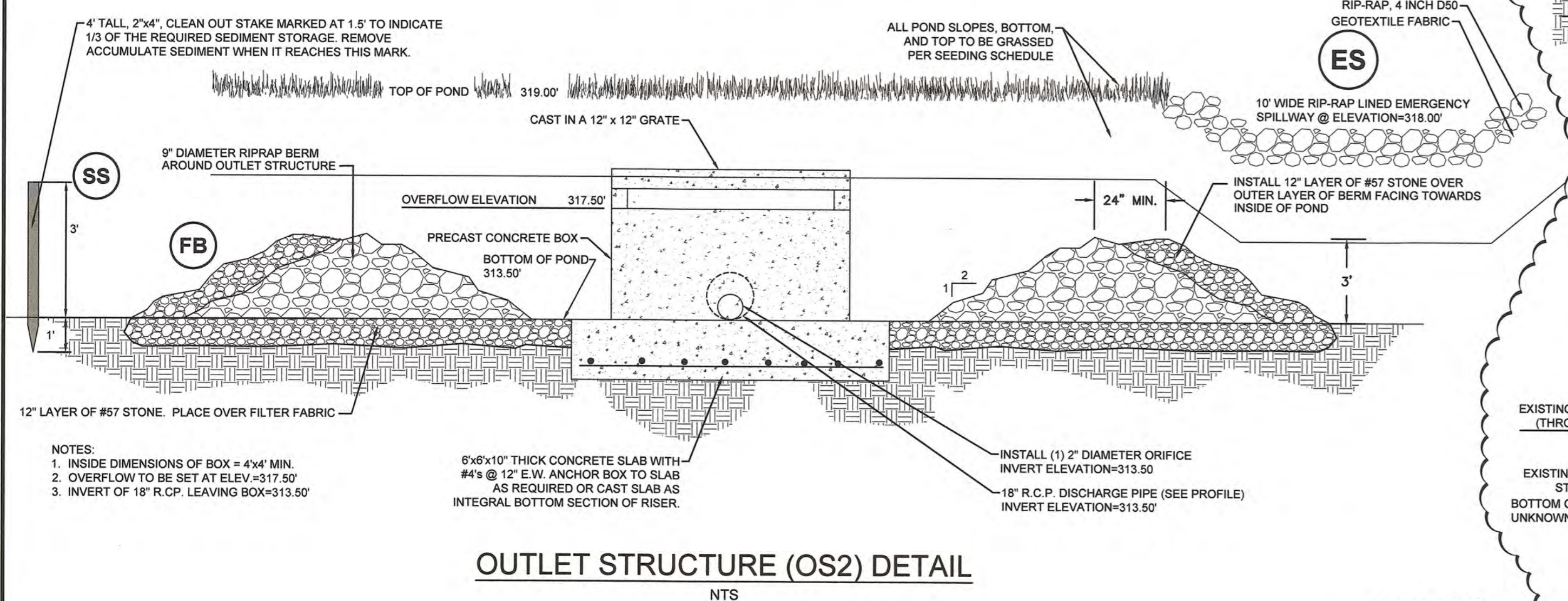
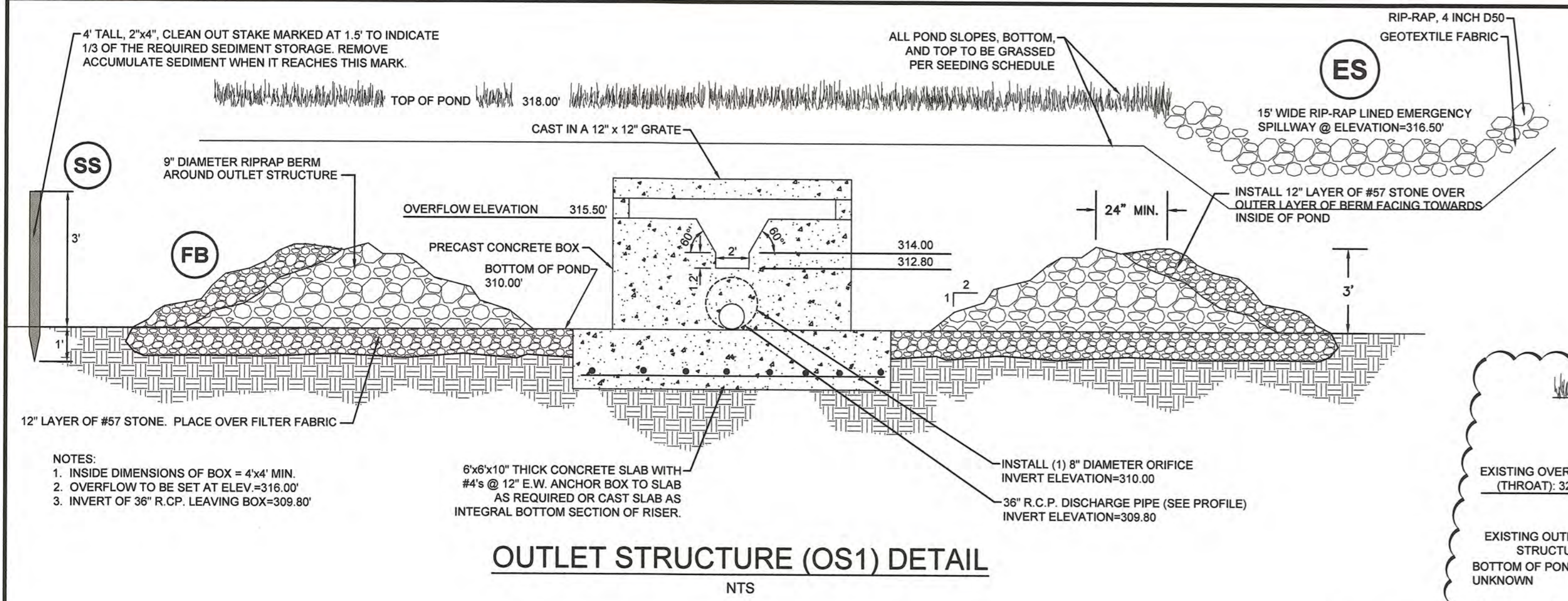
STORM DRAINAGE DETAILS

TMS 10389-03-11; 04535-1-14;
04597-09-21, -22, -26, & -27

BOOK 68C-42

DATE JANUARY 14, 2022

SHEET NO. **C20** of 48



COX AND DINKINS
ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
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COLUMBIA, SC 29205
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REGISTERED PROFESSIONAL ENGINEER
No. 27748
SOUTH CAROLINA
AYRA M. BAKER
LICENSED PROFESSIONAL ENGINEER
No. 27748

REGISTERED PROFESSIONAL ENGINEER
No. C00294
SOUTH CAROLINA
COX AND DINKINS, INC.
LICENSED PROFESSIONAL ENGINEER
No. 27748

CERTIFICATE OF AUTHORIZATION SEAL

REVISIONS

NO.	DATE	DESCRIPTION
1	03/11/2022	Add Existing Outlet Structure Details.

PRIMARY PERMITTEE:
TODD ANDERSEN
COLUMBIA APARTMENT
RESIDENCES, LLC
1545 PEACHTREE ST. NW, SUITE 260
ATLANTA, GA 30309
(404) 815-1234
email: tandersen@novaregroup.com

PROJECT
**LULLWATER AT WEST COLUMBIA
SUNSET BLVD. @ HENBET DR.**
LOCATED IN THE CITY OF WEST COLUMBIA,
LEXINGTON COUNTY, SOUTH CAROLINA
PROJECT NO. 2238
SF NO. 144-12

STORM DRAINAGE DETAILS

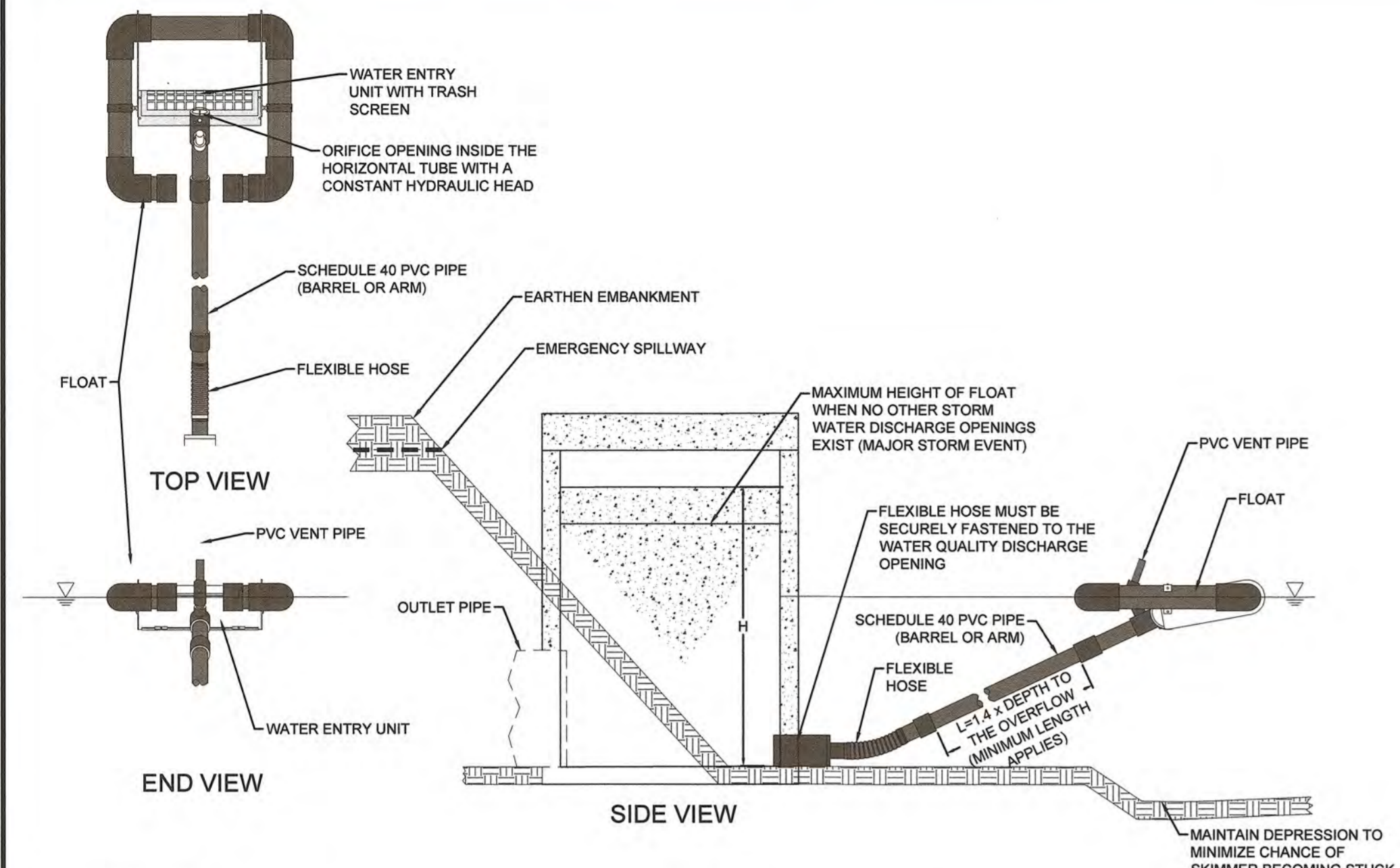
TMS U3699-03-11, U4635-1-14,
04597-09-21, -22, -26, & -27

BOOK 68G-42

DATE JANUARY 14, 2022

SHEET NO. **C21** of 48

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MAINTENANCE:
INSPECT SKIMMER SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE THE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.

REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.

IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLodge THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.

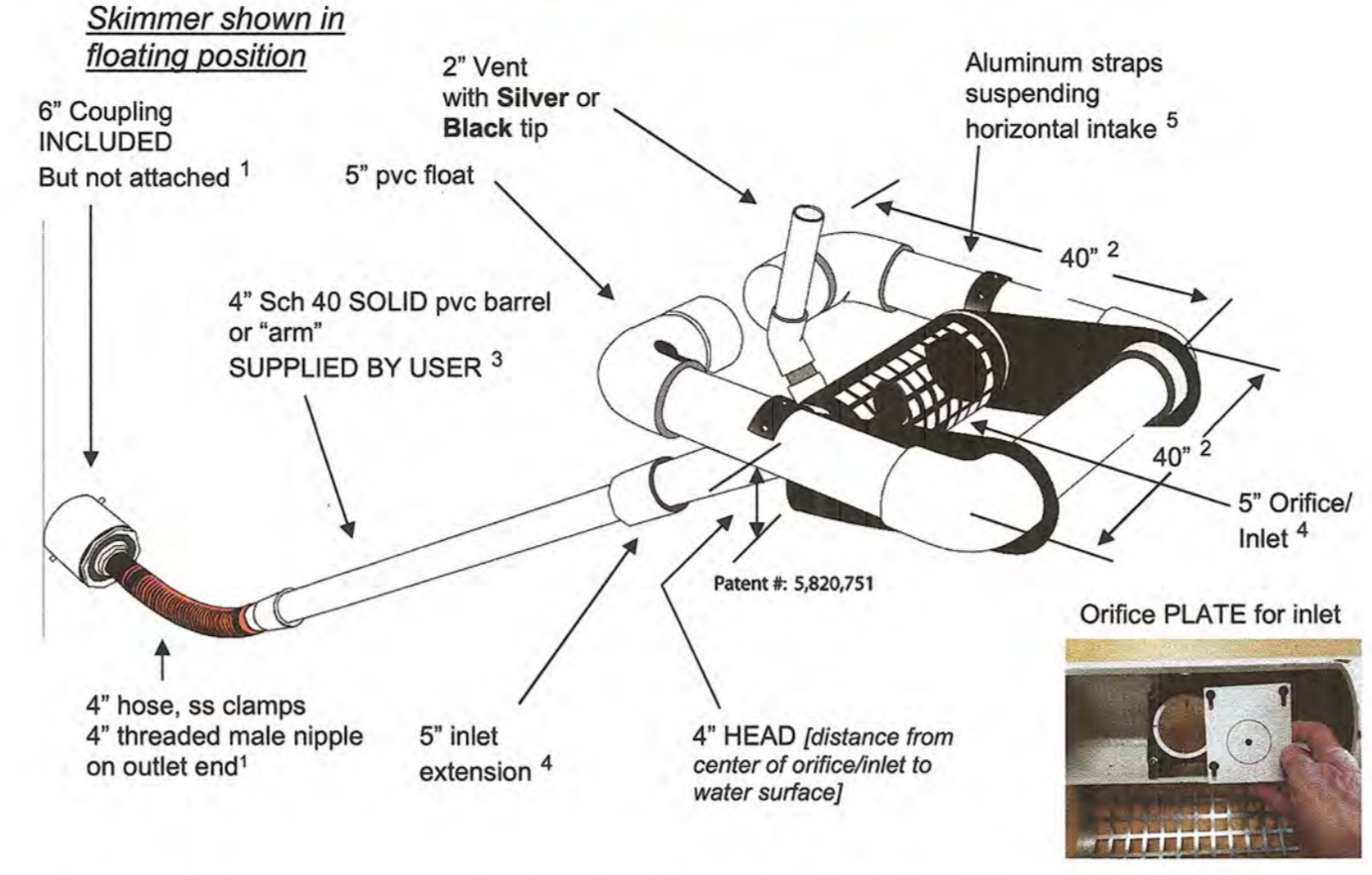
IF THE SKIMMER ARM OF BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.

CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT FOR PIPING SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.

FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.

FAIRCLOTH SKIMMER DISCHARGE SYSTEM WITH OUTLET STRUCTURE SK

5" Faircloth Skimmer® Cut Sheet
J. W. Faircloth & Son, Inc.
www.FairclothSkimmer.com

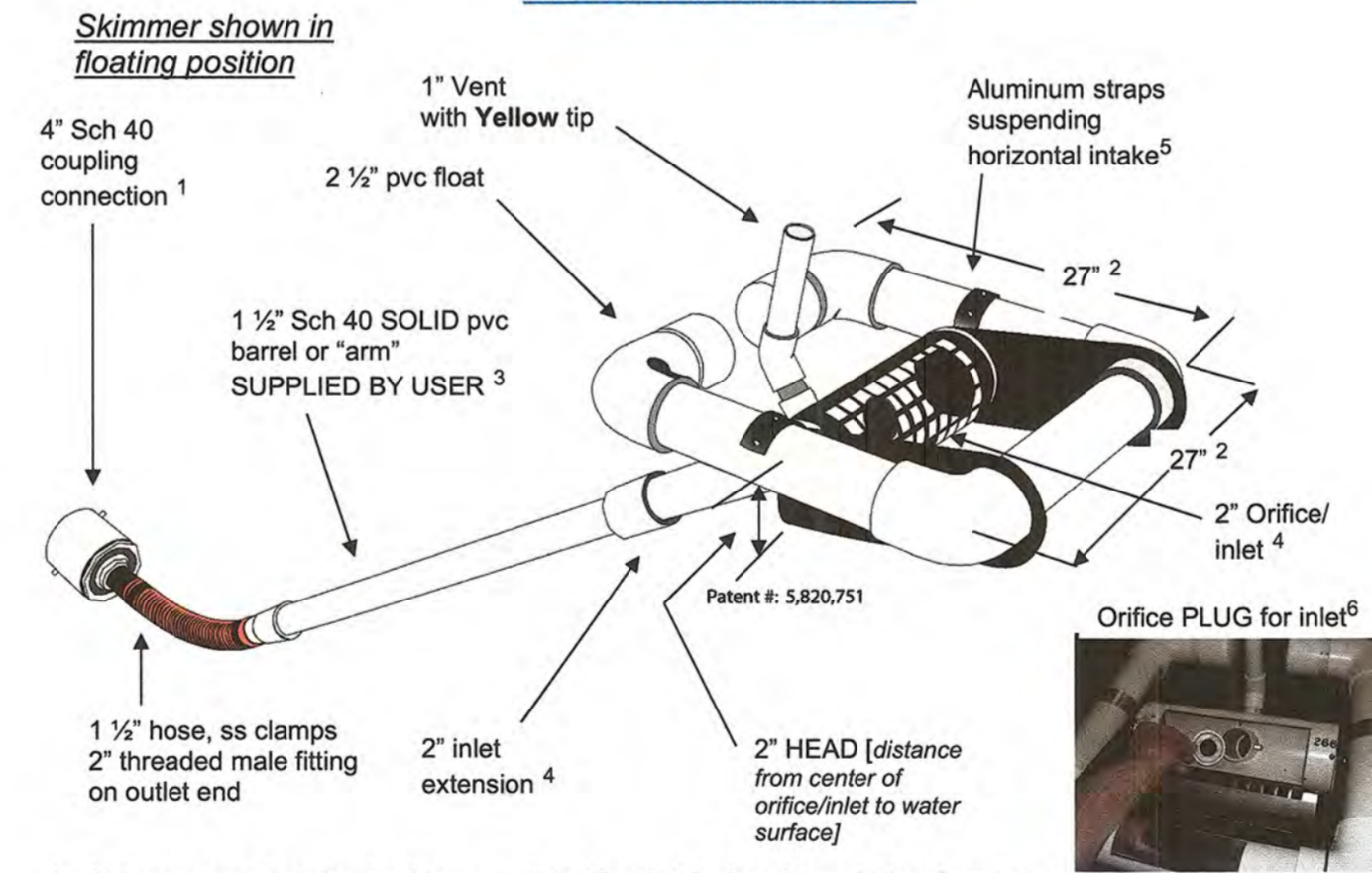


- Hose is attached to outlet using the threaded 4" nipple. Typical methods used: a) a metal structure with a steel stub out welded on the side at the bottom with a 4" threaded coupling or reducer(s); b) a concrete structure with a hole or orifice at the bottom - use a steel plate with a hole cut in it and coupling welded to it that will fit over the hole in the concrete and bolted to the structure with sealant.
- Dimensions are approximate, not intended as plans for construction.
- Barrel (solid, not foam core pipe) should be 1.4 times the depth of water with a minimum length of 8' so the inlet can be pulled to the side for maintenance. If more than 10' long, weight may have to be added to inlet to counter the increased buoyancy.
- Orifice/inlet tapers down from 5" maximum inlet to a 4" barrel and hose. Barrel is smaller to reduce buoyancy and tendency to lift inlet but is sufficient for flow through inlet because of slope. The orifice/inlet can be reduced using the plate and cutter provided to control the outflow rate - see #6.
- Horizontal intake is 8" pipe between the straps with slots cut in the inlet and aluminum screen door (smaller than shown in illustration) for access to the 5" inlet and orifice inside.
- Capacity: 32,832 cubic feet per day maximum with 5" inlet and 4" head. Inlet can be reduced by installing a smaller orifice using the plate and cutter provided to adjust flow rate for the particular drawdown time required. Please use the sizing template at www.fairclothskimmer.com.
- Ships assembled. User glues inlet extension and barrel, installs vent, cuts orifice in plate and attaches to outlet pipe or structure. Includes float, flexible hose, rope, and orifice plate and cutter. Does NOT include 4" Sch 40 SOLID pvc barrel or "arm" SUPPLIED BY USER.

