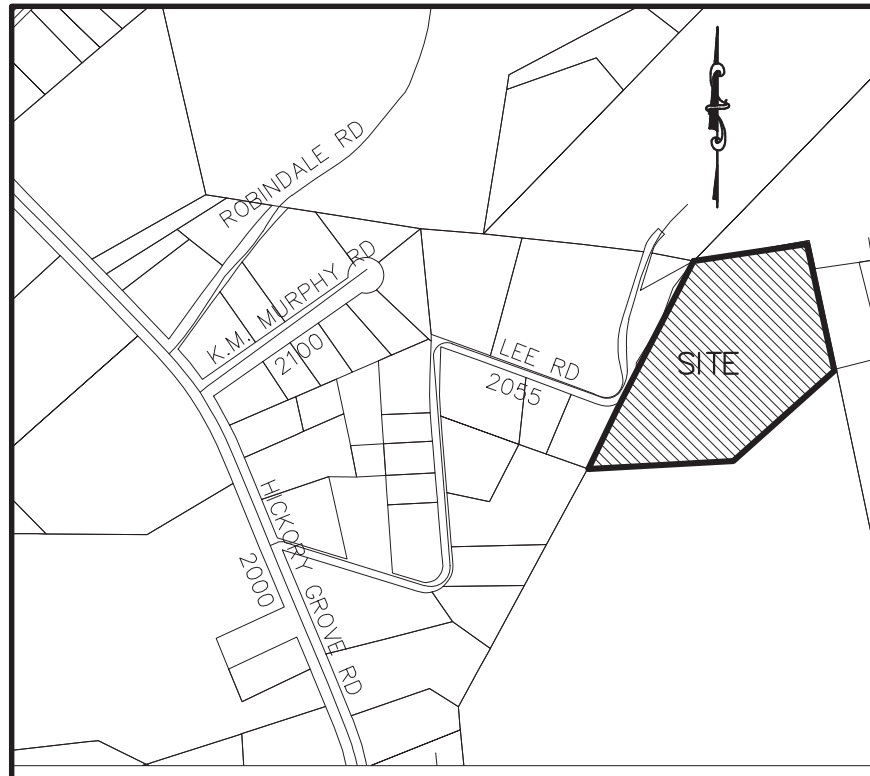


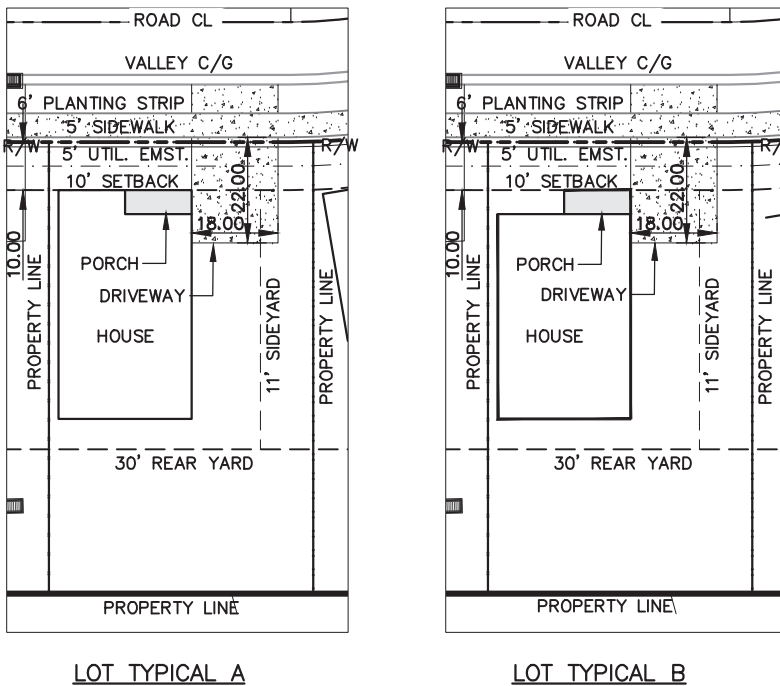
DIXON VILLAGE

CITY OF BELMONT

GASTON COUNTY, NORTH CAROLINA



VICINITY MAP-N.T.S.



- LOT TYPICAL A**
- ALL HOUSES WILL HAVE FRONT PORCHES.
 - 10 FOOT MIN. SETBACK FOR THIS DEVELOPMENT IS INCLUSIVE OF PORCHES. NO HOUSE OR PORCH SHALL ENCRoACH INTO SETBACK.
 - 11 FOOT SIDE YARD MAY BE ALLOCATED ON ONE SIDE AND SHALL BE APPLIED CONSISTENTLY THROUGHOUT DEVELOPMENT (EXCEPT ON CORNER LOTS).
 - ALL HOUSES WILL HAVE AN ATTACHED STORAGE UNIT OR A DETACHED 80 S.F. SHED THAT WILL BE ARCHITECTURALLY COMPATIBLE WITH THE HOUSE.
 - SIDING MATERIAL OF THE HOUSES AND SHEDS WILL BE CEMENT FIBER BOARD.
- LOT TYPICAL B**

- LEGEND**
- PROPOSED LARGE MATURING TREE 40.0' O.C.
 - EXISTING TREELINE
 - EXISTING WATER LINE
 - EXISTING SEWER LINE
 - EXISTING FIRE HYDRANT
 - EXISTING WATER METER
 - EXISTING UTILITY POLE
 - EXISTING MANHOLE
 - EXISTING SWALE
 - PROPOSED STOP SIGN
 - PROPOSED STREET SIGN
 - PROPOSED WALKING TRAIL
 - PROPOSED TREE SAVE AREA / CONSERVATION EASEMENT
 - PROPOSED COMMON OPEN SPACE
 - PROPOSED TRAIL/PARK/PLAYGROUND STREET LIGHT