5inchCut 5-1-19 © J. W. Faircloth & Son, Inc 2019

OS1 SKIMMER

2" Faircloth Skimmer® Cut Sheet
J. W. Faircloth & Son, Inc.
www.FairclothSkimmer.com

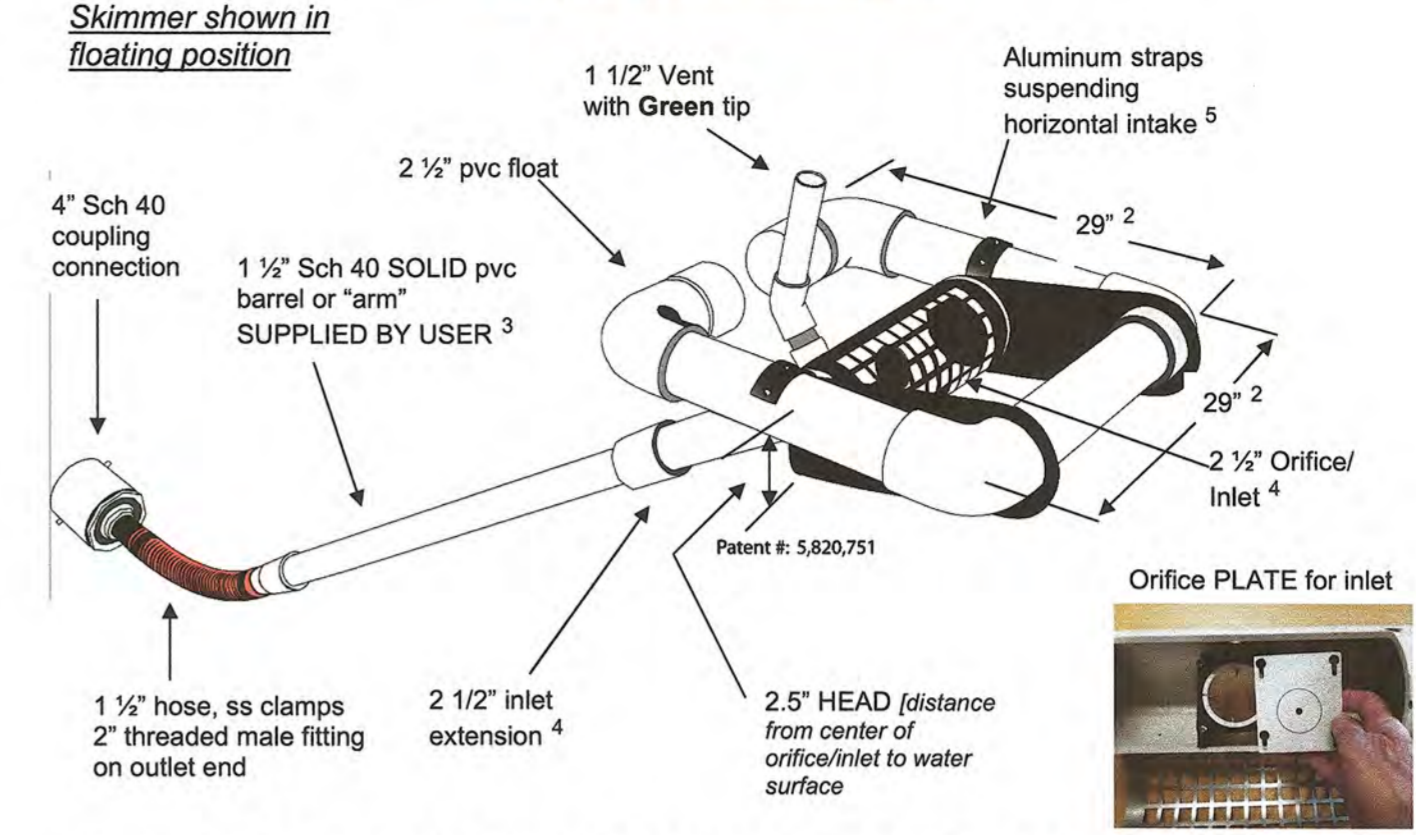


- Skimmer can be attached to a straight 4" sch 40 pipe through the dam but the pipe may need to be anchored to the bottom at the connection so it is secure. Coupling can be removed and hose attached to outlet using the threaded 2" fitting. Typical methods used: a) on a metal structure a steel stub out welded on the side at the bottom with a 2" threaded coupling or reducer(s); b) a concrete structure with a hole or orifice at the bottom - use a steel plate with a hole cut in it and coupling welded to it that will fit over the hole in the concrete and bolted to the structure with sealant; or c) grout a 4" pvc pipe in a hole in the concrete to connect the skimmer.
- Dimensions are approximate, not intended as plans for construction.
- Barrel (solid, not foam core pipe) should be 1.4 times the depth of water with a minimum length of 6' so the inlet can be pulled to the side for maintenance. If more than 8' long, weight may have to be added to inlet to counter the increased buoyancy.
- Orifice/inlet tapers down from 2" maximum inlet to a 1 1/2" barrel and hose. Barrel is smaller to reduce buoyancy and tendency to lift inlet but is sufficient for flow through inlet because of slope. The orifice/inlet can be reduced using the plug and cutter provided to control the outflow rate - see #6.
- Horizontal intake is 4" pipe between the straps with aluminum screen door for access to the inlet and orifice inside.
- Capacity: 3,283 cubic feet per day maximum with 2" inlet and 2" head. Inlet can be reduced by installing a smaller orifice using the plug and cutter provided to adjust flow rate for the particular drawdown time required. Please use the sizing template available at www.fairclothskimmer.com.
- Ships assembled. User glues inlet extension and barrel, installs vent, cuts orifice in plug and attaches to outlet pipe or structure. Includes float, flexible hose with fittings, rope, orifice plug & cutter. Does NOT include 1 1/2" Sch 40 SOLID pvc barrel or "arm" SUPPLIED BY USER.

2inchCut 5-1-19 © J. W. Faircloth & Son, Inc. 2019

OS3 SKIMMER

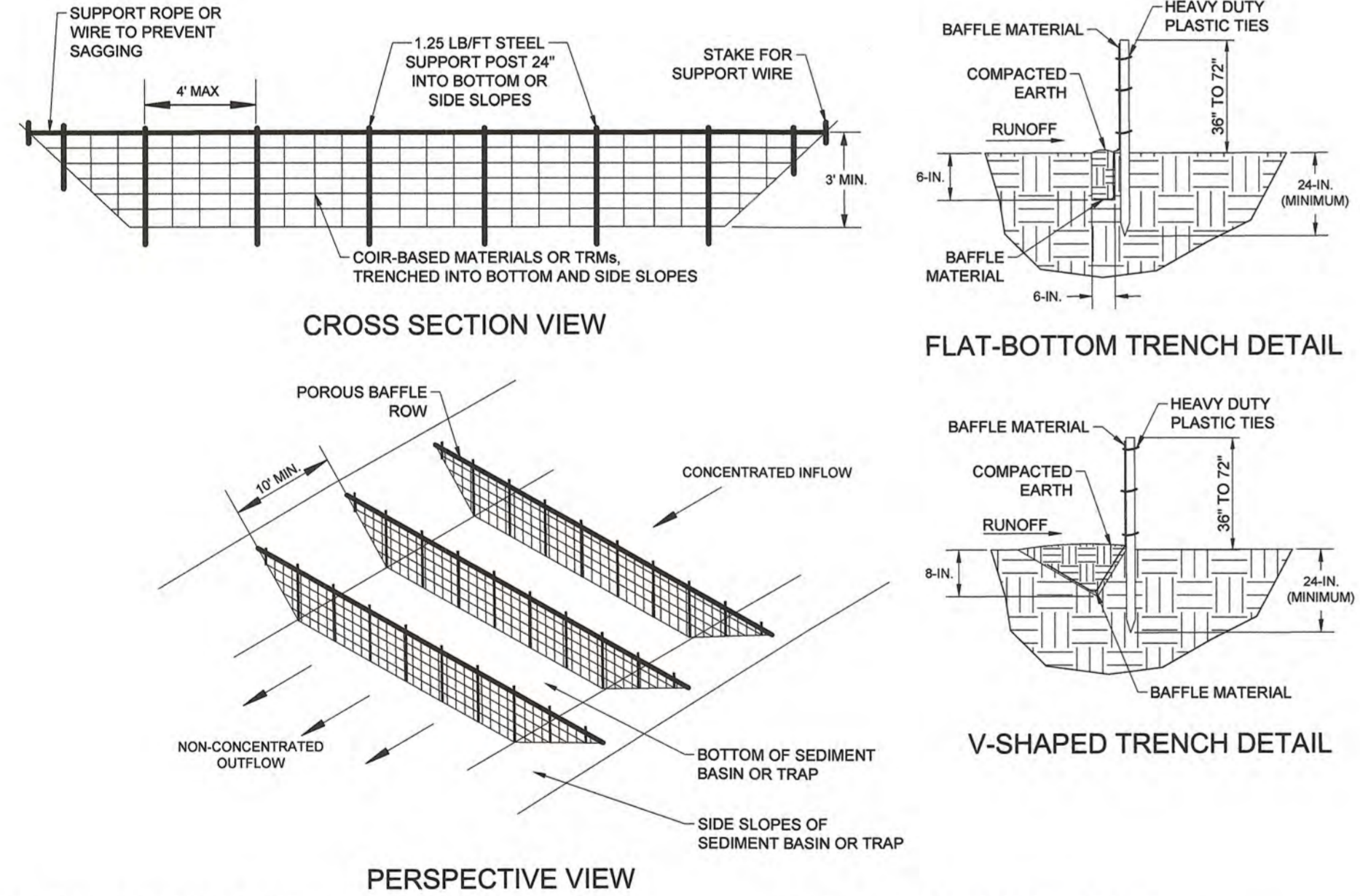
2.5" Faircloth Skimmer® Surface Drain Cut Sheet
J. W. Faircloth & Son, Inc.
www.FairclothSkimmer.com



- Skimmer can be attached to a straight 4" sch 40 pipe through the dam but the pipe may need to be anchored to the bottom at the connection so it is secure. Coupling can be removed and hose attached to outlet using the threaded 2" fitting. Typical methods used: a) a metal structure with a steel stub out welded on the side at the bottom with a 2" threaded coupling or reducer(s); b) a concrete structure with a hole or orifice at the bottom - use a steel plate with a hole cut in it and coupling welded to it that will fit over the hole in the concrete and bolted to the structure with sealant; or c) grout a 4" pvc pipe in a hole in the concrete to connect the skimmer.
- Dimensions are approximate, not intended as plans for construction.
- Barrel (solid, not foam core pipe) should be 1.4 times the depth of water with a minimum length of 6' so the inlet can be pulled to the side for maintenance. If more than 8' long weight may have to be added to inlet to counter the increased buoyancy.
- Orifice/inlet tapers down from 2 1/2" maximum inlet to a 1 1/2" barrel and hose. Barrel is smaller to reduce buoyancy and tendency to lift inlet but is sufficient for flow through inlet because of slope. The orifice/inlet can be reduced using the plate and cutter provided to control the outflow rate - see #6.
- Horizontal intake is 5" pipe between the straps with aluminum screen door for access to the 2 1/2" inlet and orifice inside.
- Capacity: 6,234 cubic feet per day maximum with 2 1/2" inlet and 2.5 head. Inlet can be reduced by installing a smaller orifice using the plate and cutter provided to adjust flow rate for the particular drawdown time required. Please use the sizing template at www.fairclothskimmer.com.
- Ships assembled. User glues inlet extension and barrel, installs vent, cuts orifice in plate and attaches to outlet pipe or structure. Includes float, flexible hose, rope, and orifice plate and cutter. Does NOT include 1 1/2" Sch 40 SOLID pvc barrel or "arm" SUPPLIED BY USER.

2-5inchCut 5-1-19 © J. W. Faircloth & Son, Inc. 2019

OS2 SKIMMER



BAFFLES - POST REQUIREMENTS:

- POROUS BAFFLE POSTS MUST BE 60-INCH TO 96-INCH LONG STEEL POSTS THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL CHARACTERISTICS.
- INCLUDE A STANDARD "T" SECTION WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
- INCLUDE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-INCHES AND A NOMINAL "T" LENGTH OF 1.48-INCHES.
- WEIGH 1.25 POUNDS PER FOOT (± 8%).
- POSTS SHALL BE EQUIPPED WITH PROJECTIONS TO AID IN FASTENING OF BAFFLE MATERIAL.
- INSTALL POSTS TO A MINIMUM OF 24-INCHES. A MINIMUM HEIGHT OF 1" TO 2" INCHES ABOVE THE FABRIC SHALL BE MAINTAINED, AND A MAXIMUM HEIGHT OF 3 FEET SHALL BE MAINTAINED ABOVE THE GROUND.
- POST SPACING SHALL BE AT A MAXIMUM OF 4-FEET ON CENTER.

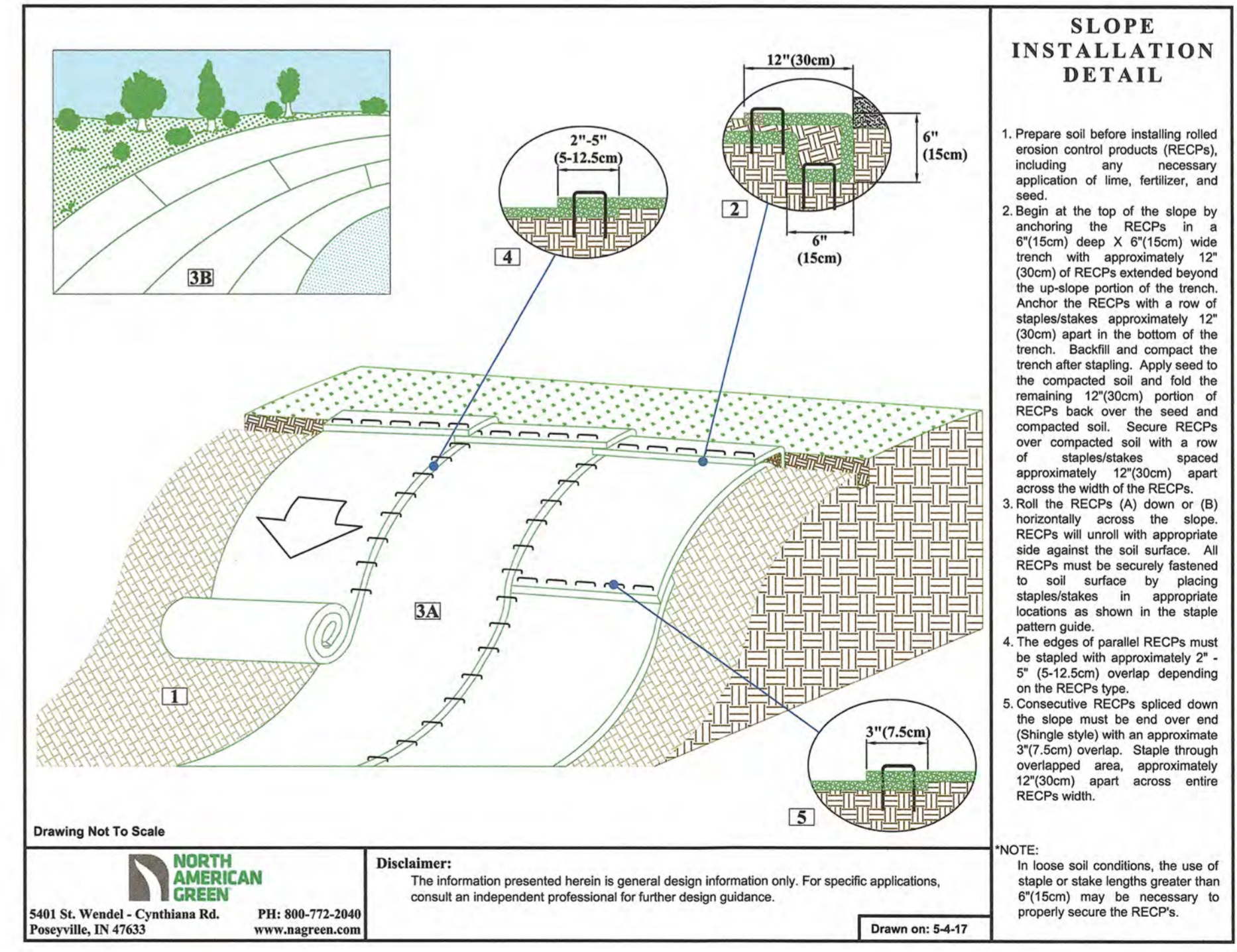
BAFFLES - MATERIAL REQUIREMENTS:

- BAFFLE MATERIAL MUST BE COMPOSED OF COIR-BASED MATERIALS OR TURF REINFORCEMENT MATTING (TRM) THAT CONSISTS OF THE FOLLOWING REQUIREMENTS:
 - HAVE A LIGHT PENETRATION (% OPENINGS) BETWEEN 10-35%.
 - FREE OF LOOSE STRAW MATERIAL.
 - HAVE A MINIMUM TENSILE STRENGTH OF 145 LB/FT. AND,
 - HAVE A MINIMUM WIDTH OF 48-INCHES.
- 12-INCHES OF THE FABRIC SHOULD BE PLACED WITHIN EXCAVATED TRENCH AND TOED IN WHEN THE TRENCH IS BACKFILLED OR BAFFLE MATERIAL MAY BE STAPLED INTO GROUND BY USING 12-INCH STAPLES WITH A MAXIMUM SPACING OF 12-INCHES.
- BAFFLE MATERIAL SHALL BE PURCHASED IN CONTINUOUS ROLLS AND CUT TO THE WIDTH OF THE SEDIMENT BASIN OR TRAP TO AVOID JOINTS.

BAFFLES - GENERAL NOTES:

- ATTACH BAFFLE TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED ALONG THE ABOVE GROUND PORTION OF EACH POST.
- INSTALL THE BAFFLE ROWS PERPENDICULAR TO THE DIRECTION OF THE STORMWATER FLOW AND PLACE EACH BAFFLE THE PROPER DISTANCE FROM INLET AND OUTLETS TO ALLOW ACCESS FOR MAINTENANCE AND CLEAN-OUT.

POROUS BAFFLES BA



Drawn Not To Scale
NORTH AMERICAN GREEN
5401 St. Wendel - Cynthiana Rd. Power-Ville, IN 47333
PH: 800-772-2840
www.nagreen.com
Disclaimer: The information presented herein is general design information only. For specific applications, consult an independent professional for further design guidance.
Drawn on: 5-4-17

COX AND DINKINS
ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
724 BELTLINE BLVD.
COLUMBIA, SC 29205
803.254.0518
COXANDINKINS.COM

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 27748
3/10/2022
J. W. Faircloth
LICENSED PROFESSIONAL ENGINEER
NO. 27748

SOUTH CAROLINA PROFESSIONAL ENGINEER
COX AND DINKINS, INC.
No. C00294
OFFICE OF AUTHORITY

CERTIFICATE OF AUTHORIZATION SEAL

REVISIONS	DESCRIPTION
1	Release Only. No revisions this sheet.