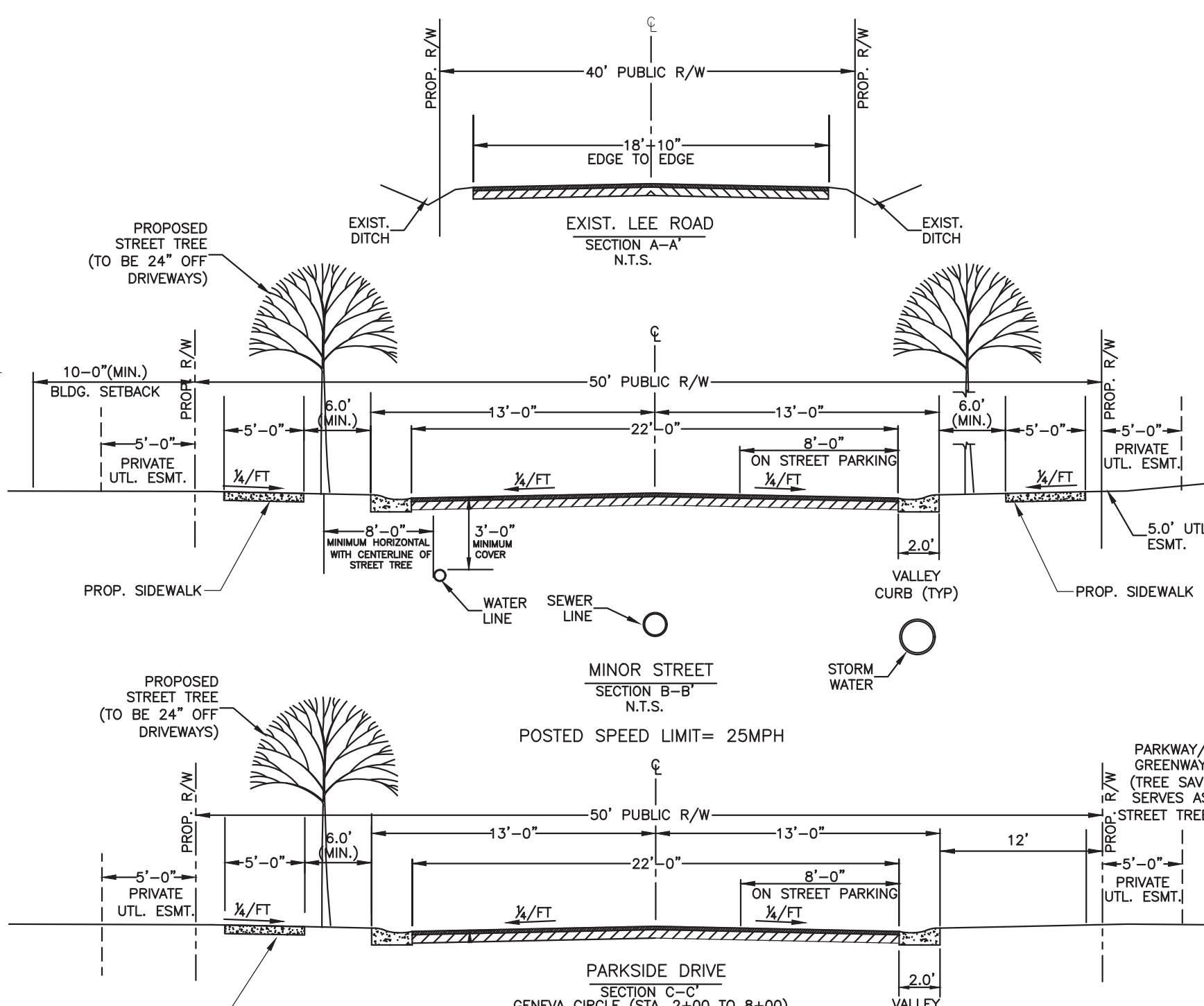
PARK & WALKING TRAIL NOTES:

- PROPOSED ALIGNMENT OF WALKING TRAIL SHOWN ON THIS PLAN IS APPROXIMATE. ACTUAL LOCATION TO BE DETERMINED ON SITE TO SUIT ACTUAL FIELD CONDITIONS.
- WALKING TRAIL CAN USE A NATURAL SURFACE OF COMPACTED EARTH WITH LEAVES, PINE NEEDLES OR COMPACTED GRAVEL SURFACE.
- TRAIL MAY BE ADJUSTED IN THE FIELD TO AVOID ENVIRONMENTAL FEATURES SUCH AS TREES, ROCK OUTCROPPINGS, WETLANDS, ETC.
- PLAYGROUND AREA SHALL BE BUFFERED FROM ROAD VIA LOW GROUND SHRUBS AND BENCHES FOR SAFETY.
- PLAYGROUND SHALL BE IN COMPLIANCE WITH CHAPTER 7 OF LDC.

PAUL WILLIAM CHILDERS
DB 0886, PG 0517
PID #181595
ZONING= R1
GASTON COUNTY
#3112 LEE ROAD
VACANT

EDWARD M. LINEBERGER
DB 2340, PG 245
PID #181595
ZONING= R1
GASTON COUNTY
#3021 LEE ROAD
SINGLE FAMILY RESIDENCE

EDWARD M. LINEBERGER
DB 2340, PG 247
PID #181595
ZONING= R1
GASTON COUNTY
#3021 LEE ROAD
SINGLE FAMILY RESIDENCE



DEVELOPER:

HABITAT FOR HUMANITY OF GASTON COUNTY
ATTN: KAY PENNINGER
1840 E. FRANKLIN BLVD.
GASTON, NC 28054
PH: 704-874-0499/FAX: 704-864-3139
EMAIL: KAY@HABITATGASTON.ORG

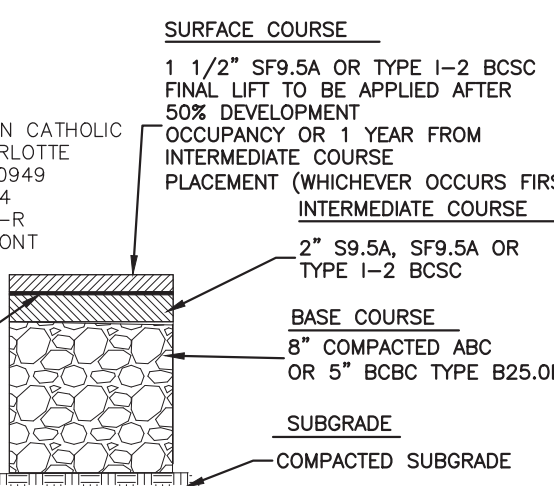
ENGINEER/SURVEYOR/PLANNER:

THE ISAACS GROUP, P.C.
8720 RED OAK BLVD., STE. 420
CHARLOTTE, NC 28217
PH: 704-527-3440/FAX: 704-527-8335

DEVELOPMENT DATA:

TOTAL SITE ACREAGE: 7.58 ACRES
ZONING: GR-CD (GENERAL RESIDENTIAL CONDITIONAL DISTRICT)
COUNTY: GASTON COUNTY
WATERSHED CLASSIFICATION: CATAWBA RIVER WS-IV PROTECTED AREA
TAX PARCEL: 182236 BELMONT

TOTAL SINGLE FAMILY LOTS: 28 LOTS (8 MIN. LOTS TO BE RESERVED FOR HABITAT FAMILIES)
DENSITY ALLOWED: 6.0 UNITS/ACRE
DENSITY PROVIDED: 28/7.58 = 3.69 LOTS/ACRE
MIN. AREA/LOT ALLOWED: 4,000 S.F.
MIN. AREA/AVG. AREA PROVIDED: 5,143 S.F. (MIN.) / 5,280 S.F. (AVG.)
MINIMUM LOT WIDTH: 55 FT.
MINIMUM FRONT SETBACK: 10 FT. (BOTH BUILDING AND PORCH)
REAR YARD: 20% OF LOT WIDTH (MAY BE ALLOCATED ON ONE SIDE. TO BE APPLIED CONSISTENTLY THROUGHOUT DEVELOPMENT EXCEPT ON CORNER LOTS)
CORNER YARD: 30 FT.
MINIMUM PARKING PAD PROPOSED: 18' WIDE X 22' DEEP
BUILT-UPON AREA: 106,005 SF
PERCENT BUILT-UPON: 32.1%
TREE SAVE REQUIRED: 1.36 AC.
TREE SAVE PROVIDED: 1.38 AC.
NOTE: ANY TREESAVE INSIDE PRIVATE LOTS SHALL BE SHOWN AS A CONSERVATION EASEMENT ON FINAL PLAT.



TYPICAL PAVEMENT SECTION

N.T.S.

UTILITY PROVIDERS:

ELECTRICITY: DUKE ENERGY
6325 WILKINSON BLVD.
CHARLOTTE, NC 28214
CONTACT: SONNY BROACH
(704) 382-2906

WATER & SEWER: BELMONT PUBLIC WORKS DEPARTMENT
1401 E. CATAWBA ST.
BELMONT, N.C. 28012
CONTACT: BILL CARROLL
(704) 825-0506

CABLE: TIME WARNER CABLE
2125 UNION ROAD
GASTONIA, N.C. 28054

PHONES: AT&T
3735 EAST FRANKLINE BLVD.
GASTONIA, N.C. 28056
1-866-620-6000

NATURAL GAS: PSNC ENERGY
800 GASTON ROAD
GASTONIA, N.C. 28056
CONTACT: JULIE ROPER
(704) 810-3323

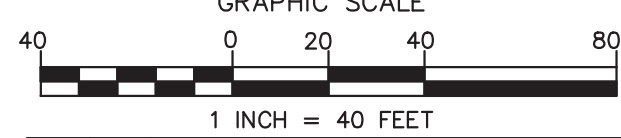
WATERSHED ZONE: CATAWBA RIVER WS-IV PROTECTED AREA
TOTAL SITE ACREAGE: 7.58 ACRES
IMPERVIOUS AREA:
PROPOSED ROAD: 39,775 SF/0.913 AC.
PROPOSED SIDEWALK: 12,946 SF/0.297 AC.
BUILDINGS & DRIVEWAYS: 53,284 SF/1.223 AC.
TOTAL AREA: 106,005 SF/2.434 AC.

COMMON OPEN SPACE CALCS:

DENSITY: 28/7.58 = 3.69 LOTS PER ACRE
ESTIMATED BEDROOMS COUNT= 98 (3.5 ROOMS/LOT)
OPEN SPACE MATRIX NUMBER= 520 (BASE)
REQUIRED COS AREA=98(520)= 50,960 S.F. ~ 1.17 ACRES
TOTAL COS PROVIDED
COS #1 (UNDEVELOPED/TREE SAVE): 0.37 AC.
COS #2 (UNDEVELOPED/TREE SAVE): 0.13 AC.
COS #3 (PARK/PLAYGROUND): 0.83 AC.
COS #4: (UNDEVELOPED/TREE SAVE): 0.11 AC.
TOTAL COS AREA PROVIDED: 1.44 AC.



Digitally signed by Anthony B. Cowan, P.E.
Date: 2021.09.07
15:58:19-04'00'



NO.	BY	DATE	REVISION
1	ABC	12/17/20	PER CITY REVIEW
2	ABC	01/06/21	PER CITY REVIEW
3	ABC	01/12/21	PER CITY REVIEW
4	ABC	01/29/21	REV. FOR TOWN COUNCIL HEARING
5	RER	4/19/21	REVISED DUE TO ZONING
6	RER	5/17/21	PER CITY REVIEW
7	ABC	7/12/21	PER CITY 2ND REVIEW
8	OTH	8/03/21	PER CITY 3RD REVIEW
9	ABC	9/07/21	ADDED MIN. HABITAT LOT COUNT

Project: **DIXON VILLAGE**
BELMONT, NORTH CAROLINA

Title: **SITE PLAN**

File #: 20162-PB.dwg Date: 11/13/2020 Project Egr: ABC

Design By: ABC
Drawn By: ABC
Scale: 1" = 40'

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

C1.0

APPENDIX A - GENERAL PLAN NOTES:

1. THE CITY OF BELMONT WILL PROVIDE PART TIME INSPECTION SERVICES FOR IMPROVEMENTS THAT ARE TO BECOME PUBLICLY MAINTAINED. THE DESIGN PROFESSIONAL AND CONTRACTOR SHALL PROVIDE ADEQUATE NOTIFICATION AND COORDINATION IT ENSURE ALL IMPROVEMENTS ARE INSPECTED DURING CONSTRUCTION.
2. REGULAR WORKING HOURS ARE DEFINED AS 8 HOURS PER DAY BETWEEN THE HOURS OF 7:00 AM AND 7:00 PM, MONDAY THROUGH FRIDAY, EXCLUDING CITY OF BELMONT HOLIDAYS. IF THE CONTRACTOR INTENDS TO WORK OTHER THAN REGULAR WORKING HOURS, HE SHALL SUBMIT A WRITTEN REQUEST TO THE CITY INSPECTOR NOT LESS THAN 48 HOURS PRIOR TO ANY PROPOSED WEEKEND WORK OR SCHEDULED EXTENDED WORK WEEKS.
3. CONTRACTOR SHALL REIMBURSE THE CITY OF BELMONT FOR ADDITIONAL INSPECTION COSTS INCURRED AS A RESULT OF OVERTIME WORK IN EXCESS OF THE REGULAR WORKING HOURS STIPULATED IN NOTE 2. OVERTIME COSTS FOR CITY PERSONNEL SHALL BE \$75 PER HOUR.
4. CONSTRUCTION MATERIALS AND METHODS SHALL BE GOVERNED BY THE CURRENT CITY OF BELMONT LAND DEVELOPMENT STANDARDS MANUAL AND THE DESIGN PROFESSIONAL'S WRITTEN SPECIFICATIONS. REQUEST FOR ANY VARIANCES TO THESE STANDARDS SHALL BE SUBMITTED TO AND REVIEWED BY DESIGN PROFESSIONAL. DESIGN PROFESSIONAL SHALL THEN MAKE FORMAL SUBMITTALS TO THE CITY FOR OFFICIAL APPROVAL. CONSTRUCTION WHICH DOES NOT CONFORM TO THE LAND DEVELOPMENT STANDARDS MANUAL WILL BE REJECTED.
5. SHOP DRAWINGS AND MATERIAL SPECIFICATION SHEETS SHALL BE SUBMITTED TO THE DESIGN PROFESSIONAL FOR APPROVAL. CONTRACTOR SHALL AFFIX A STAMP TO EACH SHOP DRAWING OR MATERIALS SPECIFICATION SHEET STATING THAT HE APPROVES THE ITEM AS MEETING THE DESIGN PROFESSIONAL'S SPECIFICATIONS. THE STAMP SHALL INCLUDE CONTRACTOR'S NAME, LANGUAGE REGARDING CONTRACTOR'S APPROVAL, AND IT MUST BE SIGNED AND DATED BY THE CONTRACTOR. THE DESIGN PROFESSIONAL WILL REVIEW AND APPROVE THESE DOCUMENTS PRIOR TO SUBMITTAL TO THE CITY FOR FINAL ACCEPTANCE. THE DESIGN PROFESSIONAL SHALL AFFIX HIS COMPANY'S STAMP AND SIGN EACH SUBMITTAL ITEM. CITY, AFTER REVIEW, WILL ISSUE FINAL MATERIAL AND EQUIPMENT APPROVAL.
6. UPON FINAL APPROVAL OF THE PLANS BY THE CITY OF BELMONT, GASTON NATURAL RESOURCES DEPARTMENT, NCDENR DIVISION OF WATER QUALITY, NCDENR PUBLIC WATER SUPPLY DIVISION, AND NCDOT AS APPLICABLE, THE DESIGN PROFESSIONAL SHALL SUBMIT COPIES OF ALL PERMITS ISSUED TO THE BELMONT CITY ENGINEER, AFTER RECEIPT AND VERIFICATION OF THESE APPROVALS, THE DESIGN PROFESSIONAL AND DEVELOPER MAY REQUEST A PRECONSTRUCTION MEETING WITH CITY STAFF. THIS MEETING IS MANDATORY AND MUST BE ARRANGED THROUGH THE PUBLIC WORKS DIRECTOR. IN ATTENDANCE AT THE MEETING SHALL BE THE DEVELOPER, THE GENERAL CONTRACTOR, PRIMARY SUBCONTRACTORS, AND THE DESIGN PROFESSIONAL. THE DESIGN PROFESSIONAL SHALL PROVIDE THE FOLLOWING MATERIALS WITH HIS REQUEST FOR THIS MEETING:
 - a. ALL APPLICABLE PERMIT APPROVALS (3 COPIES).
 - b. FINAL CONSTRUCTION PLANS AND SPECIFICATIONS, CLEARLY NOTED AS "RELEASED FOR CONSTRUCTION" (3 FULL SIZED COPIES AND ONE HALF-SIZE COPY).
 - c. SHOP DRAWING SUBMITTALS FOR ALL MATERIALS TO BE INCORPORATED INTO THE PUBLIC IMPROVEMENTS. THE SHOP DRAWINGS SHALL HAVE BEEN REVIEWED BY THE DESIGN PROFESSIONAL AND STAMPED AS "APPROVED" (4 COPIES).
 - d. LIST OF ALL PARTIES INVOLVED WITH THE DESIGN AND CONSTRUCTION OF THE PROJECT, INCLUDING THE DEVELOPER AND PROJECT OWNER, LIST SHALL INCLUDE AUTHORIZED REPRESENTATIVE FOR EACH ENTITY AND FULL CONTACT INFORMATION INCLUDING ADDRESSES, 24-HOUR CELL PHONE NUMBERS, EMAIL ADDRESSES, ETC. (3 COPIES).
7. CONTRACTOR MUST OBTAIN A GRADING PERMIT FROM THE BELMONT PLANNING DEPARTMENT PRIOR TO BEGINNING CONSTRUCTION. THE CITY WILL NOT ISSUE THIS PERMIT UNTIL ALL OFF-SITE EASEMENTS HAVE BEEN OBTAINED AND RECORDED. ALL OTHER PERMITS HAVE BEEN OBTAINED WITH COPIES DELIVERED TO THE CITY ENGINEER, BEGIN A PRECONSTRUCTION MEETING HELD. BEGINNING WORK ON THE SITE PRIOR TO THE ISSUANCE OF THE GRADING PERMIT WILL SUBJECT THE CONTRACTOR TO FINES AND OTHER REMEDIES PRESCRIBED IN BELMONT AND GASTON COUNTY ORDINANCES AND CODES.
8. RECORD DRAWINGS MUST BE PROVIDED IN PAPER AND DIGITAL FORMAT (AUTOCAD AND ADOBE PDF) PRIOR TO ACCEPTANCE OF THE WATER, SANITARY SEWER, AND DRAINAGE SYSTEMS FOR MAINTENANCE BY THE CITY. THE RECORD DRAWINGS FOR THIS PROJECT MUST INCLUDE SPECIFIC INFORMATION REGARDING THE LOCATION OF:
 - a. WATER MAINS, WATER SERVICE TAPS ON THE MAIN, VALVES, AND FIRE HYDRANTS.
 - b. SANITARY SEWERS, MANHOLES, SEWER SERVICE TAPS ON THE SEWER.
 - c. PUMP STATION AND FORCE MAIN.
 - d. STORM SEWERS, MANHOLES, CATCH BASINS, SUBSURFACE DRAINS.
 - e. DETENTION AND WATER QUALITY FACILITIES INCLUDING FIELD VERIFICATION OF BASIN VOLUMES.
 - f. ALL EXISTING BURIED UTILITIES ENCOUNTERED DURING CONSTRUCTION.
 - g. ROCK IF ENCOUNTERED DURING CONSTRUCTION.
9. UTILITY EASEMENTS HAVE BEEN EXECUTED AND RECORDED. IF THE LOCATIONS OF WATER AND SEWER FACILITIES ARE CHANGED DURING CONSTRUCTION, THE EASEMENT DOCUMENTS SHALL BE UPDATED AND RE-RECORDED.
10. CONSTRUCTION FOR THE PLACEMENT AND COMPACTION OF FILL DIRT SHALL BE CONTROLLED AND TESTED BY A CERTIFIED GEOTECHNICAL ENGINEER. THE CITY OF BELMONT WILL NOT BE RESPONSIBLE FOR SUCH. THE FILLING OF THE LOTS, FILLS IN RIGHTS OF WAY WILL BE MONITORED BY THE CITY INSPECTOR. THE DESIGN PROFESSIONAL SHALL SUBMIT COMPACTION TESTING RESULTS TO THE CITY INSPECTOR AS VERIFICATION THAT SPECIFIED COMPACTION IS ACHIEVED.
11. ANY SPRINGS DISCOVERED DURING CONSTRUCTION OF THE IMPROVEMENTS MUST BE ACCOMMODATED BY THE EXTENSION OF THE STORM DRAINAGE SYSTEM TO PREVENT WATER FROM FLOWING OVER PUBLIC SIDEWALKS, CURBS, AND PAVEMENTS. THESE EXTENSIONS SHALL BE INCLUDED ON THE RECORD DRAWINGS.
12. NO TREES MAY BE REMOVED FROM THE SITE WITHOUT FIRST IDENTIFYING TREES TO REMAIN IN THE FIELD WITH YELLOW FLAGGING. TREE PROTECTION FENCING IS REQUIRED BY CITY CODE.
13. THE CITY OF BELMONT DOES NOT GUARANTEE WATER VOLUME AND WATER DISTRIBUTION SYSTEM PRESSURE.
14. NO VERTICAL BUILDING CONSTRUCTION MAY PROCEED UNTIL THE WATER MAINS AND FIRE HYDRANTS ARE INSTALLED AND APPROVED FOR OPERATION BY THE NCDENR PUBLIC WATER SUPPLY DIVISION. THIS PROCESS REQUIRES COMPLETE INSTALLATION, PRESSURE TESTING OF THE WATER MAIN, DISINFECTION, ACCEPTABLE BACTERIOLOGICAL TEST RESULTS, CERTIFICATION BY THE DESIGN PROFESSIONAL, APPLICANT CERTIFICATION, AND SUBMITTAL TO THE NCDENR PUBLIC WATER SUPPLY SECTION FOR AUTHORITY TO OPERATE APPROVAL. THE CONSTRUCTION OF THE WATER MAIN MAY BE THE CRITICAL PATH ITEM FOR STARTING BUILDING CONSTRUCTION.
15. WATER AND SEWER SYSTEMS CANNOT BE ACTIVATED UNTIL FINAL APPROVAL FROM NCDENR IS OBTAINED AND NCDENR APPROVAL LETTERS ARE RECEIVED BY THE CITY. THE PROJECT DESIGN PROFESSIONAL SHALL PROVIDE THE NECESSARY SERVICES REQUIRED IN ORDER FOR HIM TO MAKE THE CERTIFICATIONS NECESSARY FOR SUCH FINAL APPROVALS. IF A DIFFERENT ENGINEER WILL BE RETAINED BY THE DEVELOPER FOR CONSTRUCTION PHASE SERVICES, THE DEVELOPER SHALL NOTIFY THE CITY OF BELMONT IN WRITING OF SUCH CHANGE IN DESIGN PROFESSIONAL.
16. CLEARANCES BETWEEN SEWER, WATER, AND STORM PIPES HAVE BEEN CHECKED IN DETAIL BY THE DESIGN PROFESSIONAL. FIELD CHANGES FOR CROSSING CONFLICTS MUST BE SUBMITTED WITH REVISED PLANS BY THE DESIGN PROFESSIONAL AND MUST BE APPROVED BY THE CITY PRIOR TO ANY CONSTRUCTION MODIFICATIONS.
17. THE MINIMUM PAVEMENT CROSS-SECTION SHALL BE 8 INCHES OF ABC STONE BASE OR 5" TYPE B25.0B, 2 INCHES OF TYPE SPS.0B OR TYPE SPS.5A ASPHALT INTERMEDIATE COURSE, AND 1-1/2" INCHES OF TYPE SPS.0A OR TYPE SPS.5A ASPHALT SURFACE COURSE. THE FINAL COURSE SHALL NOT BE INSTALLED UNTIL 50 PERCENT OF THE LOTS ON A STREET HAVE RECEIVED A CERTIFICATE OF OCCUPANCY FOR A PRINCIPAL STRUCTURE OR ONE YEAR AFTER THE COMPLETION OF THE BASE AND INTERMEDIATE COURSES. FINAL SURFACE COURSE SHALL NOT BE PLACED UNTIL THE STREET HAS BEEN INSPECTED BY THE CITY INSPECTOR AND ALL BASE AND INTERMEDIATE ASPHALT COURSES HAVE BEEN REPAIRED AND ARE DEEM IN GOOD CONDITION BY THE CITY.
18. ALL PUBLICLY MAINTAINED STORM INLETS, CATCH BASINS, AND MANHOLES SHALL BE PRECAST CONCRETE CONSTRUCTION. BRICK OR BLOCK STRUCTURES ARE UNACCEPTABLE.
19. WATER SERVICE LINES AND SEWER SERVICES ARE NOT PERMITTED UNDER DRIVEWAYS. PAIRED SEWER SERVICES SHARING THE SAME TRENCH FOR ADJACENT LOTS ARE NOT PERMITTED. THE SAME APPLIES TO WATER SERVICES. SERVICES SHALL BE LOCATED IN THE MIDDLE OF THE LOT FRONTAGE TO AVOID DRIVEWAYS. IF THIS DOES NOT WORK WITH THE PROPOSED BUILDING PLANS, THEN SEWER SERVICES SHOULD BE AT THE LOW CORNER OF THE LOT FRONTAGE.
20. THE CITY DOES NOT ASSUME THE RESPONSIBILITY FOR REPLACEMENT OF PAVEMENTS, CONCRETE WALKS AND CURBING, OR LANDSCAPING IF REMOVAL OF THESE ITEMS IS REQUIRED TO REPAIR WATER AND SEWER FACILITIES IN UTILITY EASEMENTS.
21. THE CITY RESERVES THE RIGHT TO DELETE ANY TREES THAT MAY CONFLICT WITH ADEQUATE VEHICULAR SIGHT DISTANCES.
22. THE CONTRACTOR SHALL PROVIDE A ONE YEAR WARRANTY ON ALL IMPROVEMENTS. WARRANTY PERIOD DOES NOT BEGIN UNTIL THE IMPROVEMENTS HAVE BEEN INSPECTED AND ACCEPTED BY THE CITY IN ACCORDANCE WITH CURRENT CITY ACCEPTANCE POLICY. A TWO YEAR WARRANTY IS REQUIRED FOR TREES AND PLANT MATERIALS.