DATE	DESCRIPTION
03/11/2022	

PRIMARY PERMITTEE:
TODD ANDERSEN
COLUMBIA APARTMENT RESIDENCES, LLC
1545 PEACHTREE ST. NW, SUITE 280
ATLANTA, GA 30309
(404) 815-1234
email: tandersen@novaregroup.com

PROJECT
LULLWATER AT WEST COLUMBIA
SUNSET BLVD. @ HENBET DR.
LOCATED IN THE CITY OF WEST COLUMBIA,
LEXINGTON COUNTY, SOUTH CAROLINA

SWPPP DETAILS

PROJECT NO. 2238
SF NO. 144-12

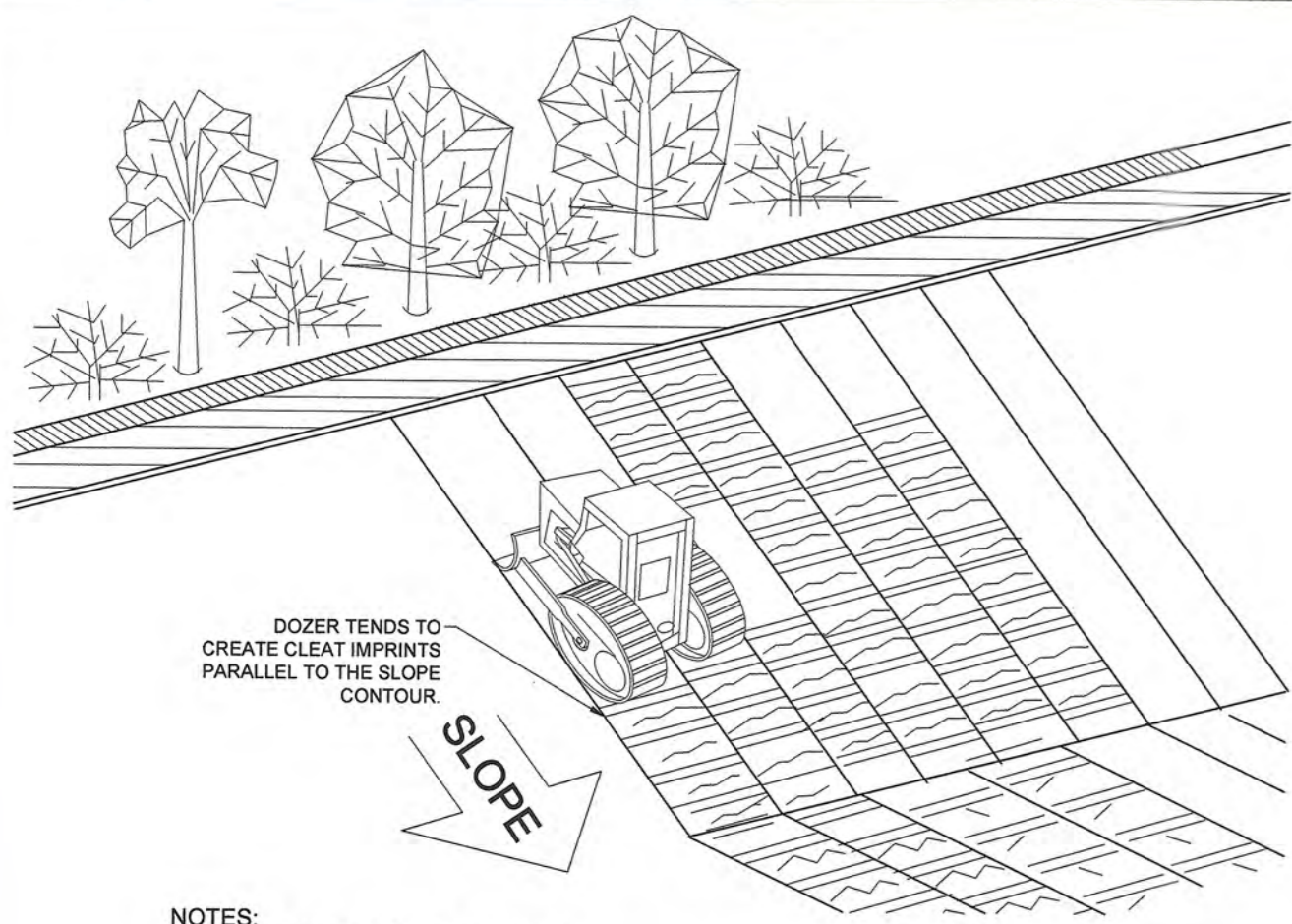
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04597-09-21, -22, -26, & -27

BOOK 68G-42

DATE JANUARY 14, 2022

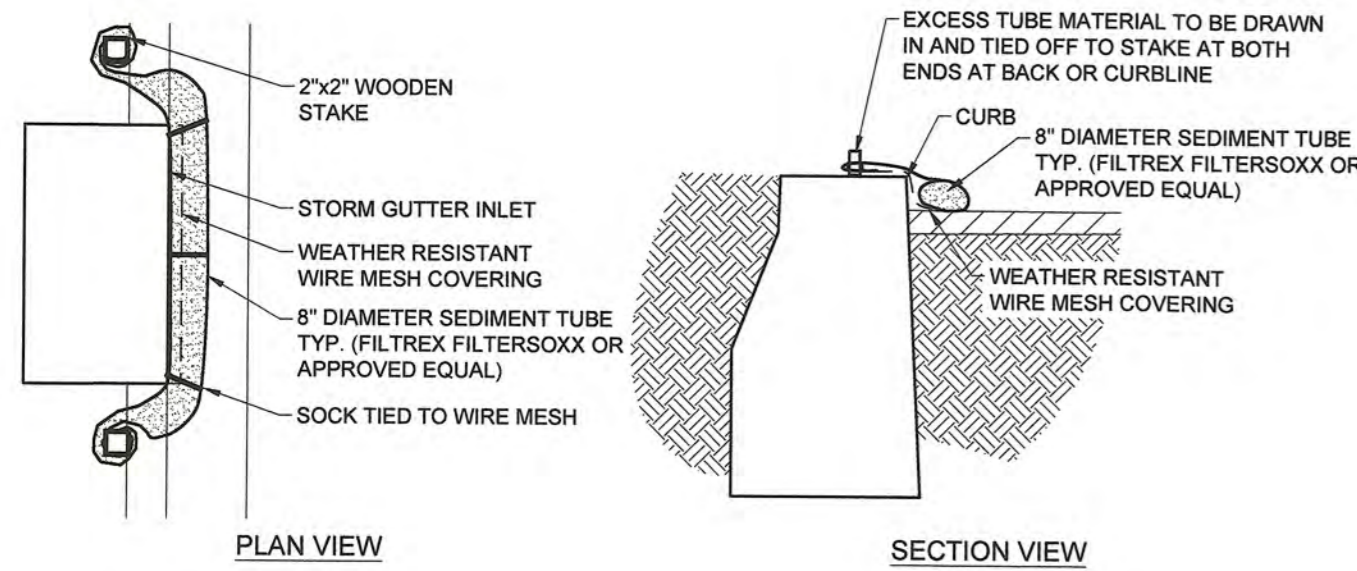
SHEET NO. **C22** of **48**

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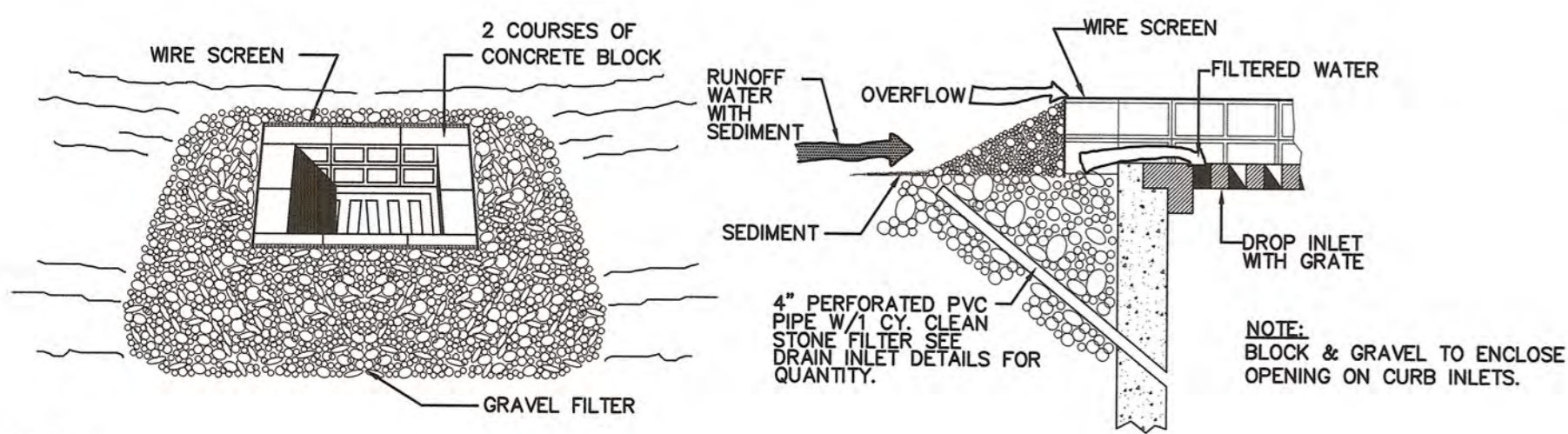
- NOTES:**
WHEN AND WHERE TO USE TRACKING:
 1. PERFORM TRACKING AS SOON AS POSSIBLE AFTER THE VEGETATION HAS BEEN REMOVED FROM THE SLOPE.
 2. USE TRACKING WITH TEMPORARY SEEDING AND TEMPORARY MULCHING TO STABILIZE AN AREA.
 3. PERFORM TRACKING IMMEDIATELY AFTER GRADING ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY) IN AN AREA.
INSTALLATION:
 4. AVOID EXCESS COMPACTING OF THE SOIL SURFACE WHEN TRACKING SINCE SOIL COMPACTON INHIBITS VEGETATION GROWTH AND CAUSES HIGHER RUNOFF RATES.
 5. AS FEW PASSES AS POSSIBLE SHOULD BE MADE WITH THE MACHINERY IN ORDER TO MINIMIZE COMPACTON.
 6. SLOPES SHALL BE SEEDED AND STABILIZED IMMEDIATELY.

SLOPE TRACKING DETAIL
NTS

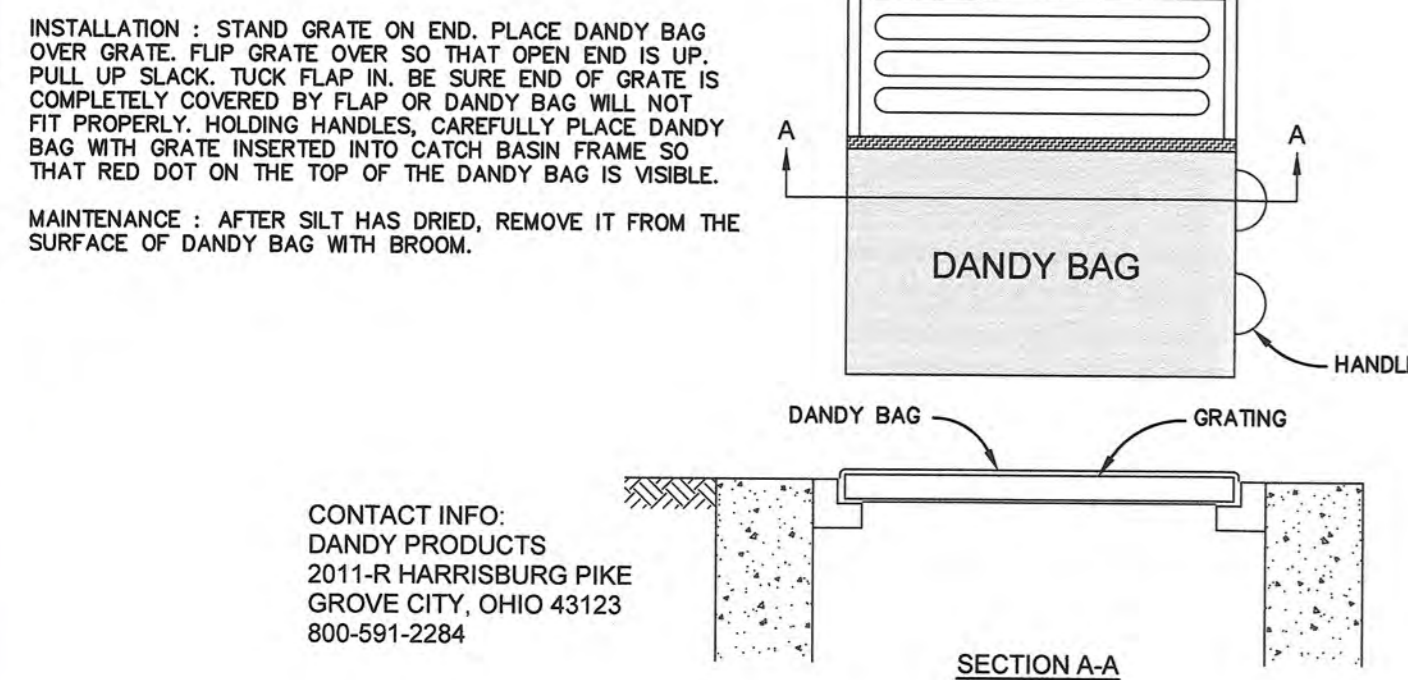


MAINTENANCE:
 WITH A STIFF BRISTLE BROOM, SWEEP SILT & OTHER DEBRIS OFF SURFACE AFTER EACH EVENT.

SEDIMENT TUBE INLET PROTECTION DETAIL
NTS



IP BLOCK AND GRAVEL INLET SEDIMENT FILTER DETAIL
NTS

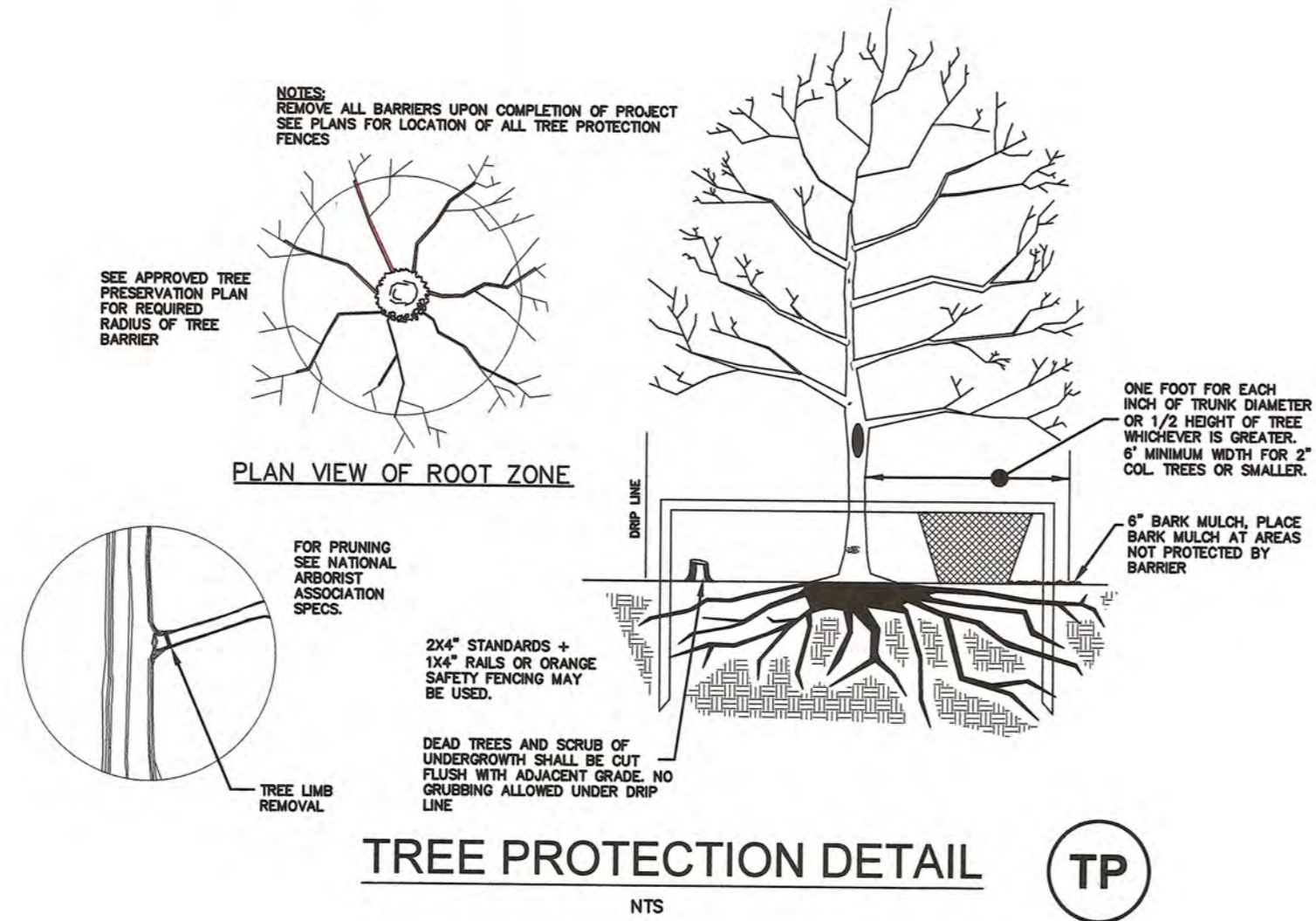


INSTALLATION: STAND GRATE ON END, PLACE DANDY BAG OVER GRATE. FLIP GRATE OVER SO THAT OPEN END IS UP. PULL UP SLACK TUCK FLAP IN. BE SURE END OF GRATE IS COMPLETELY COVERED BY FLAP OR DANDY BAG WILL NOT FIT PROPERLY. HOLDING HANDLES, CAREFULLY PLACE DANDY BAG WITH GRATE INSERTED INTO CATCH BASIN FRAME SO THAT RED DOT ON THE TOP OF THE DANDY BAG IS VISIBLE.

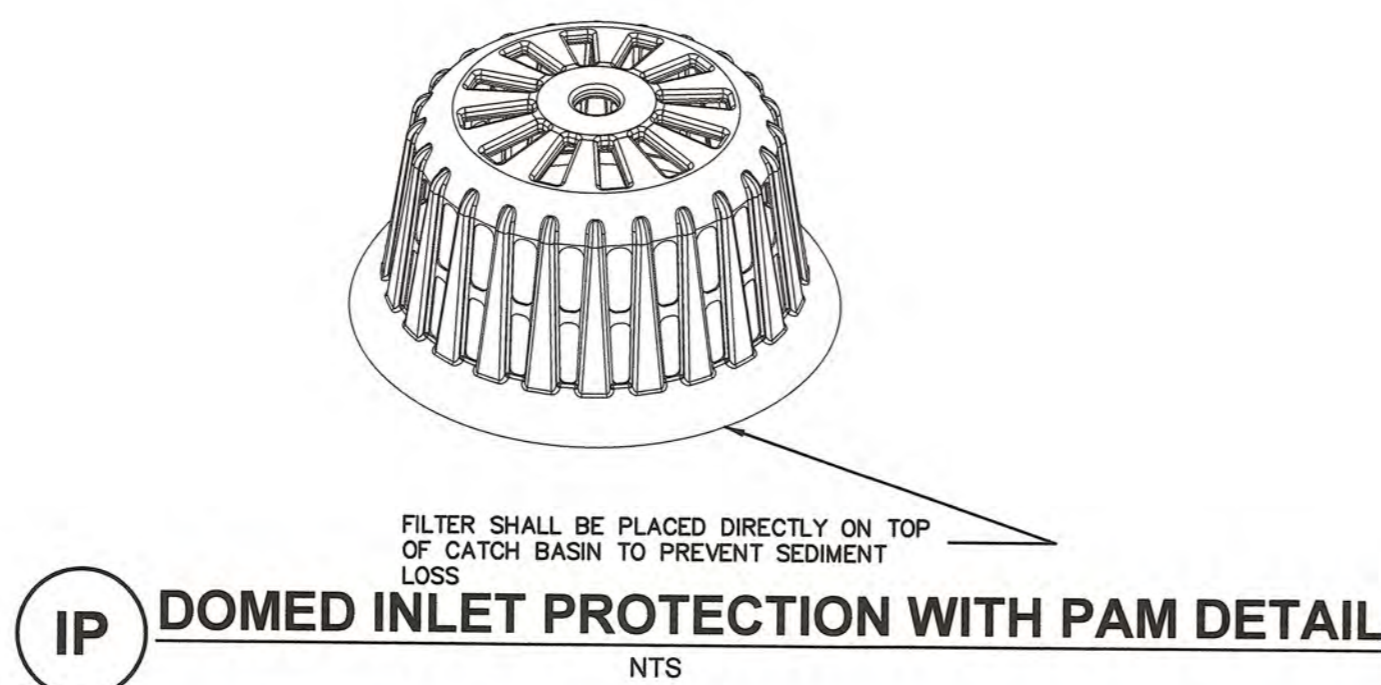
MAINTENANCE: AFTER SILT HAS DRIED, REMOVE IT FROM THE SURFACE OF DANDY BAG WITH BROOM.

CONTACT INFO:
 DANDY PRODUCTS
 2011-R HARRISBURG PIKE
 GROVE CITY, OHIO 43123
 800-591-2284

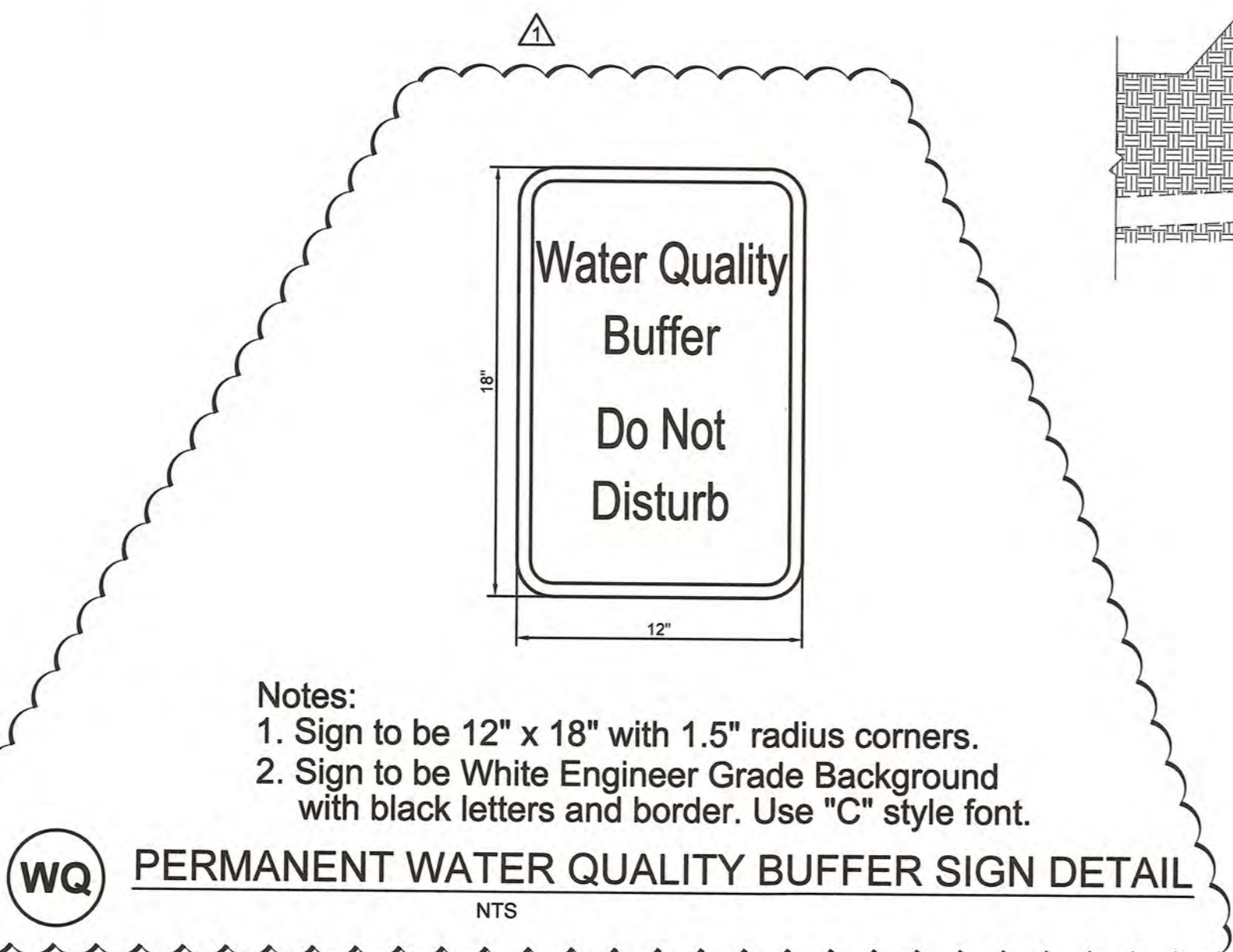
IP DANDY BAG INLET PROTECTION DETAIL
(OR ENGR APPROVED EQUAL)
NTS



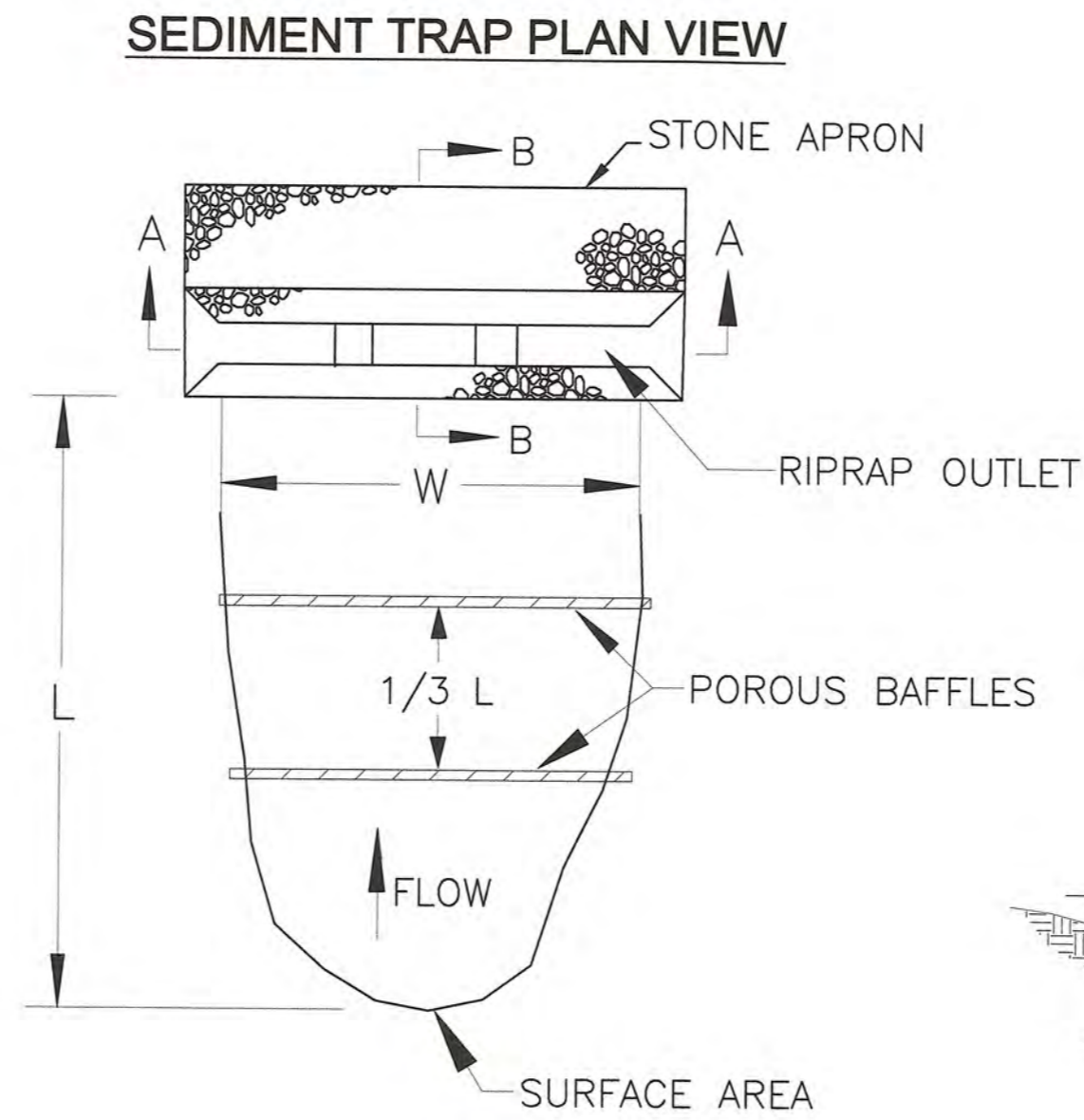
TP TREE PROTECTION DETAIL
NTS



IP DOMED INLET PROTECTION WITH PAM DETAIL
NTS



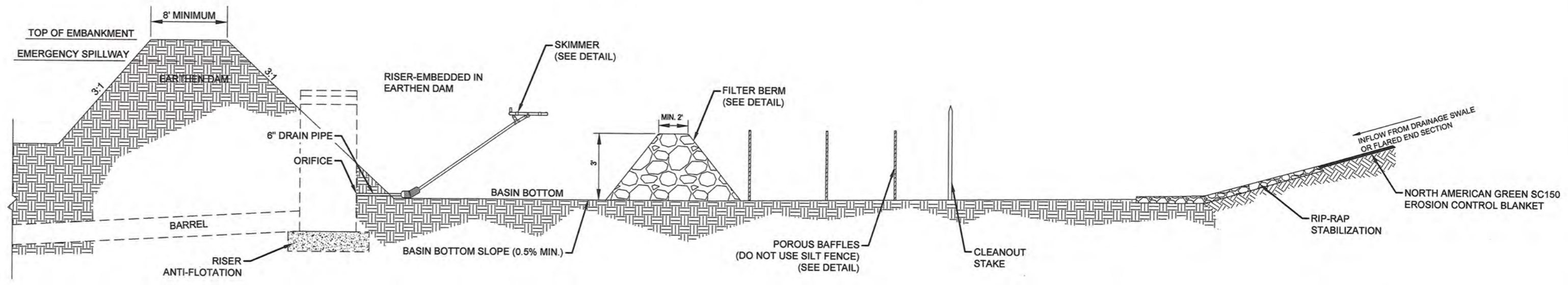
WQ PERMANENT WATER QUALITY BUFFER SIGN DETAIL
NTS



SEDIMENT TRAP - GENERAL NOTES

- Sediment traps should not be placed in Waters of the State or USGS blue-line streams (unless approved by Federal Authorities).
- The rock outlet structure shall consist of 12-inch D50 riprap. The upstream face of this outlet shall consist of a 1-foot thick layer of 1-inch D50 washed stone. The maximum steepness of the rock outlet structure shall be 2:1.
- Both the rock outlet and the stone apron shall have an underlying layer of non-woven geotextile filter fabric.
- All internal side slopes of the sediment trap should be 3:1 or flatter.
- A sediment cleanout stake should be installed and marked to remove sediment at 50% of the sediment storage volume.
- At least two (2) porous baffles shall be installed within the sediment trap. There should be at least 10 linear feet between each baffle and between any row of baffles and any of the sediment trap's inlets/outlets.
- After construction of each sediment trap, the area disturbed to construct the trap should be promptly stabilized, including all side slopes.
- The following sediment trap requirements shall be maintained:
 - Maximum embankment height shall be 5-feet.
 - Maximum riprap outlet height shall be 3.5-feet.
 - Minimum width at bottom of riprap outlet shall be 3-feet.
 - Minimum flow length at top of riprap outlet shall be 2-feet.

TR TEMPORARY SEDIMENT TRAP DETAIL
NTS



GENERAL NOTES:

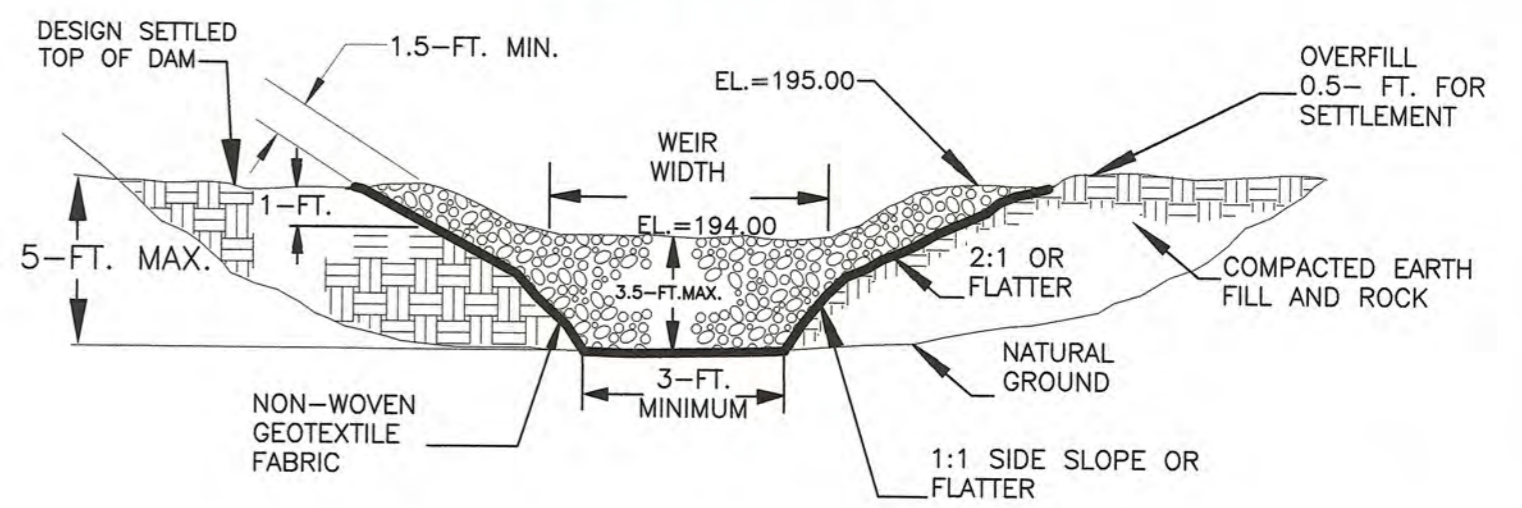
- SEDIMENT BASINS SHOULD NOT BE PLACED IN WATERS OF THE STATE OR USGS BLUE-LINE STREAMS (UNLESS APPROVED BY FEDERAL AUTHORITIES).
- SEDIMENT BASINS SIDE SLOPES SHALL BE SEEDED AND, WHEN NECESSARY, STABILIZED WITH VEGETATIVE OR SYNTHETIC MATTING TO PREVENT THE FORMATION OF RILLS AND GULLIES.
- INSTALL THREE (3) ROWS OF POROUS BAFFLES WITH A MINIMUM SPACING OF 10 FEET. BAFFLES SHOULD ULTIMATELY BE PLACED TO MAXIMIZE THE SPACE BETWEEN EACH ROW OF BAFFLES AND THE BASIN'S INLETS/OUTLETS. ONLY TWO (2) ROWS OF BAFFLES ARE NECESSARY FOR BASINS THAT ARE LESS THAN 50 FEET IN LENGTH.
- POROUS BAFFLES SHOULD BE COMPOSED OF COIR-BASED MATERIALS OR TRMS WITH A LIGHT PENETRATION (OPEN SPACES) BETWEEN 10-35%. THESE MATERIALS SHOULD NOT HAVE LOOSE STRAW. SILT FENCE MAY NOT BE USED AS POROUS BAFFLES.
- EACH POROUS BAFFLES SHALL BE INSTALLED ACROSS THE ENTIRE WIDTH OF THE BASIN AND ALONG THE BASIN'S SIDE SLOPE UNTIL THE HEIGHT OF THE BAFFLE INTERSECTS THE SLOPE.
- INSTALL SKIMMER AND COUPLING (AS NECESSARY) TO RISER STRUCTURE AT ORIFICE ALONG BOTTOM OF THE PRINCIPLE SPILLWAY'S RISER STRUCTURE. (REFER TO SKIMMER MANUFACTURER FOR INSTALLATION PROCEDURES AND SKIMMER SPECIFICATIONS.)
- SKIMMER SHOULD BE EQUIPPED WITH A MECHANISM, SUCH AS A ROPE, TO ALLOW EASY ACCESS TO SKIMMER TO UNCLOGGED ORIFICE OR PERFORM OTHER NECESSARY MAINTENANCE.
- STORMWATER RUNOFF ENTERING THE BASIN MUST BE DIRECTED INTO PROPER BMPs TO PREVENT EROSION ALONG SIDE SLOPES AND TO PREVENT SCOUR AT THE BASIN'S INLETS.
- THE FOREBAY BERM SHOULD CONSIST OF RIP-RAP, GABION, OR AN EARTHEN BERM WITH A ROCK FILLED OUTLET THAT IS CONSTRUCTED ACROSS THE BOTTOM OF THE BASIN'S WIDTH.
- AN ADDITIONAL CLEANOUT STAKE FOR THE FOREBAY AREA IS RECOMMENDED AND SHOULD BE MARKED FOR CLEANOUT AT 50% OF PROVIDED SEDIMENT STORAGE.
- THE ELEVATION OF THE EMERGENCY SPILLWAY SHOULD BE AT LEAST 1 FOOT BELOW THE TOP OF THE EMBANKMENT. THE EMERGENCY SPILLWAY SHOULD NOT BE LOCATED ON FILL MATERIAL, WHEN POSSIBLE.

INSPECTION AND MAINTENANCE:

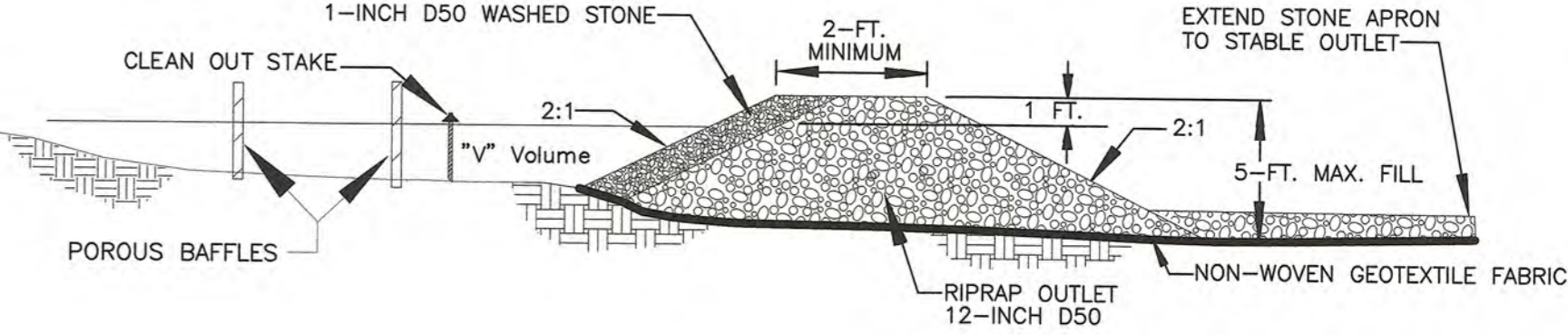
- THE KEY TO A FUNCTIONAL SEDIMENT BASIN IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
- ATTENTION TO SEDIMENT ACCUMULATIONS WITHIN THE BASIN IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT DEPOSITION SHOULD BE CONTINUALLY CHECKED AND REMOVED WHEN NECESSARY.
- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 OF THE DESIGN SEDIMENT STORAGE VOLUME. WHICHEVER IS REACHED FIRST.
- REMOVED SEDIMENT FROM THE BASIN SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS THE DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
- INSPECTIONS OF SEDIMENT BASINS SHOULD BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24 HOURS OF EACH RAINFALL EVENT THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.
- ALL TEMPORARY SEDIMENT BASINS, WHICH ARE NOT TO BE CONVERTED TO A DETENTION BASIN POST-CONSTRUCTION, SHOULD BE REMOVED WITHIN 30 DAYS.
- DISTURBED AREAS RESULTING FROM THE REMOVAL OF THE SEDIMENT BASIN SHOULD BE PERMANENTLY STABILIZED AND ADDITIONAL BMPs, SUCH AS SILT FENCE, SHOULD BE UTILIZED TO ACCEPT STORMWATER RUNOFF FROM THIS DISTURBED AREA UNTIL FINAL STABILIZATION IS REACHED.