NOTE:
DRAINAGE STRUCTURES ARE TO BE OF PRECAST CONCRETE CONSTRUCTION.

NOTE:
HIGH-HAZZARD SILT FENCE & ORANGE TREE PROTECTION FENCE ARE SHOWN OFFSET FROM ACTUAL CLEARING AND TREE PROTECTION LIMITS FOR GRAPHIC DISPLAY PURPOSES ONLY.

DEVELOPER'S ACKNOWLEDGEMENT OF ENGINEER'S RESPONSIBILITIES DURING CONSTRUCTION:

THE DEVELOPER SHALL VERIFY THAT HE/SHE/ THEY HAS AUTHORIZED THE DESIGN ENGINEER TO PERFORM SUCH INSPECTIONS REQUIRED FOR WATER AND SEWER CERTIFICATIONS. THE ATTACHED DEVELOPER'S ACKNOWLEDGEMENT FORM MUST BE SIGNED AND SUBMITTED WITH THE NEXT REVIEW MATERIALS. IF A DIFFERENT ENGINEER WILL BE RETAINED BY THE DEVELOPER FOR CONSTRUCTION PHASE SERVICES, THE DEVELOPER SHALL NOTIFY THE CITY OF BELMONT IN WRITING OF SUCH CHANGE IN ENGINEER. A NOTE SHALL BE ADDED TO THE PLANS INCLUDING THE REQUIRED ENGINEER CERTIFICATIONS AND NOTIFICATION OF CHANGE OF ENGINEER.

GENERAL NOTES:

1. THIS MAP IS NOT A CERTIFIED SURVEY, BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY THE ISAACS GROUP, P.C.. THE PHYSICAL AND TOPOGRAPHIC DATA PROVIDED IN THESE DRAWINGS HAS BEEN COMPILED BY THE ISAACS GROUP AND THE ENGINEER OF RECORD (ENGINEER) IN SUPPORT OF THIS PROJECT AND CANNOT BE RELIED UPON BY OTHERS. "THE ENGINEER OF RECORD" SHALL BE WITHIN THE PROJECT AREA. THE CONTRACTOR IS 100% RESPONSIBLE FOR THE SUBSEQUENT NOTES.
2. THE EXISTING UTILITIES SHOWN ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THIS PLAN AND THE UTILITIES SHOWN ON THIS PLAN MAY NOT BE IN THE EXACT LOCATIONS AS SHOWN. THE ISAACS GROUP, P.C. ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN OR ANY OMISSIONS IN SHOWING EXISTING UTILITIES THAT MAY BE WITHIN THE PROJECT AREA. THE CONTRACTOR IS 100% RESPONSIBLE FOR UTILIZING A PRIVATE LOCATOR AND APPROPRIATE UTILITY COMPANIES TO LOCATE THE SIZE, LOCATION, INVERTS, DEPTHS AND EXISTENCE OF ALL EXISTING UTILITIES (ELECTRICAL, MECHANICAL, WATER, TELEPHONE, FIBER OPTIC, GAS, ETC.) TO HIS/HER SATISFACTION PRIOR TO COMMENCEMENT OF CONSTRUCTION AND EXCAVATION ACTIVITIES. ANY CONFLICTS BETWEEN EXISTING UTILITIES AND PROPOSED EXCAVATION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
3. PROVIDE MINIMUM OF 48 HOUR NOTICE TO OWNER OR REPRESENTATIVE PRIOR TO INTERRUPTION OF ANY EXISTING UTILITY, IF BEING UTILIZED.
4. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY UTILITIES DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATION & PROTECTION OF EXISTING ABOVE AND BELOW GROUND UTILITIES AND STRUCTURES. ANY AND ALL MAINS OR INDIVIDUAL SERVICES PRESENTLY IN SERVICE WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE ISAACS GROUP, P.C.. ANY AND ALL MAINS OR INDIVIDUAL SERVICES PRESENTLY NOT IN SERVICE AND WHICH ARE TO BE REPLACED DURING THE COURSE OF CONSTRUCTION MAY BE REMOVED AND LEGALLY DISPOSED OF IF DAMAGED DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR ALL UNDERGROUND AND OVERHEAD UTILITIES.
6. HANDICAP SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH A.D.A STANDARDS AT H/YC PARKING SPACES SHOWN.
7. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL NECESSARY PERMITS AND APPROVALS HAVE BEEN OBTAINED PRIOR TO CONSTRUCTION. THESE PERMITS AND APPROVALS MAY INCLUDE BUT ARE NOT LIMITED TO GRADING, DEMOLITION, ZONING, BUILDING, DRIVEWAY, DETENTION, SUBDIVISION, SPECIAL USE, SEWER AND WATER.
9. PROPOSED LOCATIONS AND SIZES OF UNDERGROUND UTILITIES SHOWN ON THESE DRAWINGS ARE BASED UPON DESIGN CONSTRAINTS IDENTIFIED BY THE ENGINEER AND SHOULD BE VERIFIED BY THE CONTRACTOR TO ENSURE COMPLIANCE WITH THE MECHANICAL, ELECTRICAL, AND PLUMBING PLANS TO ENSURE PROPER COORDINATION AND PLAN CONSISTENCY. ANY DISCREPANCIES BETWEEN THE INFORMATION SHOWN ON THESE DRAWINGS AND DRAWINGS PREPARED BY OTHER DESIGN CONSULTANTS NOT SUBCONTRACTING DIRECTLY WITH THE ISAACS GROUP / ENGINEER SHOULD BE REPORTED IMMEDIATELY UPON DISCOVERY AS NEEDED TO RESOLVE.
10. IN ORDER TO ENSURE THE PROPER DRAINAGE, CONTRACTOR SHALL KEEP A MINIMUM OF 0.5% SLOPE ON THE CURB. ENGINEER HAS VERIFIED THAT THESE PLANS MEET THE REQUIREMENTS.
11. ALL LEE ROAD IMPROVEMENTS TO BE COORDINATED WITH NCDOT AND CITY OF BELMONT PLANNING DEPARTMENT.
12. ANY VARIATION OF CURB AND STREET GRADES IN INTERSECTION AT LEE ROAD SHALL BE COORDINATED WITH DESIGN ENGINEER AND NCDOT PRIOR TO CONSTRUCTION.
13. ALL HANDICAP RAMPS, PARKING SPACES, ETC. TO MEET ALL A.D.A. CODES.
14. ALL DRIVEWAYS SHALL BE BUILT IN ACCORDANCE WITH THE CITY OF BELMONT LAND DEVELOPMENT STANDARDS AND NCDOT STANDARDS.
15. CONTRACTOR TO SUBMIT ALL SITE CONSTRUCTION SHOP DRAWINGS AND MATERIAL SUBMITTALS. WATER/SEWER & STORM DRAINAGE TO ENGINEER FOR APPROVAL. ANY SUBSTITUTIONS OF REVISIONS TO MATERIALS OR CONSTRUCTION SHALL BE APPROVED FIRST BY ENGINEER AND CITY OF BELMONT PRIOR TO CONSTRUCTION.
16. ALL DESIGN, CONSTRUCTION AND CONSTRUCTION MATERIALS SHALL CONFORM TO CITY OF BELMONT SPECIFICATIONS.
17. ANY SPRINGS DISCOVERED DURING CONSTRUCTION OF THE IMPROVEMENTS MUST BE ACCOMMODATED BY THE EXTENSION OF THE STORM DRAINAGE SYSTEM TO PREVENT WATERS FROM FLOWING OVER PUBLIC SIDEWALK, CURBS AND PAVEMENTS. THESE DRAIN EXTENSIONS SHALL BE DESIGNED BY AN ENGINEER AND INCLUDED ON THE RECORD DRAWINGS.
18. ALL STREET NAMES AND SUBDIVISION NAME HAVE BEEN APPROVED BY GASTON COUNTY GIS FOR PLAT RECDORDATION AND CONSTRUCTION APPROVAL.
19. WATER AND SEWER LINES SHALL BE INSTALLED EXCLUSIVELY IN THE ROAD RIGHTS OF WAY UNLESS NOTED OR SHOWN OTHERWISE. ELECTRIC LINES SHALL BE INSTALLED IN A PRIVATE EASEMENT LOCATED OUTSIDE OF THE ROAD RIGHT OF WAY, EXCEPT FOR ROAD CROSSINGS.
20. PROPERTY USE TO BE RESIDENTIAL.
21. ALL COMMON AREAS SHALL BE MAINTAINED BY THE PROPERTY OWNER'S ASSOCIATION. THE COVENANTS & BYLAWS WILL BE SUBMITTED TO BELMONT FOR REVIEW AND APPROVAL PRIOR TO RECDORDATION.
22. SIGHT TRIANGLE AT INTERSECTIONS OF ROADS WILL BE MAINTAINED FREE OF ANY MATERIAL INTERFERING WITH SIGHT.
23. MAXIMUM POSTED SPEED LIMIT FOR ALL ROADWAYS INSIDE THE SUBDIVISION IS 25 MPH.
24. PROPOSED CELLULOSIC BURIAL SITES SHALL BE LOCATED ON THE FINAL PLAT.
25. A 5.0' UTILITY EASEMENT WILL BE PROVIDED ADJACENT TO ALL PUBLIC RIGHT-OF-WAYS ON BOTH SIDES OF THE ROAD AND WILL APPEAR ON THE FINAL PLAT.
26. UPON FINAL APPROVAL OF THE PLANS BY THE CITY OF BELMONT, GASTON NATURAL RESOURCES DEPARTMENT, NCDENR DIVISION OF WATER QUALITY, NCDENR PUBLIC WATER SUPPLY DIVISION, AND NCDOT, A PRECONSTRUCTION MEETING IS REQUIRED WITH CITY STAFF. THIS MEETING MUST BE ARRANGED THROUGH THE OWNER OF PUBLIC WORKS, DAVID ISENHOUR, AND MUST INCLUDE THE CONTRACTOR(S), DESIGN ENGINEER AND OWNER. ADDITIONAL INFORMATION WILL BE PROVIDED REGARDING REQUIREMENTS OF THE MEETING PRIOR TO THE CONFERENCE.
27. ENGINEER IS REQUIRED TO CERTIFY INSTALLED WATER, SEWER, STORM, AND BMP POND. DEVELOPER SHALL NOTIFY BELMONT IN WRITING IF THERE IS A CHANGE IN ENGINEER.
28. NO VERTICAL BUILDING CONSTRUCTION MAY PROCEED UNTIL THE WATER MAINS AND FIRE HYDRANTS ARE INSTALLED AND ARE APPROVED FOR OPERATION BY THE NCDENR PUBLIC WATER SUPPLY SECTION. THIS PROCESS REQUIRES COMPLETE INSTALLATION, PRESSURE TESTING OF THE WATER MAIN, DISINFECTION, ACCEPTABLE BACTERIOLOGICAL TEST RESULTS, CERTIFICATION BY THE DESIGN PROFESSIONAL, APPLICANT CERTIFICATION, AND SUBMITTAL TO THE NCDENR PUBLIC WATER SUPPLY SECTION FOR AUTHORITY TO OPERATE APPROVAL. THE CONSTRUCTION OF THE WATER LINES WILL LIKELY BE THE CRITICAL PATH ITEM FOR STARTING BUILDING CONSTRUCTION.