SEDIMENT BASIN DETAIL
NTS

SECTION A - A



SECTION B - B



PLAN SYMBOL

SEDIMENT TRAP - INSPECTION AND MAINTENANCE

- The key to a functional sediment trap is weekly inspections, routine maintenance and regular sediment removal.
- Attention to sediment accumulations within the trap is extremely important. Accumulated sediment deposition should be continually monitored in the trap and removed when necessary.
- Remove accumulated sediment when it reaches 50% of the designed sediment storage volume as marked by the cleanout stake.
- Removed sediment from the trap shall be placed in stockpile storage areas or spread thinly across the disturbed area. Stabilize the removed sediment after it is relocated.
- Regular inspections of sediment traps should be conducted once every calendar week and, as recommended, within 24-hours after each rainfall event that produces 1/2-inch or more of precipitation.
- DISTURBED AREAS RESULTING FROM THE REMOVAL OF THE SEDIMENT TRAP SHOULD BE PERMANENTLY STABILIZED AND ADDITIONAL BMPs, SUCH AS SILT FENCE, SHOULD BE UTILIZED TO HANDLE STORMWATER RUNOFF FROM THIS DISTURBED AREA UNTIL FINAL STABILIZATION IS REACHED.

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 ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
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 COLUMBIA, SC 29205
 803.254.0518
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JAMIE M. DICK
 LICENSED PROFESSIONAL ENGINEER
 No. 27748

COX AND DINKINS, INC.
 No. C00294
 CERTIFICATE OF AUTHORIZATION

REVISIONS	DESCRIPTION	DATE
1	Add Water Quality Buffer Sign Detail.	03/11/2022

PRIMARY PERMITTEE:
 TODD ANDERSEN
 COLUMBIA APARTMENT
 RESIDENCES, LLC
 1545 PEACHTREE ST. NW, SUITE 260
 ATLANTA, GA 30309
 (404) 815-1234
 email: tandersen@novaregroup.com

PROJECT:
 LULLWATER AT WEST COLUMBIA
 SUNSET BLVD. @ HENBET DR.
 LOCATED IN THE CITY OF WEST COLUMBIA,
 LEXINGTON COUNTY, SOUTH CAROLINA

PROJECT NO.: 2238

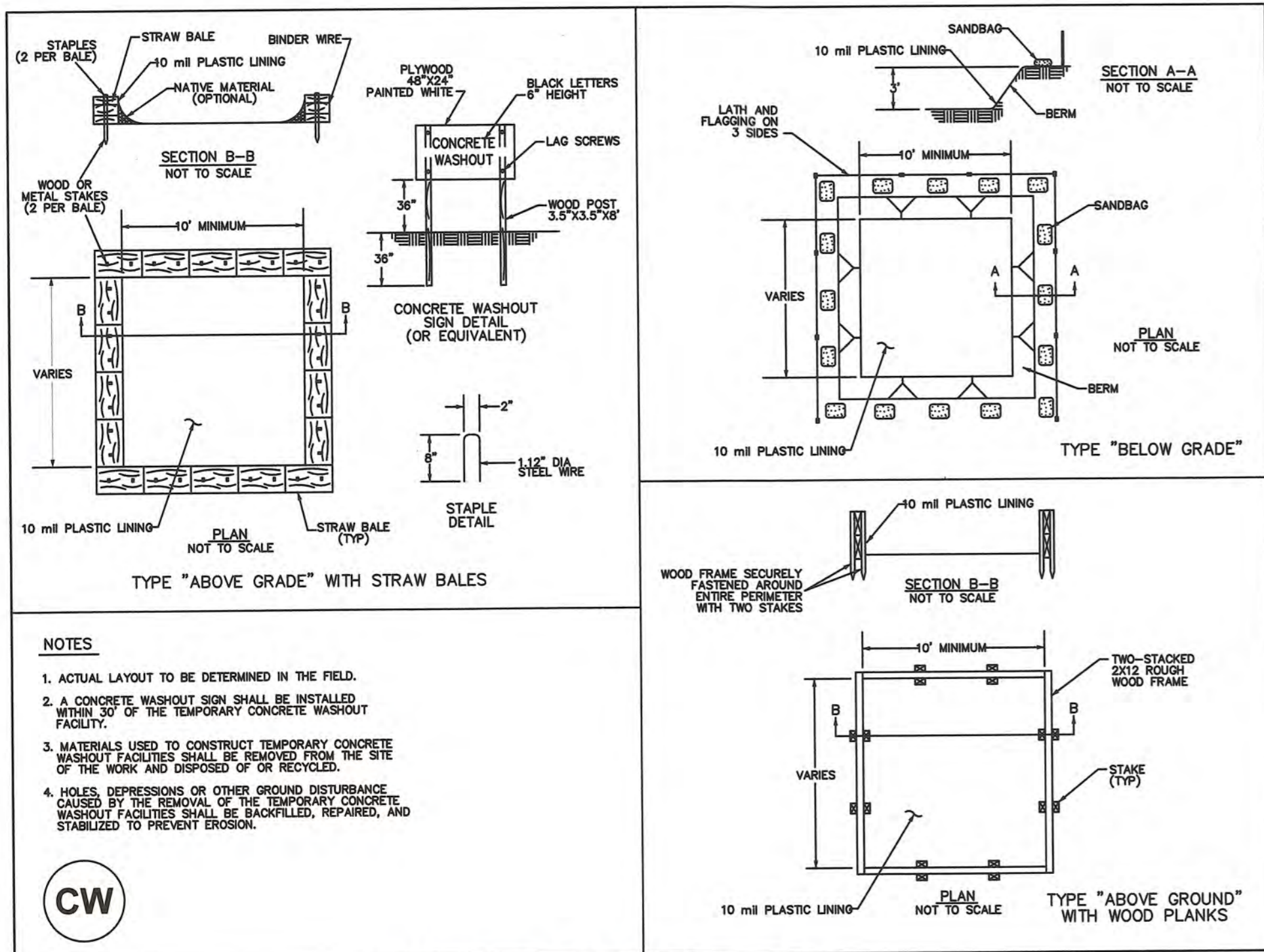
SHEET NO.: C23 of 48

DATE: JANUARY 14, 2022

BOOK: 68G-42

TMS: 03699-03-11, 04535-1-14, 04597-09-21, -22, -26, & -27

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- NOTES**
- ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
 - A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 20' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
 - MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
 - HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.

CW

CONCRETE WASHOUT DETAIL

MAINTENANCE:

LIQUID REMOVAL:

CHECK ALL CONCRETE WASHOUT FACILITIES DAILY TO DETERMINE IF THEY HAVE BEEN FILLED TO 75 PERCENT CAPACITY, WHICH IS WHEN MATERIALS NEED TO BE REMOVED BOTH ABOVE- AND BELOW- GROUND SELF INSTALLED WASHOUTS SHOULD BE INSPECTED DAILY TO ENSURE THAT PLASTIC LININGS ARE INTACT AND SIDEWALLS HAVE NOT BEEN DAMAGED BY CONSTRUCTION ACTIVITIES. PREFABRICATED WASHOUT CONTAINERS SHOULD BE INSPECTED DAILY AS WELL TO ENSURE THE CONTAINER IS NOT LEAKING OR NEARING 75 PERCENT CAPACITY. INSPECTORS SHOULD NOTE WHETHER THE FACILITIES ARE BEING USED REGULARLY. IF DRIVERS WASH OUT THEIR CHUTES OR HOPPERS IN OTHER LOCATIONS, THE SITE SUPERINTENDENT MAY NEED TO PROVIDE MORE EDUCATION, INSTALL ADDITIONAL SIGNAGE, OR PLACE ADDITIONAL WASHOUTS IN MORE CONVENIENT LOCATIONS.

INSPECTION:

CONCRETE WASHOUTS ARE DESIGNED TO PROMOTE EVAPORATION WHERE FEASIBLE. HOWEVER, IF STORED LIQUIDS HAVE NOT EVAPORATED AND THE WASHOUT IS NEARING CAPACITY, VACUUM AND DISPOSE OF THEM IN AN APPROVED MANNER - CHECK WITH THE LOCAL SANITARY SEWER AUTHORITY TO DETERMINE IF THERE ARE SPECIAL DISPOSAL REQUIREMENTS FOR CONCRETE WASH WATER. REMOVE LIQUIDS OR COVER THE STRUCTURES BEFORE PREDICTED RAINFALLS TO PREVENT OVERFLOWS. COMPANIES THAT OFFER PREFABRICATED AND WATERTIGHT WASHOUT CONTAINERS GENERALLY OFFER A VACUUM SERVICE TO REMOVE THE LIQUID MATERIAL. HARDENED SOLIDS CAN BE REMOVED WHILE WHOLE OR CAN BE BROKEN UP FIRST DEPENDING ON THE TYPE OF EQUIPMENT AVAILABLE AT YOUR SITE. SOLIDS CAN BE REUSED ON SITE OR HAUL THEM AWAY FOR RECYCLING - CRUSHED CONCRETE MAKES EXCELLENT AGGREGATE FOR ROADBEDS AND OTHER BUILDING APPLICATIONS. CHECK WITH THE LOCAL RECYCLING AGENCY TO IDENTIFY OPPORTUNITIES FOR CONCRETE RECYCLING. WHEN MATERIALS ARE REMOVED FROM THE CONCRETE WASHOUT, BUILD A NEW STRUCTURE OR, IF THE PREVIOUS STRUCTURE IS STILL INTACT, INSPECT THE STRUCTURE FOR SIGNS OF WEAKENING OR DAMAGE AND MAKE ANY NECESSARY REPAIRS. LINE THE STRUCTURE WITH NEW PLASTIC THAT IS FREE OF HOLES OR TEARS AND REPLACE SIGNAGE IF NECESSARY. IT IS VERY IMPORTANT THAT NEW PLASTIC IS USED AFTER EVERY CLEANING BECAUSE PUMPS AND CONCRETE REMOVAL EQUIPMENT CAN DAMAGE THE EXISTING LINER.

TABLE 3.14 PERMANENT VEGETATION SCHEDULE

Species	Rate (lbs./acr)	Optimum Dates to Plant	Remarks
Bahi Grass (Alone)	40	March 20 – June 15	Slow to become established
Bahi Grass (Mix)*	30	March 20 – June 15	Slow to become established
Bermuda Grass (Hulled) (Alone)	8-12	April – July 15	Quick cover, Sod forming, partial winter kill
Bermuda Grass (Hulled) (Mix)*	4-6	April – July 15	Quick cover, Sod forming, partial winter kill
Fescue, Tall (KY31) Alone	40	August 15 – October	Seldom seeded alone, not for dry or wet sites
Fescue, Tall (KY31) Mix*	20	August 15 – October	Seldom seeded alone, not for dry or wet sites
Scarica Lepedeza (Scarified) Alone or Mix*	40	April – June	Good for slopes, cuts, and fills that require low maintenance
Ladino Clover (Mix* only), (Innoculate with AB Inoculant)	2	August 20 – October	Naturally adds nitrogen

TABLE 3.15 PERMANENT VEGETATION SCHEDULE FOR STEEP SLOPES/CUT SLOPES

Species	Rate (lbs./acr)	Optimum Dates to Plant	Remarks
Weping Lovegrass (Alone)	4	April – July 20	Quick cover, deep roots, likes dry sites, seldom used alone, clumps
Weping Lovegrass (Mix)*	2	April – July 20	Quick cover, deep roots, likes dry sites, seldom used alone, clumps

TABLE 3.16 NATIVE SPECIES THAT CAN BE USED ON NON-CRITICAL LEVEL SITES IN LEXINGTON COUNTY, SC

Species	Rate (lbs./acr)	Optimum Dates to Plant	Remarks
Switchgrass (Mix* with Legumes)	10, PLS**	February 10 – April 20	Mix with Serotia at 30 lbs./acre
Indian Grass (Mix)*	8, PLS**	February – April 20	Mix with Serotia at 30 lbs./acre
Little Bluestem (Mix*)	6, PLS**	February 10 – April	

Plant Selection
Plant selection should be based on the type of soil, the season of the year in which the planting is to be done, and the needs and desires of the permanent land user. Tables 3.14 and 3.15 shall be used to select the desired species to be planted. Failure to carefully follow agronomic recommendations often result in an inadequate stand of permanent vegetation that provides little or no erosion control. The rates in Tables 3.14 and 3.15 are based on purity and germination standards required for certification.

The following notes apply to Tables 3.14 and 3.15.
 1. In mixtures with temporary cover, the full seeding rate of permanent cover should be used.
 2. Use means 2 or 3 to indicate the order of seed placement. For details other than optimum, call the Lexington Soil and Water Conservation District, (803) 359-3165 ext. 3.
 3. A legume, such as a clover, crown vetch, and serotia should be used where it is possible.
 4. The appropriate inoculants should be used.

Tillage
If the surface soil of the seedbed is not adequate for plant growth, topsoil should be applied.
If the area has been recently plowed, no tillage is required other than raising or surface harrowing to break up any crust that has formed and to leave a textured surface. If the soil is compacted more than 8-inches, it should be disked for optimal permeability. If the soil is compacted more than 6-inches, it should be sub-soiled and disked.

Soil Testing
Information and test procedures are available from the FW/980 and the Soil and Water Conservation District Office.
Unless a specific soil test indicates otherwise, apply 1x tons of ground coarse textured agricultural limestone per acre (70 pounds per 1000 square feet).

Lime
Lime is a minimum of 1000 pounds per acre of a complete 10-10-10 fertilizer (23 pounds per 1000 square feet) or equivalent should be applied during permanent seeding of grasses unless a soil test indicates a different requirement. Fertilizer and lime (if used) should be incorporated into the top 4-6 inches of the soil by disking or other means where conditions allow. Do not mix the lime and the fertilizer prior to the field application.

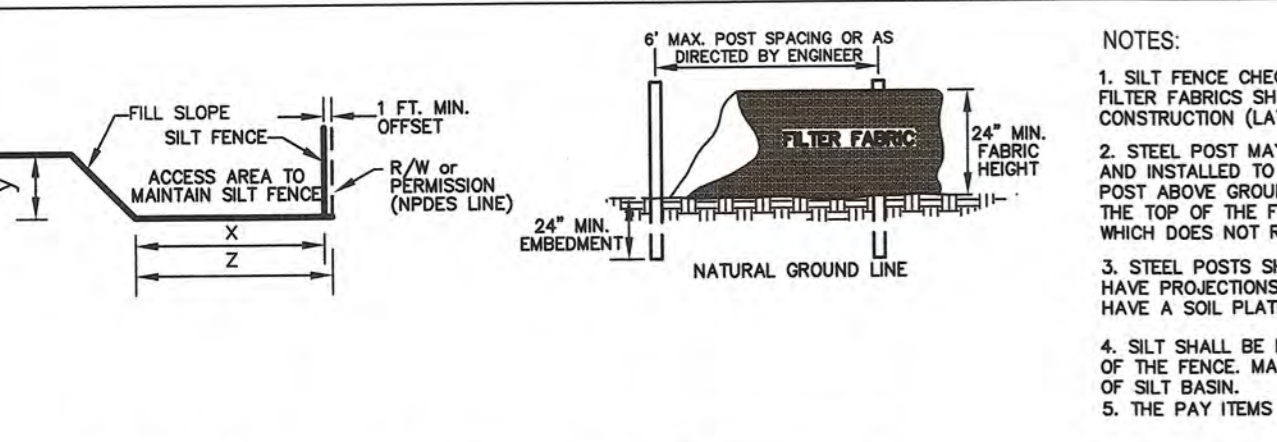
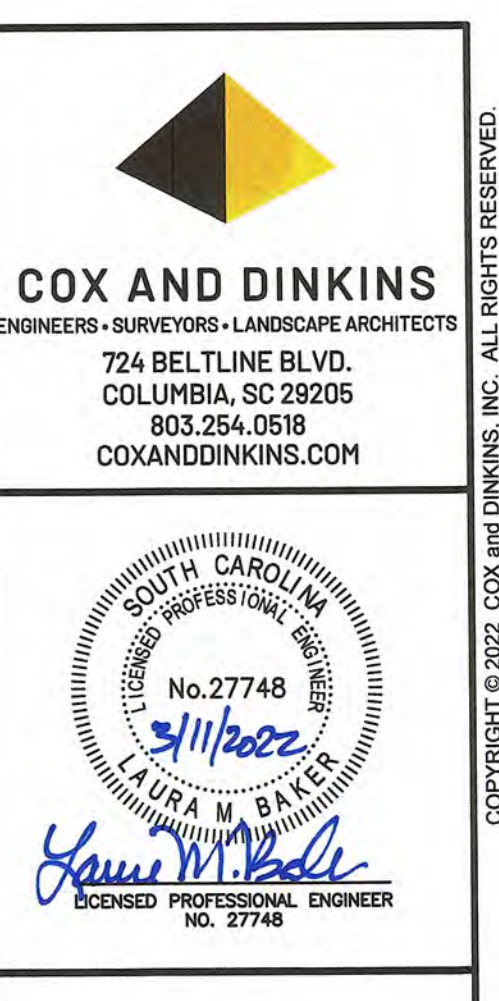
Seeding
The surface of the soil should be loosened just before broadcasting the seed. Seed should be evenly applied by the most convenient method available for the type of seed to be applied. Typical application methods include but are not limited to cyclone seeders, rotary spreaders, drop spreaders, broadcast spreaders, hand spreaders, outdragger seeder, and hydro-seeders. Cover applied seed by raking or dragging a chain or brush mat, and then lightly firm the area with a roller or outdragger. Do not use seed that is applied with a hydro-seeder and hydro-mulcher.

Mulching
All permanent seeded areas should be covered with mulch immediately upon completion of the seeding application to retain soil moisture and reduce erosion during establishment of vegetation. The mulch should be applied such a manner that it provides a minimum of 75% coverage. Typical mulch applications include straw, wood chips, bark, wood, fiber, and compost mulch. The most commonly accepted mulch used in conjunction with permanent seeding is small particle wood chips. Mulch should be dry and free from mold, disease and noxious weeds. The straw mulch must be applied with netting or ophast emulsions to prevent it from blowing or washed away. The straw mulch may be applied by hand or machine at the rate of 2 tons per acre (90 pounds per 1000 square feet). Prequent inspections are necessary to check seed conditions for growth and weeds.

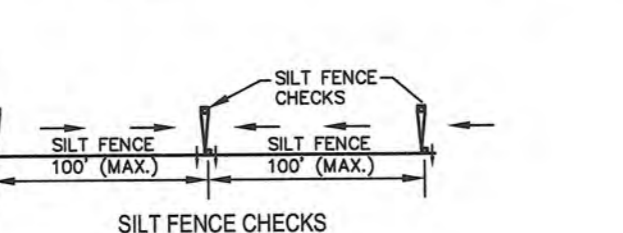
Irrigation
Permanent seeded grass should be kept adequately moist, especially late in the specific growing season. Irrigate the seeded area if normal rainfall is not adequate for the germination and growth of seedlings. Water seeded areas of controlled rates that are less than the rate at which the soil can absorb water to prevent runoff.
Runoff of irrigation water wastes water and can cause erosion.

Re-seeding
Inspect permanently seeded areas for failure, make necessary repairs and re-seed or overseed within the same growing season if possible. If the grass cover is sparse or patchy, re-seed or overseed the area. The contractor shall be responsible for the cost of re-seeding or overseeding to determine any soil or nutrient deficiency problems. Final stabilization by permanent seeding of the site requires that it is completed within a 70% coverage rate.

Post-Stabilization
Once areas are stabilized they can be converted to native species or for establishing a non-irrigated, level area. Table 3.16 lists some native species of Lexington County that can be used.



- NOTES:**
- SILT FENCE CHECKS MUST BE LOCATED EVERY 100 FT. MAXIMUM AND AT LOW POINTS. FILTER FABRIC SHALL CONFORM TO SCOTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION).
 - STEEL POSTS MAY BE USED. POSTS SHALL BE A MINIMUM OF 5 FEET LONG AND INSTALLED TO A MINIMUM DEPTH OF 24 INCHES WITH NO MORE THAN 3 FEET OF THE POST ABOVE GROUND. AT LEAST 1 TO 2 INCHES OF THE POSTS SHALL EXTEND ABOVE THE TOP OF THE FABRIC. POST SPACING WILL BE A MAXIMUM OF 6 FEET ON CENTER WHICH DOES NOT REQUIRE WIRE BACKING UNLESS DIRECT ENGINEERED.
 - STEEL POSTS SHALL BE 5 FEET AND WEIGH A MINIMUM OF 1.25 POUNDS PER FOOT AND HAVE PROJECTIONS FOR FASTENING THE FABRIC TO THE POST. STEEL POSTS SHALL ALSO HAVE A SOIL PLATE HELD NEAR THE BOTTOM OF THE POST.
 - SILT SHALL BE REMOVED AND DISPOSED OF WHEN SILT ACCUMULATES TO 1/3 THE HEIGHT OF THE FENCE. MAINTENANCE OF SILT FENCE WILL BE MEASURED AND PAID FOR BY THE ITEM OF SILT BASIN.
 - THE PAY ITEMS SHALL BE SILT FENCE AND SILT BASIN.

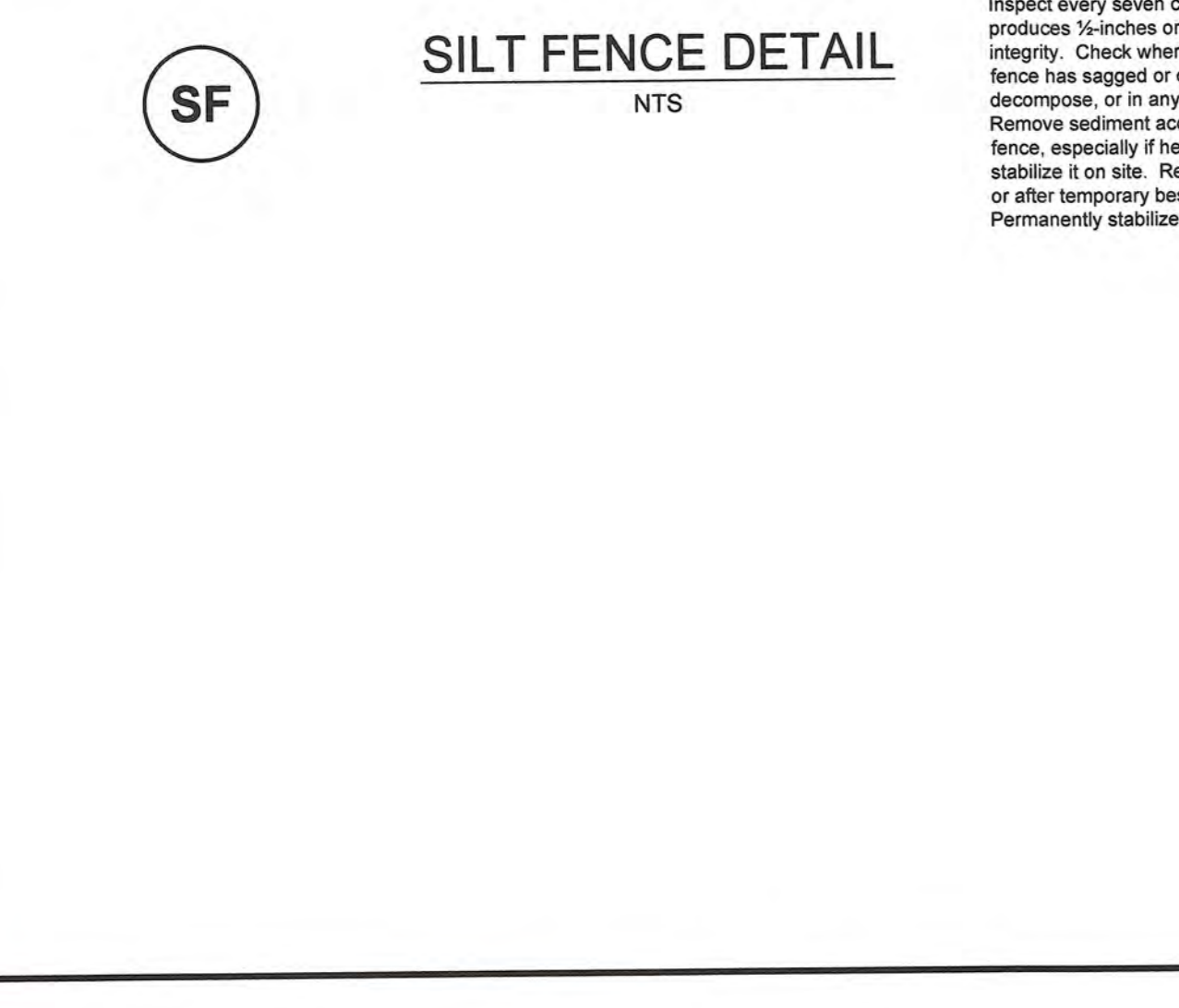


- NOTES:**
- TYPICAL SILT FENCE APPLICATIONS REQUIRE 24 INCHES OF THE FABRIC TO BE ABOVE GROUND WHEN NEEDED, THE HEIGHT OF SILT FENCE FABRIC ABOVE THE GROUND MAY BE GREATER THAN 24 INCHES FOR APPLICATION OF HIGHER SILT FENCE. PAY ITEMS AND INSTALLATION METHODS.
 - IN TOTAL AREAS, SILT FENCE EXTRA HEIGHT MAY BE REQUIRED THE LENGTH OF POST WILL BE TWICE THE EXPOSED SPACING BURRED. HEIGHTS OF SILT FENCE FABRIC ABOVE THE GROUND MAY BE GREATER THAN 24 INCHES FOR APPLICATION OF HIGHER SILT FENCE. PAY ITEMS AND INSTALLATION METHODS.
 - SILT FENCE CHECKS WILL HAVE A MAXIMUM LENGTH OF FIVE (5) FEET OR UNTIL THEY TIE BACK INTO THE SLOPE.

HEIGHT OF SLOPE AND SILT FENCE DETAIL

HEIGHT OF SLOPE (H) IN FEET	FILL SLOPE OFFSET FROM TOE OF SLOPE (X) IN FEET	MINIMUM SILT FENCE RIGHT OF WAY OFFSET FROM TOE OF SLOPE (Y) IN FEET	MINIMUM RIGHT OF WAY OFFSET FROM TOE OF SLOPE (Z) IN FEET	CHECK LENGTH IN FEET**
<6	2.1	2	3	2
6-10	4.1	2*	13*	5
10-14	6.1	3*	4	3
14-18	8.1	12* </td <td>13*<!--</td--> <td>6</td> </td>	13* </td <td>6</td>	6
>10	8.1	4* </td <td>5*<!--</td--> <td>4</td> </td>	5* </td <td>4</td>	4

* THESE MINIMUM OFFSETS MAY BE REDUCED WHEN CURB AND GUTTER OR SOME OTHER FEATURE REDUCES THE FLOW OF WATER DOWN THE SLOPE. THE SMALL OFFSETS OF EACH GROUP OF HEIGHT OF FILL CANNOT BE REDUCED.
 ** SILT FENCE CHECKS WILL HAVE A MAXIMUM LENGTH OF FIVE (5) FEET OR UNTIL THEY TIE BACK INTO THE SLOPE.



Inspection and Maintenance
Inspect every seven calendar days and within 24-hours after each rainfall event that produces 1/4 inch or more of precipitation. Check for sediment buildup and fence integrity. Check where runoff has eroded a channel beneath the fence, or where the fence has sagged or collapsed by fence overtopping. If the fence fabric tears, begins to decompose, or in any way becomes ineffective, replace the section of fence immediately. Remove sediment accumulated along the fence when it reaches 1/3 the height of the fence, especially if heavy rains are expected. Remove trapped sediment from the site or stabilize it on site. Remove silt fence within 30 days after final stabilization is achieved or after temporary best management practices (BMPs) are no longer needed. Permanently stabilize disturbed areas resulting from fence removal.

SF

SILT FENCE DETAIL

TEMPORARY SEEDBED PREPARATION

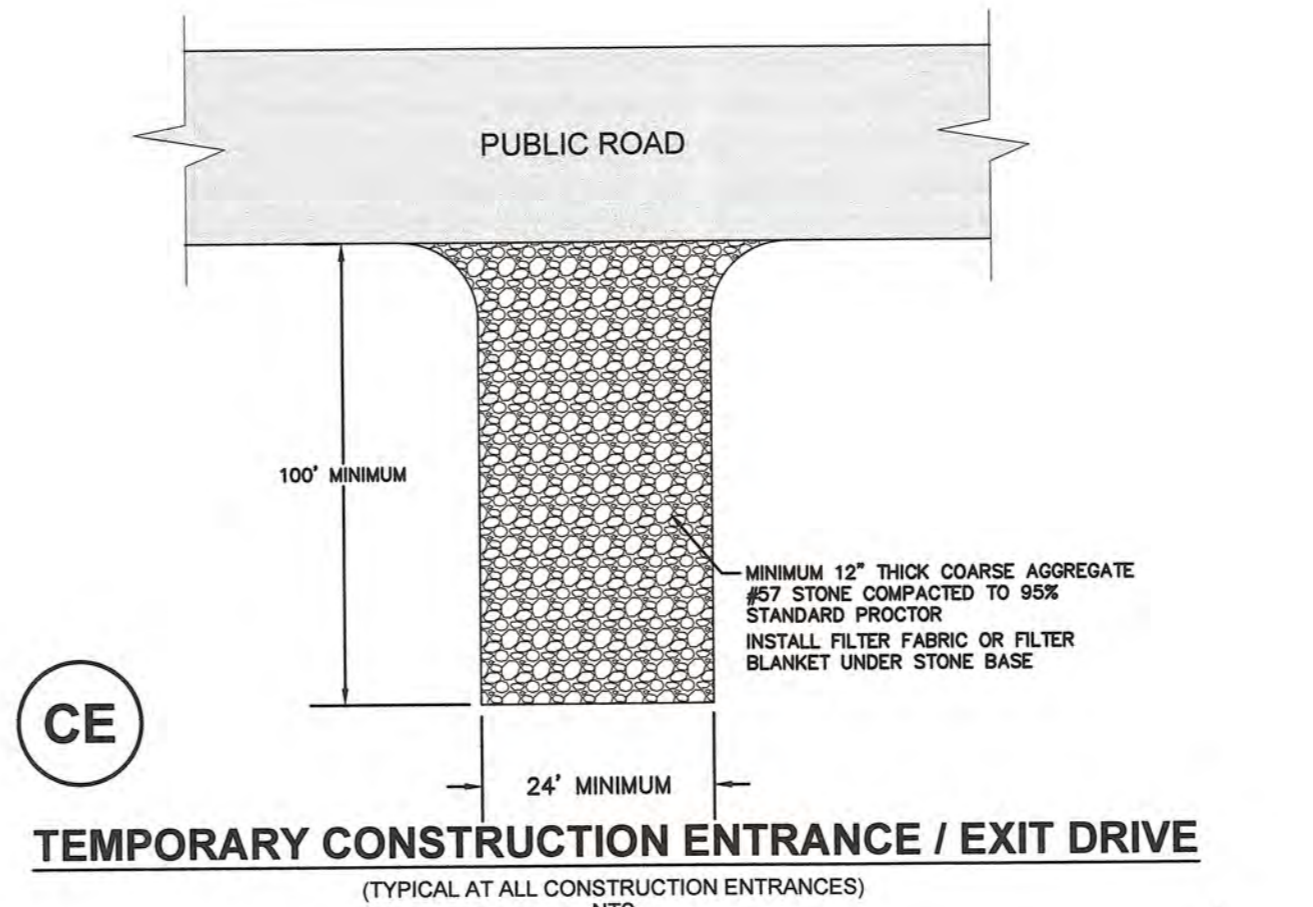
- SURFACE WATER CONTROL MEASURES SHALL BE INSTALLED ACCORDING TO PLAN.
- AREA TO BE SEEDBED SHALL BE RIPPED AND SPREAD WITH AVAILABLE TOP SOIL 3" DEEP. TOTAL SEEDBED PREPARED DEPTH SHALL BE 4" TO 8" DEEP.
- LOOSE ROCKS, ROOTS AND OTHER OBSTRUCTIONS SHALL BE REMOVED FROM THE SURFACE SO THAT THEY WILL NOT INTERFERE WITH ESTABLISHMENT AND MAINTENANCE OF VEGETATION. SURFACE FOR FINAL SEEDBED PREPARATION, AT FINISH GRADES SHOWN, SHALL BE REASONABLY SMOOTH AND UNIFORM.
- IF NO SOIL TEST IS TAKEN, FERTILIZER AND LIME TO BE ACCORDING TO SEEDING SCHEDULE. IN ADDITION, PROVIDE 15 LBS/100 SF OF SUPERPHOSPHATE.
- IF SOIL TEST IS TAKEN, PROVIDE LIME AND FERTILIZER ACCORDING TO SOIL TEST REPORT.
- LIME AND FERTILIZER SHALL BE APPLIED UNIFORMLY AND MIXED WITH THE SOIL DURING SEEDBED PREPARATION.
- MULCH TO BE CHECKED OR MECHANICALLY TIED DOWN WITHIN TWO DAYS AFTER MULCH IS RIPPED.

TEMPORARY SEEDING SCHEDULE

	FROM MAY 1 - AUGUST 31	FROM SEPTEMBER 1 - APRIL 30
1 POUND	BROWNTOPMILLET	2 POUNDS ANNUAL RYE GRASS
2 POUNDS	HULLED BERMU DA	0.5 POUND HULLED BERMU DA
25 POUNDS	10-10-10 FERTILIZER	1.5 POUNDS UNHULLED BERMU DA
75 POUNDS	LIMESTONE	25 POUNDS 10-10-10 FERTILIZER
		75 POUNDS LIMESTONE
	OR	OR
1 POUND	BROWNTOPMILLET	2 POUNDS ANNUAL RYE GRASS
2 POUNDS	HULLED BERMU DA	0.5 POUND HULLED BERMU DA
25 POUNDS	10-10-10 FERTILIZER	1 POUND UNHULLED BERMU DA
75 POUNDS	LIMESTONE	25 POUNDS 10-10-10 FERTILIZER
		75 POUNDS LIMESTONE
	OR	OR
2 POUNDS	(DEEP DANDY SOILS) BROWNTOPMILLET	1 POUND ANNUAL RYE GRASS
3* POUNDS	BAHIA GRASS	2 POUNDS HULLED BERMU DA
25 POUNDS	10-10-10 FERTILIZER	1 POUND UNHULLED BERMU DA
75 POUNDS	LIMESTONE	25 POUNDS 10-10-10 FERTILIZER
		75 POUNDS LIMESTONE
	OR	OR
2 POUNDS	(DEEP DANDY SOILS) BROWNTOPMILLET	1 POUND ANNUAL RYE GRASS
2 POUNDS	BAHIA GRASS	2 POUNDS HULLED BERMU DA
25 POUNDS	10-10-10 FERTILIZER	1 POUND UNHULLED BERMU DA
75 POUNDS	LIMESTONE	25 POUNDS 10-10-10 FERTILIZER
		75 POUNDS LIMESTONE

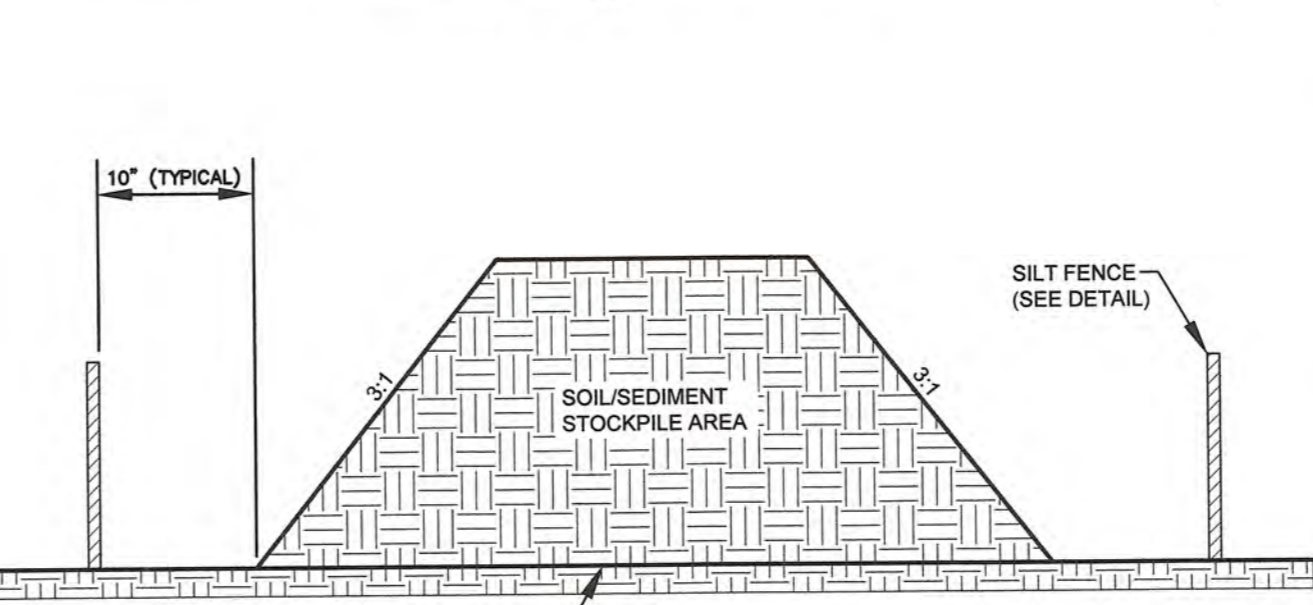
*BAHIA GRASS IS A GOOD EROSION CONTROL GRASS. HOWEVER, IT PRODUCES MANY SEED HEADS WHICH SCATTER TO OTHER AREAS. BAHIA GRASS IS HARD TO MOW, BUT IT DOES NOT REQUIRE THE CARE THAT OTHER GRASSES REQUIRE. AROUND OFFICE BUILDINGS AND WITHIN SUBDIVISIONS, USE 4 TO 6 OUNCES OF CENTIPEDE GRASS IN LIEU OF BAHIA GRASS OR IN COMBINATION WITH BERMUDA GRASS.

- **FOR SOILS WITH CLAY SUBSOIL. DO NOT PLANT IN SANDY SOILS.
- NOTES:**
- ON ALL VEGETATED SWALES OR DITCHES WITH SIDE SLOPES (CUT OR FILL) STEEPER THAN 2:1, ADD A TO 6 OUNCES PER 1,000 SQUARE FEET OF WEAVING LOVE GRASS SEED TO ANY OF THE ABOVE MIXTURES.
 - SWALE AND DITCH BOTTOMS SHOULD BE DOUBLE SEEDBED.
 - ALL SLOPES STEEPER THAN 2:1 SHALL BE HYDROSEEDED.
 - GROWTH OF RYE GRASS IN EARLY SPRINGS MUST BE SUPPRESSED TO PREVENT RYE FROM CHOKING OUT PERMANENT GRASS SUCH AS BERMUDA, BAHIA OR FESCUE.



CE

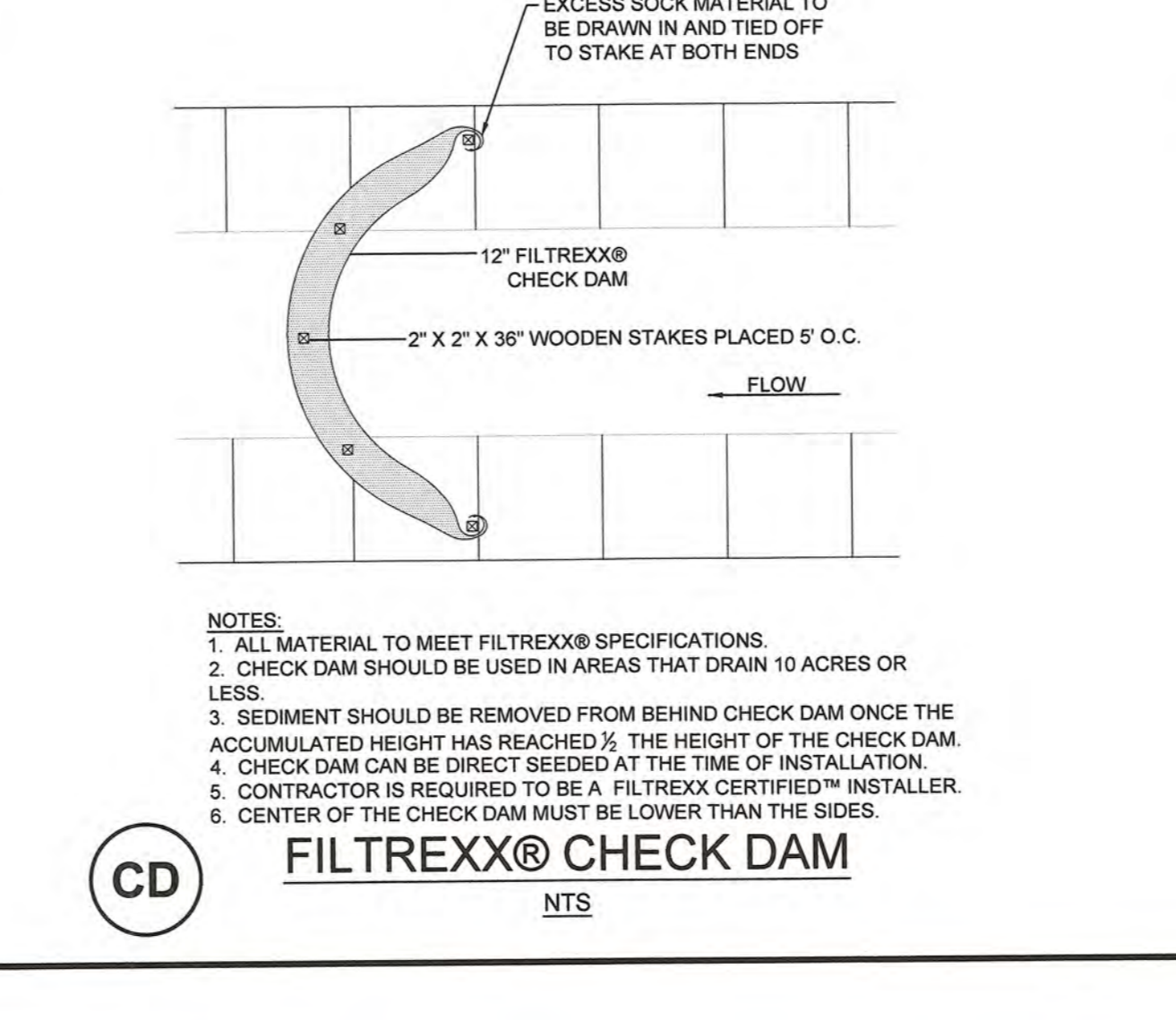
TEMPORARY CONSTRUCTION ENTRANCE / EXIT DRIVE



- NOTES:**
- SILT FENCE TO EXTEND AROUND ENTIRE PERIMETER OF STOCKPILE, OR IF STOCKPILE AREA IS LOCATED ONNEAR A SLOPE, THE SILT FENCE IS TO EXTEND ALONG CONTOURS OF THE DOWN-GRADIENT AREA.
 - IF STOCKPILE IS TO REMAIN FOR MORE THAN 14 DAYS, TEMPORARY STABILIZATION MEASURES MUST BE IMPLEMENTED.
 - SILT FENCE SHALL BE MAINTAINED UNTIL STOCKPILE AREA EITHER BE REMOVED OR PERMANENTLY STABILIZED.
 - THE KEY TO FUNCTIONAL AND TEMPORARY STOCKPILE AREAS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.

SP

TEMPORARY STOCKPILE DETAIL



CD

FILTREX CHECK DAM

EROSION CONTROL NOTES

- LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN ISSUED BY GOVERNING AUTHORITIES.
- THE CONTRACTOR SHALL COMPLY WITH ALL STATE & LOCAL ORDINANCES THAT APPLY.
- ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED EVERY NINE (9) CALENDER DAYS. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY OR INCORRECTLY INSTALLED, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF ONCE AT LEAST ONCE EVERY CALENDER WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
- THE EROSION CONTROL MEASURES INCLUDED IN THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE INSTALLED PRIOR TO INITIAL LAND DISTURBANCE ACTIVITIES OR AS SOON AS PRACTICAL. SEDIMENT SHALL BE PREVENTED FROM DISCHARGING FROM THE PROJECT SITE BY INSTALLING LAND DISTURBANCE PRACTICES AS SHOWN ON THIS PLAN. IF SHOWN ON THESE PLANS, ENERGY DISSIPATION DEVICES OR EROSION CONTROL AT THE OUTFALL OF THE STORM SEWER SYSTEM SHALL BE INSTALLED AT THE TIME OF THE CONSTRUCTION OF THE OUTFALL. STRUCTURAL PRACTICES SHALL BE USED TO CONTROL EROSION FROM ALL SITES REMAINING UNDISTURBED FOR MORE THAN 14 DAYS.
- THE CONTRACTOR SHALL CONTROL WASTES, GARBAGE, DEBRIS, WASTEWATER, & OTHER SUBSTANCES ON THE SITE IN SUCH A WAY THAT THEY SHALL NOT BE TRANSPORTED FROM THE SITE BY THE ACTION OF WINDS, STORM WATER RUNOFF, OR OTHER FORCES. PROPER DISPOSAL OR MANAGEMENT OF ALL WASTES & UNUSED BUILDING MATERIAL, APPROPRIATE TO THE NATURE OF THE WASTE OR MATERIAL IS REQUIRED. COMPLIANCE IS REQUIRED WITH ALL STATE OR LOCAL REGULATIONS REGARDING WASTE DISPOSAL, SANITARY SEWER, OR SEPTIC SYSTEMS.
- THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS & GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
- ALL ON-SITE STORM DRAIN INLETS SHALL BE PROTECTED AGAINST SEDIMENTATION AS SHOWN ON THESE PLANS.
- STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS. STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE, OR WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, & EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3:1 V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDER DAYS.
- THIS EROSION CONTROL PLAN SHALL BE IMPLEMENTED ON ALL DISTURBED AREAS WITHIN THE CONSTRUCTION SITE. ALL MEASURES INVOLVING EROSION CONTROL PRACTICES SHALL BE INSTALLED UNDER THE GUIDANCE OF QUALIFIED PERSONNEL EXPERIENCED IN EROSION CONTROL & FOLLOWING THE PLANS & SPECIFICATIONS INCLUDED HEREIN.
- DURING THE PERIOD OF CONSTRUCTION ACTIVITY, ALL SEDIMENT BASINS (OTHER EROSION CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR. AT COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE THE TRANSFER OF MAINTENANCE RESPONSIBILITIES, IF REQUIRED, WITH THE OWNER. MAINTENANCE SHALL BE IN ACCORDANCE WITH DHEC'S MANUAL, "SOUTH CAROLINA STORMWATER MANAGEMENT & SEDIMENT CONTROL HANDBOOK FOR LAND DISTURBANCE ACTIVITIES".
- EXISTING VEGETATION SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AS MUCH AS PRACTICABLE.
- TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT AND/ OR WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
- ALL WATERS OF THE STATE (WRS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CANT BE MAINTAINED BETWEEN THE DISTURBED AREA & ALL WRS. A 10-FOOT BUFFER SHALL MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE & ALL WRS.
- LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, & BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (e.g., STOCKPILES OF FRESHLY TREATED LUMBER) & CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
- ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES & ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE & THE SITE IS STABILIZED.
- EXISTING VEGETATION SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AS MUCH AS PRACTICABLE.
- THE APPROVED EROSION CONTROL PLAN MUST BE RETAINED ON-SITE AT ALL TIMES DURING THE PERIOD OF CONSTRUCTION. A COPY OF THE SWPPP, INSPECTION RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.
- IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY DRAINS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
- IF SYNTHETIC OR PERMANENT VEGETATIVE MATTING IS USED, THE MANUFACTURER'S REPRESENTATIVE WILL APPROVE, IN WRITING, THE INSTALLATION OF THE MATERIAL. A LETTER WILL BE PROVIDED TO THE ENGINEER & OWNER.
- IF THE INSTALLATION OF THE STORM DRAINAGE SYSTEM IS INTERRUPTED BY WEATHER OR NIGHTFALL, PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
- PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, & STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL COVER & TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE ANY SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE Routed THROUGH APPROPRIATE BMPs (SEDIMENT BASIN, FILTER BAG, ETO).
- THE CONTRACTOR SHALL REMOVE SEDIMENT FROM THE DETENTION/POND/SEDIMENTATION BASIN AT SUCH TIME AS IT REACHES A DEPTH OF 0.5 FEET ABOVE THE DESIGN BOTTOM ELEVATION OF THE POND/BASIN. DISPOSAL OF THE MATERIAL IS ALSO THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL REMOVE ALL ACCUMULATED SEDIMENT FROM THE DETENTION/POND/SEDIMENTATION BASIN AFTER THE SITE IS STABILIZED, ENSURING THAT THE DESIGN VOLUME OF THE POND/BASIN WILL BE MAINTAINED.
- MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.
- ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE & THE SITE IS STABILIZED.
- THE CONTRACTOR SHALL RESPRAY THE TOPSOIL ON SITE AS MUCH AS POSSIBLE PRIOR TO FINAL GRADING AND STABILIZATION.
- THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES AT HIS EXPENSE TO REDUCE EROSION & PREVENT SEDIMENT FROM LEAVING THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR ALL CLEANUP & REPAIR ON-SITE AND DOWNSTREAM DUE TO EROSION & SILTATION.
- RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C. REG. 72-300 ET SEQ. AND SCR100000.
- MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.
- THE FOLLOWING DISCHARGES FROM SITE ARE PROHIBITED: WASTEWATER FROM THE TRAPS OR STABLE OUTLETS, UNLESS MANAGED BY AN APPROPRIATE CONTROL. WASTEWATER FROM THE WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS; FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE, AND SOAPS AND SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
- IF EXISTING BMPs NEED TO BE MODIFIED OR IF ADDITIONAL BMPs ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SC WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE MEASURES MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.
- A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10-ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

CERTIFICATE OF AUTHORIZATION SEAL

REVISIONS	DESCRIPTION	DATE
1	Release Only. No Revisions This Sheet.	03/11/2022

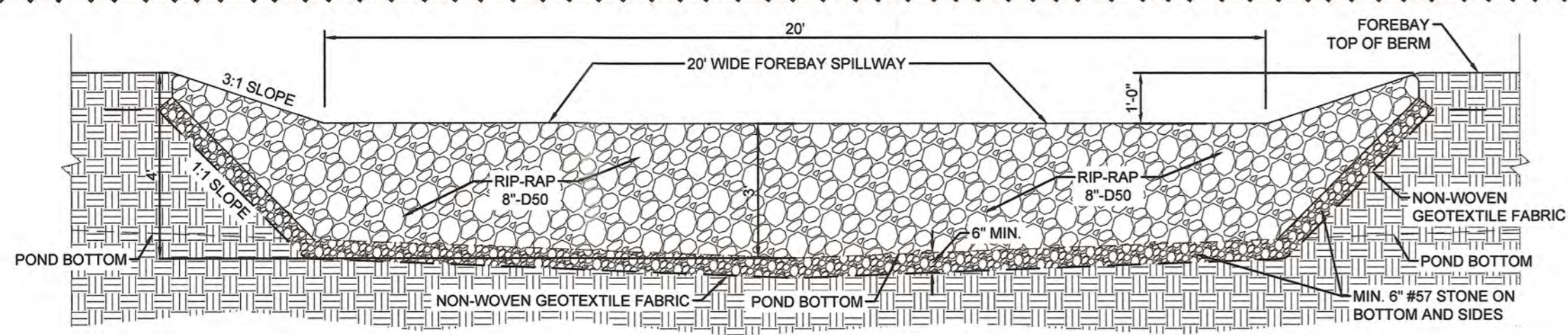
PROJECT: LULLWATER AT WEST COLUMBIA
 TMS: U3699-03-11, 04533-1-14, 04597-09-21, -22, -26, & -27

PRIME PERMITTEE: TODD ANDERSEN
 COLUMBIA APARTMENT RESIDENCES, LLC
 1545 PEACHTREE ST. NW, SUITE 280
 ATLANTA, GA 30309
 (404) 815-1234
 email: tandersen@novaregroup.com

PROJECT: LULLWATER AT WEST COLUMBIA
 SUNSET BLVD. @ HENBET DR.
 LOCATED IN THE CITY OF WEST COLUMBIA,
 LEXINGTON COUNTY, SOUTH CAROLINA

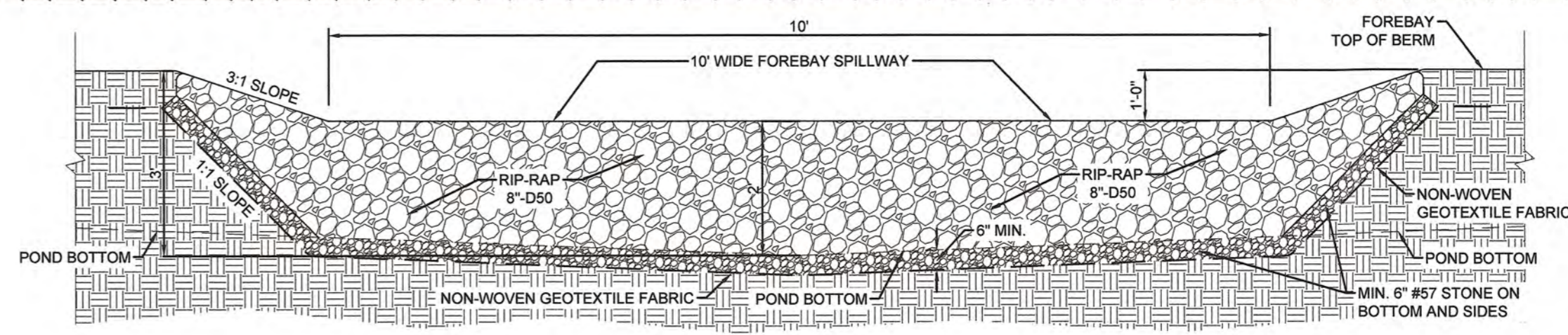
SWPPP DETAILS

DATE: JANUARY 14, 2022
 SHEET NO: **C24** of 48



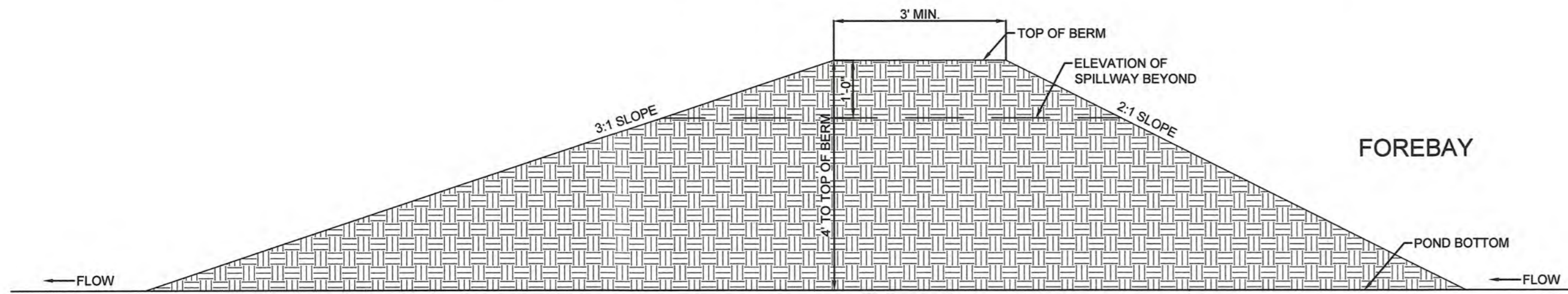
FOREBAY 1 RIPRAP FILTER SPILLWAY

NTS



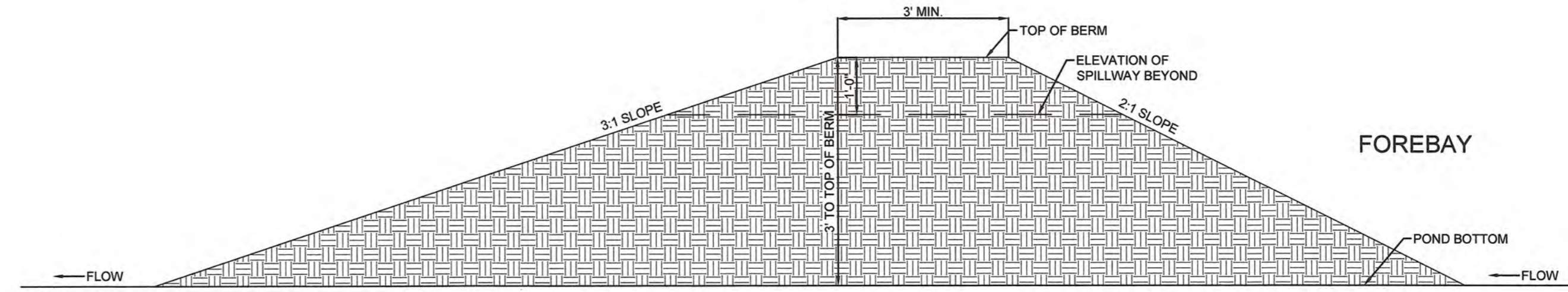
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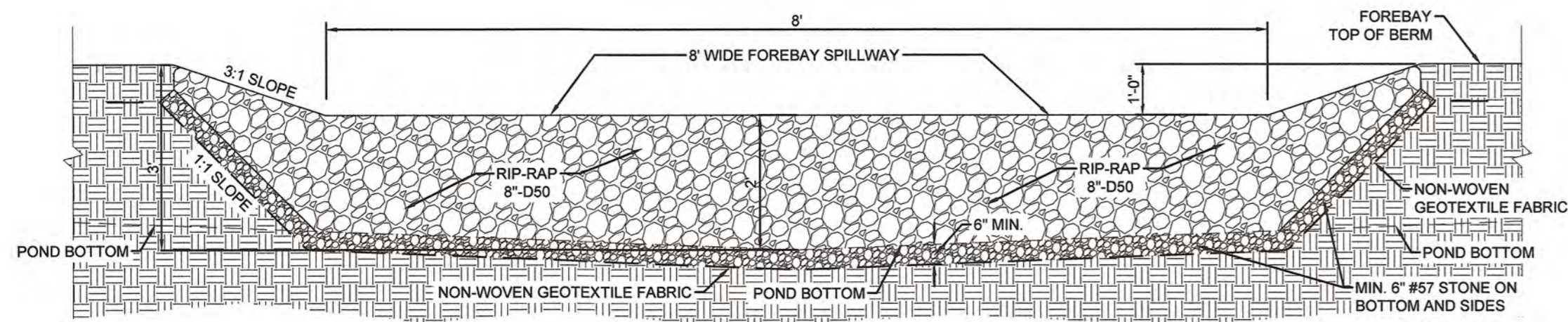
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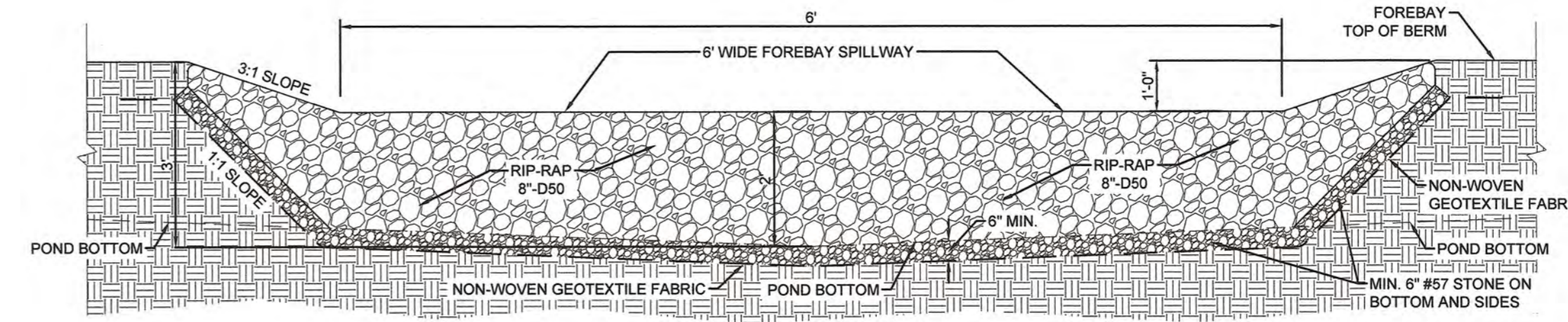
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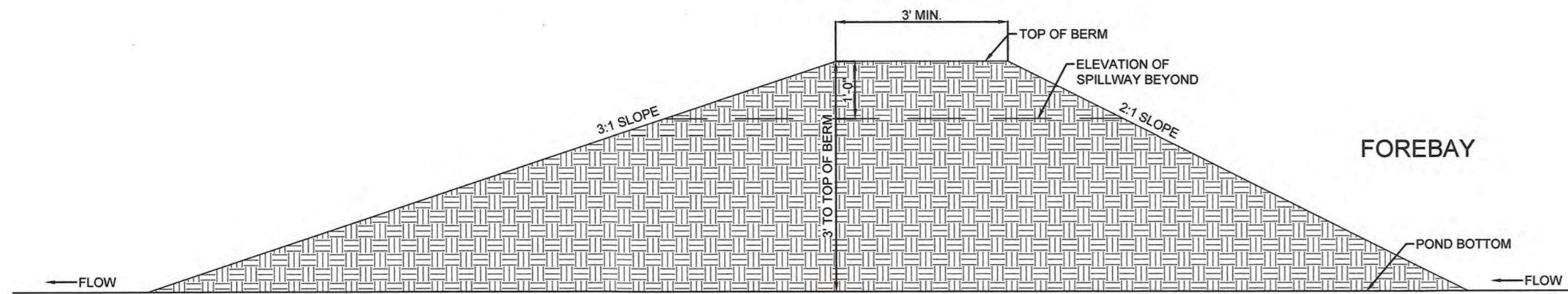
FOREBAY 3 RIPRAP FILTER SPILLWAY

NTS



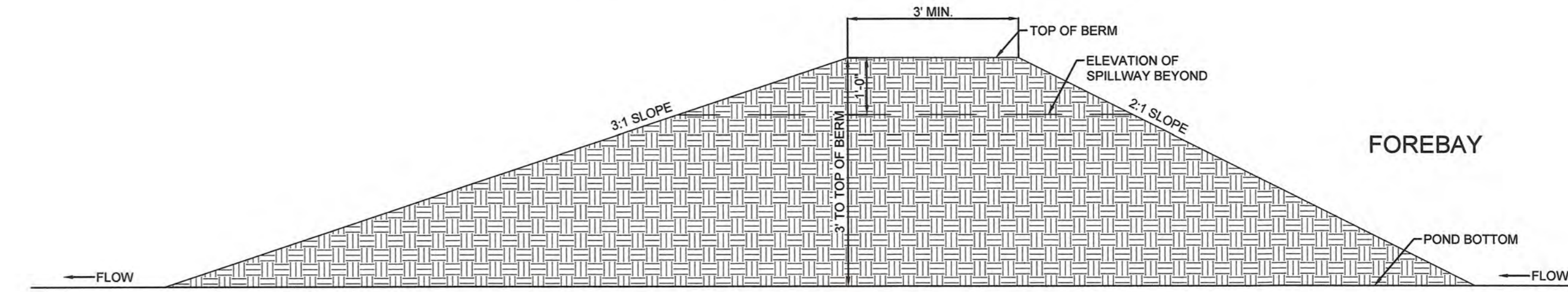
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NTS



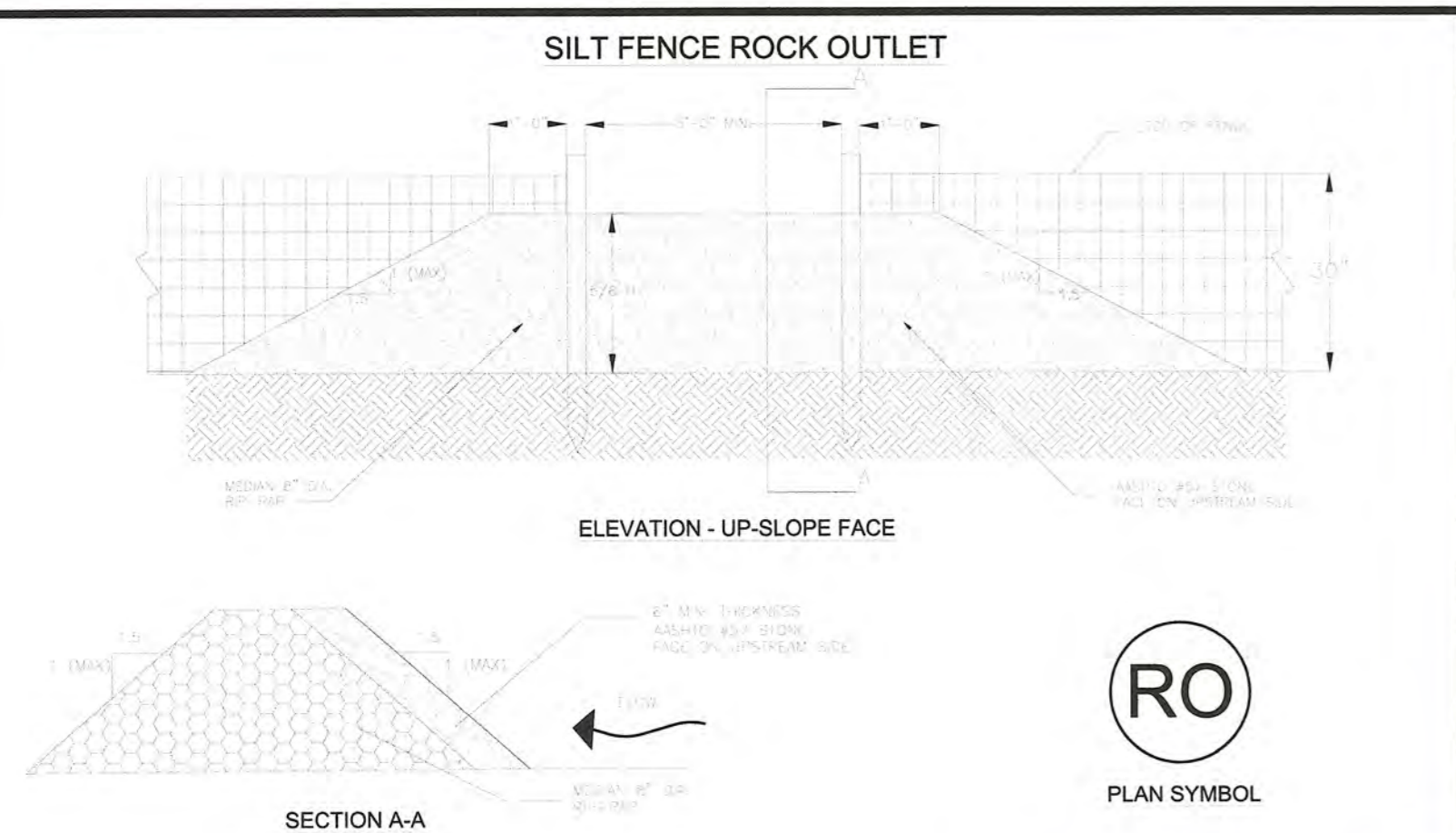
FOREBAY 3 BERM CROSS SECTION

NTS



FOREBAY 4 BERM CROSS SECTION

NTS

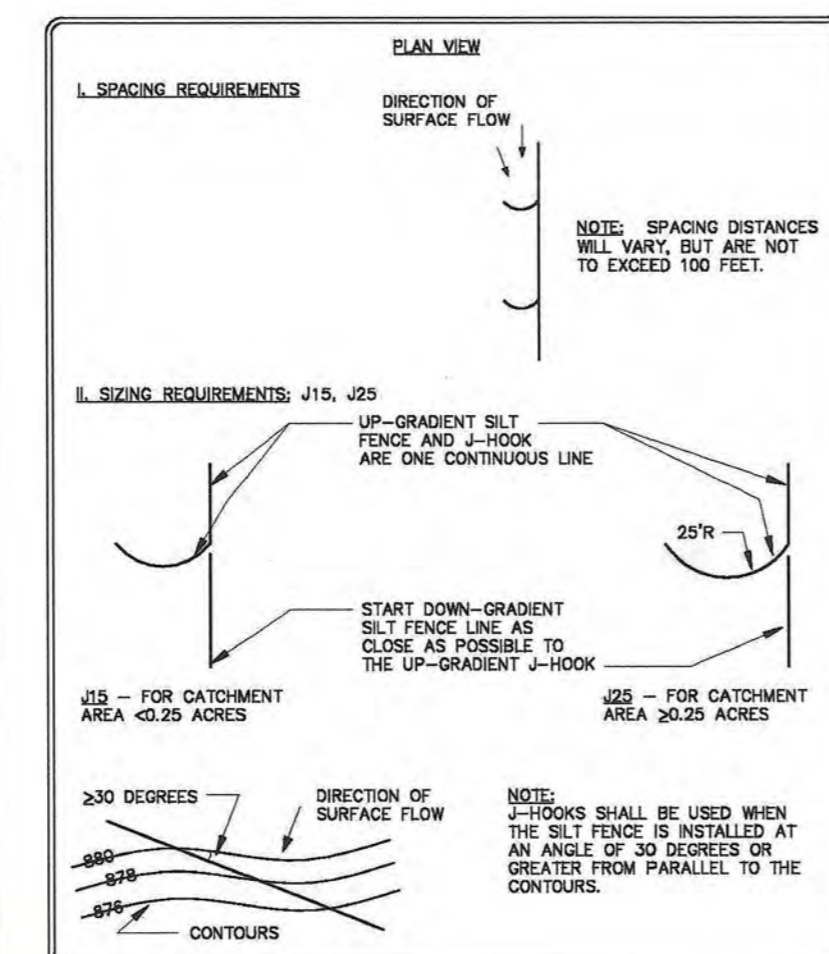


SILT FENCE ROCK OUTLET

ELEVATION - UP-SLOPE FACE



PLAN SYMBOL



PLAN VIEW

L - SPACING REQUIREMENTS

DIRECTION OF SURFACE FLOW

NOTE: SPACING DISTANCES WILL VARY, BUT ARE NOT TO EXCEED 100 FEET.

L - SPACING REQUIREMENTS: J15, J25

UP-GRADE SILT FENCE AND J-HOOK ARE ONE CONTINUOUS LINE

START DOWN-GRADE SILT FENCE LINE AS CLOSE AS POSSIBLE TO THE UP-GRADE J-HOOK

J15 - FOR CATCHMENT AREA 0.25 ACRES

J25 - FOR CATCHMENT AREA 0.25 ACRES

J30 - FOR CATCHMENT AREA 0.25 ACRES

J36 - FOR CATCHMENT AREA 0.25 ACRES

J42 - FOR CATCHMENT AREA 0.25 ACRES

J48 - FOR CATCHMENT AREA 0.25 ACRES

J54 - FOR CATCHMENT AREA 0.25 ACRES

J60 - FOR CATCHMENT AREA 0.25 ACRES

J66 - FOR CATCHMENT AREA 0.25 ACRES

J72 - FOR CATCHMENT AREA 0.25 ACRES

J78 - FOR CATCHMENT AREA 0.25 ACRES

J84 - FOR CATCHMENT AREA 0.25 ACRES

J90 - FOR CATCHMENT AREA 0.25 ACRES

J96 - FOR CATCHMENT AREA 0.25 ACRES

J102 - FOR CATCHMENT AREA 0.25 ACRES

J108 - FOR CATCHMENT AREA 0.25 ACRES

J114 - FOR CATCHMENT AREA 0.25 ACRES

J120 - FOR CATCHMENT AREA 0.25 ACRES

J126 - FOR CATCHMENT AREA 0.25 ACRES

J132 - FOR CATCHMENT AREA 0.25 ACRES

J138 - FOR CATCHMENT AREA 0.25 ACRES

J144 - FOR CATCHMENT AREA 0.25 ACRES

J150 - FOR CATCHMENT AREA 0.25 ACRES

J156 - FOR CATCHMENT AREA 0.25 ACRES

J162 - FOR CATCHMENT AREA 0.25 ACRES

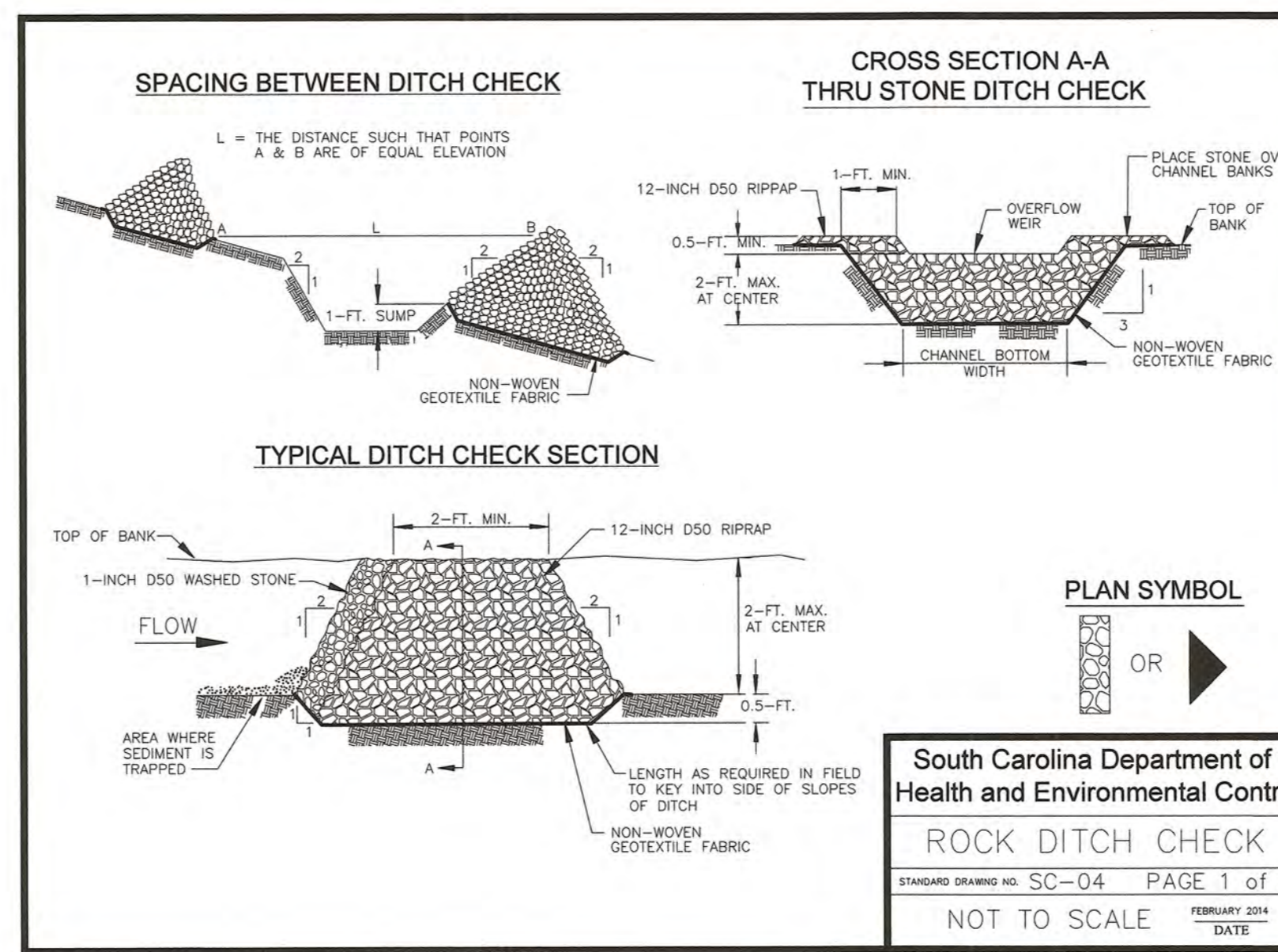
J168 - FOR CATCHMENT AREA 0.25 ACRES

J174 - FOR CATCHMENT AREA 0.25 ACRES

- Inspection and Maintenance
1. Inspect every calendar week. Check for sediment buildup and fence integrity. Check where runoff has eroded a channel beneath the fence, or where the fence has sagged or collapsed by fence overlapping.
 2. If the fence fabric tears, begins to decompose, or in any way becomes ineffective, replace the section of fence immediately.
 3. Remove sediment accumulated along the fence when it reaches 1/3 the height of the fence, especially if heavy rains are expected.
 4. Remove trapped sediment from the site or stabilize it on site.
 5. Remove silt fence within 30 days after final stabilization is achieved or after temporary best management practices (BMPs) are no longer needed.
 6. Permanently stabilize disturbed areas resulting from fence removal.

SILT FENCE TIE-BACKS

J15



SPACING BETWEEN DITCH CHECK

CROSS SECTION A-A THRU STONE DITCH CHECK

TYPICAL DITCH CHECK SECTION

PLAN SYMBOL

South Carolina Department of Health and Environmental Control

ROCK DITCH CHECK

STANDARD DRAWING NO. SC-04 PAGE 1 of 2

NOT TO SCALE FEBRUARY 2014 DATE

ROCK DITCH CHECK - GENERAL NOTES

1. Rock Ditch Checks should not be placed in Waters of the State or USGS blue-line streams (unless approved by Federal Authorities).
2. Rock Ditch Checks should be installed in steeply sloped channels where adequate vegetation cannot be established. This BMP measure should only be used in small open channels.
3. A non-woven geotextile fabric shall be installed over the soil surface where the rock ditch check is to be placed.
4. The body of the rock ditch check shall be composed of 12-inch D50 Riprap. The upstream face may be composed of 1-inch D50 washed stone.
5. Rock Ditch Checks should not exceed a height of 2-feet at the channel.
6. Rock Ditch Checks should have a minimum top flow length of 2-feet.
7. Riprap should be placed over channel banks to prevent water from cutting around the ditch check.
8. The riprap should be placed by hand or mechanical placement (no dumping of rock to form dam) to achieve complete coverage of the channel. Doing so will also ensure that the center of the check is lower than the edges.
9. The maximum spacing between the dams should be such that the toe of the upstream check is at the same elevation as the top of the downstream check.

ROCK DITCH CHECK - INSPECTION & MAINTENANCE

1. The key to functional rock ditch check is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of rock ditch checks shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall event that produces 1/2-inch or more of precipitation.
3. Attention to sediment accumulations in front of the rock ditch check is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the rock ditch check.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed areas. Stabilize the removed sediment after it is relocated.
6. Inspect Rock Ditch Checks' edges for erosion and evidence of runoff bypassing the installed check. If evident repair promptly as necessary to prevent erosion and bypassing.
7. In the case of grass-lined ditches, channels, and swales, rock ditch checks should be removed when the grass has matured sufficiently to protect the ditch or swale unless the slope of the swale is greater than 4%.
8. After construction is completed and final stabilization is reached, the entirety of the rock ditch check should be removed if vegetation will be used for permanent erosion control measures. The area beneath the removed rock ditch check must be addressed with permanent stabilization measures.

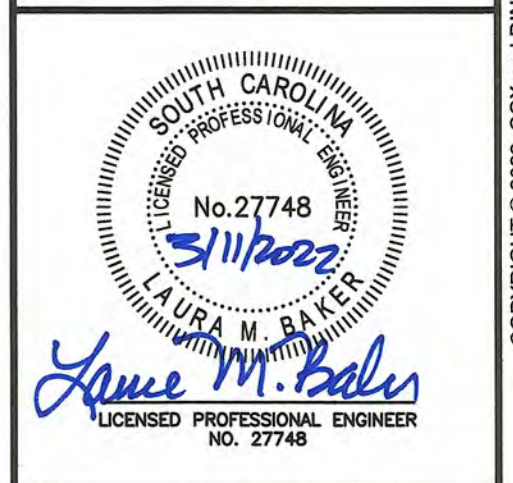
South Carolina Department of Health and Environmental Control

ROCK DITCH CHECK

STANDARD DRAWING NO. SC-04 PAGE 2 of 2

GENERAL NOTES FEBRUARY 2014 DATE

COX AND DINKINS
ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS
724 BELTLINE BLVD.
COLUMBIA, SC 29206
803.254.0518
COXANDINKINS.COM



CERTIFICATE OF AUTHORIZATION SEAL

REVISIONS	DESCRIPTION
No.	DATE
1	03/11/2022
Add Forebay Details and Rock Check Dam Detail.	

PRIMARY PERMITTEE:
TODD ANDERSEN
COLUMBIA APARTMENT
RESIDENCES, LLC
1545 PEACHTREE ST. NW, SUITE 260
ATLANTA, GA 30309
(404) 815-1234
email: tandersen@novaregroup.com

PROJECT
LULLWATER AT WEST COLUMBIA
SUNSET BLVD. @ HENBET DR.
LOCATED IN THE CITY OF WEST COLUMBIA,
LEXINGTON COUNTY, SOUTH CAROLINA

PROJECT NO.
2258

SF NO.
144-12

TMS 03699-03-11; 04535-1-14;
04597-09-21, -22, -26, & -27

BOOK
68G-42

DATE
JANUARY 14, 2022

SHEET NO.
C25 of 48

SWPPP DETAILS