GRADING NOTES:

1. THE UTILITIES AND THE LOCATIONS THEREOF, SHOWN ON THE DRAWING, REPRESENT THE DESIGNER'S UNDERSTANDING OF EXISTING UTILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL VERIFY THE SIZE, LOCATION, INVERTS, DEPTHS, AND EXISTENCE OF ALL UTILITIES (ELECTRICAL, MECHANICAL, WATER, TELEPHONE, GAS, ETC.) WITHIN THE CONSTRUCTION AREA WITH THE OWNER AND/OR THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING ANY EXCAVATION. THE OMISSION OF OR THE INCLUSION OF UTILITIES NOT SHOWN ON THIS PLAN IS TO BE CONSIDERED AS THE NON-EXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
2. THE DESIGN ENGINEER SHALL BE NOTIFIED WHEN FIELD LOCATION INFORMATION CONFLICTS WITH THE PROPOSED DESIGN. ANY NECESSITATING CHANGES, OR ADDITIONAL WORK SHALL BE APPROVED BY THE OWNER/ENGINEER PRIOR TO CONSTRUCTION.
3. WE RECOMMEND A LICENSED AND INDEPENDENT GEOTECHNICAL ENGINEER BE RETAINED BY THE OWNER/DEVELOPER TO PROVIDE QUALITY CONTROL / QUALITY ASSURANCE REVIEW OF CONTRACTOR WORK THROUGHOUT CONSTRUCTION.
4. APPROVAL OF "THIS PLAN" IS NOT AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT, THE CITY OF BELMONT, PLANNING & DESIGN MANAGER, SHALL BE NOTIFIED PRIOR TO THE OWNER(S) BEFORE PROCEEDING.
5. ALL CONSTRUCTION AND CONSTRUCTION MATERIALS WITHIN COUNTY RIGHT-OF-WAY AND NCDOT RIGHT-OF-WAY SHALL CONFORM TO THEIR RESPECTIVE STANDARD SPECIFICATIONS.
6. CONTRACTOR TO PROVIDE ALL EROSION CONTROL MEASURES AS REQUIRED BY LOCAL AUTHORITIES.
7. TOP SOIL TO BE STRIPPED AND STOCKPILED IN AREA DESIGNATED BY ENGINEER. ANY UNSUITABLE MATERIALS ON SITE ARE TO BE QUALIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO REMOVING. CONTRACTOR MUST NOTIFY OWNER OR OWNER REPRESENTATIVE IN CASE UNSUITABLE MATERIAL IS UNCOVERED.
8. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL ENGINEER ANY SUBSURFACE DRAINAGE SYSTEMS TO BE INSTALLED.
9. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF NCDENR EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
10. GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF NCDENR EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
11. THE GEOTECHNICAL ENGINEER IS RESPONSIBLE FOR ALL EMBANKMENT ACTIVITY. THE FINAL REPORT OF ALL TEST SHALL BE SENT TO THE APPROPRIATE REGULATORY AGENCY FOR PART OF AS-BUILT AND BEFORE CERTIFICATE OF OCCUPANCY.
12. THE BMP'S ARE TO BE BUILT AFTER 99% OF CONTRIBUTING DRAINAGE AREAS ARE BUILT UPON AND STABILIZED.
13. BORROW MATERIAL SHALL BE CLASSIFIED AS ML, MH, SC, SM, CL OR CH SOILS ACCORDING TO THE UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487) OR ANY MIXTURE OF THESE SOILS.
14. SOIL TO BE USED AS STRUCTURAL FILL SHOULD BE FREE OF ORGANIC MATERIAL, ROOTS OR OTHER DELETERIOUS MATERIALS. STRUCTURAL FILL SHOULD HAVE A PLASTICITY INDEX (PI) LESS THAN 30 AND A LIQUID LIMIT (LL) LESS THAN 50, OR AS APPROVED BY THE GEOTECHNICAL ENGINEER.
15. MATERIALS SHALL BE FREE OF TOPSOIL, ORGANIC MATERIAL, ROOTS, STUMPS, BRUSH, ROCKS LARGER THAN 3 INCHES, SUBSOIL, DEBRIS, VEGETATION, AND OTHER FOREIGN MATTER.
16. ALL MATERIAL CLOUDS WILL BE BROKEN DOWN WITH TILLERS AND/OR DISCS TO PROVIDE A HOMOGENEOUS SOIL THAT IS FREE OF CLAY CLOUDS GREATER THAN 3 INCHES IN DIAMETER.
17. THE ISAACS GROUP (ENGINEER) HAS PERFORMED THE GRADING DESIGN BASED UPON AVAILABLE SITE INFORMATION AND INDUSTRY TRADE PRACTICES TO ARRIVE AT EARTHWORK QUANTITIES ANTICIPATED DURING CONSTRUCTION. BASED UPON THE VARIABILITY OF SOIL PROPERTIES AND PROFILES ON A GIVEN SITE, THE ISAACS GROUP DOES NOT WARRANT OR GUARANTEE THAT THERE WILL BE A BALANCE OF EARTHWORK AND SITE CONDITIONS MAY REQUIRE A SITE VERTICAL ADJUSTMENT OR AN IMPORT OR EXPORT OF SOIL AS NEEDED TO ESTABLISH A SITE BALANCE. CONTRACTOR IS RESPONSIBLE FOR INDEPENDENTLY VERIFYING EARTHWORK QUANTITIES AND ESTABLISHING PROCEDURES THAT REFLECTS ALL WORK ANTICIPATED INCLUDING IMPORT, EXPORT OR ON-SITE EARTHWORK ADJUSTMENTS AS NEEDED TO ESTABLISH THE PROPOSED GRADES AS SHOWN ON THESE DRAWINGS. ANY QUESTIONS OR CONCERNS RELATIVE TO THE BALANCE OF EARTHWORK SHOULD BE REPORTED IMMEDIATELY TO THE ENGINEER. DEVELOPER PRIOR TO COMMENCEMENT OF CONSTRUCTION AS NEEDED TO INVESTIGATE AND RESOLVE BY MAKING SITE GRADE ADJUSTMENTS IF PRACTICABLE.

UTILITY NOTES:

1. THE UTILITIES AND THE LOCATIONS THEREOF, SHOWN ON THE DRAWING, REPRESENT THE DESIGNER'S UNDERSTANDING OF EXISTING UTILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL VERIFY THE SIZE, LOCATION, INVERTS, DEPTHS, AND EXISTENCE OF ALL UTILITIES (ELECTRICAL, MECHANICAL, WATER, TELEPHONE, GAS, ETC.) WITHIN THE CONSTRUCTION AREA WITH THE OWNER AND/OR THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING ANY EXCAVATION. THE OMISSION OF OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
2. THE DESIGN ENGINEER SHALL BE NOTIFIED WHEN FIELD LOCATION INFORMATION CONFLICTS WITH THE PROPOSED DESIGN. ANY NECESSITATING CHANGES, OR ADDITIONAL WORK SHALL BE APPROVED BY THE OWNER/ENGINEER PRIOR TO CONSTRUCTION.
3. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTACT BELMONT PUBLIC WORKS (704-825-0507) PRIOR TO DIGGING.
4. THE COST OF ANY UTILITY RELOCATIONS AND/OR ADJUSTMENTS THAT ARE DEEMED NECESSARY FOR PROJECT COMPLETION, SHALL BE INCLUDED IN THE CONTRACTOR'S BASE BID.
5. CONTRACTOR TO ASCERTAIN LOCATION AND CONDITION OF ALL EXISTING UTILITY CONNECTIONS. ALL EXISTING CONNECTIONS IN SUITABLE CONDITIONS SHALL BE USED INSTEAD OF MAKING NEW CONNECTIONS.
6. CONTRACTOR SHALL COORDINATE WITH OTHER UTILITY COMPANIES TO PREVENT CONFLICTS (I.E., PIPE CROSSINGS) WHEN LAYING PIPE. SOME UTILITIES MAY NEED TO BE ADJUSTED IN FIELD. CONTACT ENGINEER IMMEDIATELY IF SUCH A CASE ARISES.
7. CONTRACTOR SHALL COORDINATE ANY UTILITY REMOVALS AND RELOCATIONS WITH CITY OF BELMONT.
8. D.I.P. WITH MECHANICAL JOINT ENDS MAY BE SUBSTITUTED WHERE SEPARATION DISTANCES BETWEEN THE SANITARY SEWER AND WATER LINE OR STORM SEWER CANNOT BE MAINTAINED. PIPE MUST BE LAID SUCH THAT FULL SEWER PIPE ARE CENTERED ON THE CROSSING POINT & EXTEND A DISTANCE OF 10' ON EACH SIDE OF THE POINT OF CROSSING.
9. ALL CONSTRUCTION AND CONSTRUCTION MATERIALS SHALL CONFORM TO CITY OF BELMONT STANDARD DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL WATER, SEWER AND STORM DRAINAGE MATERIAL TO ENGINEER FOR APPROVAL.
10. MINIMUM COVER OF 36 INCHES IS REQUIRED FOR WATER MAINS.
 - ALL 2" WATER LINE SHALL BE CLASS 200, SDR35 PVC
 - ALL 8" & 6" WATER LINES SHALL BE AWWA C900 PVC DR14 OR CEMENT LINED DIP AWWA C151 CLASS 350
11. CONTRACTOR SHALL COORDINATE WITH BELMONT PUBLIC WORKS PRIOR TO TAPPING/CONNECTING TO EXISTING WATER & SANITARY SEWER LINES TO ALLOW BELMONT TO SUPERVISE THE CONNECTION. CONTRACTOR TO RECORD ALL LOCATIONS WHERE DIP PIPE IS USED BY STATIONING AND INDICATE THE LOCATIONS ON THE AS-BUILT DRAWINGS.
12. CONTRACTOR SHALL COORDINATE WITH CITY OF BELMONT UTILITY DEPARTMENT THE CONNECTIONS OF PROPOSED WATER & SANITARY SEWER LINES.
13. CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ISAACS GROUP A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO THE CONSTRUCTION OF WATER AND SEWER LINES TO ALLOW REPRESENTATIVE FROM THE ISAACS GROUP TO PERIODICALLY BE ON-SITE DURING INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AN AS-BUILT SURVEY OF THE WATER AND SEWER LINES TO THE ISAACS GROUP UPON COMPLETION OF INSTALLATION.
14. PROVIDE MINIMUM OF 48 HOUR NOTICE TO OWNER OR REPRESENTATIVE.
15. PROF. EMPTY CONDUITS AND LATERALS TO BE CAPPED AND MARKED AT EACH END WITH 1/2" REBAR DRIVEN 3' INTO THE GROUND AND FLAGGED.(TYP.)
16. THERE SHALL BE NO TAPS, TYPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPT. CONNECTION POINTS, OR OTHER WATER-USE APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND ITS BACKFLOW PREVENTER.
17. WATER AND SEWER SYSTEMS CANNOT BE ACTIVATED UNTIL FINAL APPROVAL FROM NCDEQ IS OBTAINED AND NCDEQ APPROVAL LETTERS ARE RECEIVED BY THE CITY.
18. PIPE FITTINGS TO JOIN DIP TO PVC PIPE SHALL BE HARCO GASKETED ADAPTER OR APPROVED EQUAL.
19. CONTRACTOR/DEVELOPER TO PROVIDE A 12 MONTH WARRANTY OF WATER/SEWER IMPROVEMENTS AFTER CITY ACCEPTANCE.
20. UPON FINAL DESIGN, FIRE HYDRANTS LOCATIONS WILL BE ADJUSTED SO AS NOT TO CONFLICT WITH RESIDENTIAL DRIVEWAYS AND WILL MAINTAIN THE REQUIRE 500 FT. (MAX.) SPACING.

SEWER NOTES:

1. ALL 8" PVC SANITARY SEWER IS TO BE:
 - PVC ASTM 3034, TYPE PSM SDR35
 - CIP CEMENT LINED AWWA C151 PRESSURE CLASS 350 W/ 401 PROTECTION.
2. STATIONS SHOWN FOR SANITARY SEWER MANHOLE LOCATIONS IN SEWER PROFILE ARE STATIONS NOT TIED TO ROADWAY STATIONING.
3. ALL SANITARY SEWER SERVICES SHALL BE SCHEDULE 40 PVC.
4. STONE BEDDING IS REQUIRED FOR ALL SDR 35 PVC SEWER PIPE & SHALL EXTEND 4" BELOW THE PIPE.
5. ALL SEWER SERVICES ARE TO BE LOCATED NEAR THE MIDDLE OF LOTS UNLESS OTHERWISE INDICATED.
6. ALL CLEAN OUTS ARE TO BE LOCATED ON THE HOUSE SIDE OF THE SIDEWALK OUTSIDE OF THE SIDEWALK AND/OR DRIVEWAY AT THE PROPERTY LINE.
7. CONTRACTOR SHALL NOTIFY BELMONT & THE ENGINEER 24 HOURS PRIOR TO ANY SEWER TIES OR SEWER LINE RELOCATION.
8. SEWER LATERAL SERVICE LOCATIONS SHOULD BE MARKED WITH A "S" CUT INTO THE PROPOSED CURB AND PAINTED GREEN.
9. CONTRACTOR TO INSTALL 14 GAUGE SOLDER COPPER TRACER WIRE ALONG THE TOP OF ALL SEWER LATERALS.
10. SEWER SERVICE LATERALS ARE SHOWN AT ANTICIPATED LOCATIONS. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS WITH GARY GALLAGHER (704) 901-2072.
11. TRENCHES MUST BE INSPECTED BY BELMONT BEFORE IT IS ALLOWED TO BE FILLED.
12. TO ENSURE POSITIVE DRAINAGE ALL SEWER LATERALS MUST HAVE A 1/4 IN.-FT. FALL.

WATER NOTES:

1. MINIMUM COVER OF 36 INCHES IS REQUIRED FOR WATER MAINS.
 - ALL 2" WATER LINE SHALL BE CLASS 200, SDR35 PVC
 - ALL 8" & 6" WATER LINES SHALL BE AWWA C900 PVC DR14 OR CEMENT LINED DIP AWWA C151 CLASS 350
2. CONTRACTOR TO FIELD VERIFY SIZE AND TYPE OF EXISTING LINES AT THE POINTS PRIOR TO COMMENCING CONSTRUCTION AND NOTIFY THE ENGINEER IMMEDIATELY IF DISCREPANCIES EXIST.
3. ALL SERVICES ARE TO BE LOCATED NEAR THE MIDDLE OF LOTS UNLESS OTHERWISE INDICATED.
4. ALL SERVICES ARE TO BE LOCATED ON THE HOUSE SIDE OF SIDEWALKS OUTSIDE OF THE SIDEWALK AND/OR DRIVEWAY
5. CONTRACTOR TO INSTALL 14 GAUGE SOLDER COPPER TRACER WIRE ALONG TOP OF ALL PVC WATERLINES & LATERALS.
6. PIPE DEFLECTION AT EACH JOINT IS NOT TO EXCEED PIPE MANUFACTURER'S RECOMMENDATIONS, WHERE REQUIRED DEFLECTION EXCEEDS THE RECOMMENDATIONS, MAKE THE DEFLECTION OVER MULTIPLE PIPE JOINTS TO MEET MANUFACTURER'S REQUIREMENTS.
7. CONTRACTOR SHALL NOTIFY BELMONT PUBLIC WORKS 24 HOURS PRIOR TO ANY CONNECTIONS TO CITY WATERLINE ARE MADE. A BELMONT REPRESENTATIVE SHALL BE PRESENT WHEN TAPPING TO EXISTING WATER LINES.
8. WATER METER SERVICE LOCATIONS SHOULD BE MARKED WITH A "W" CUT INTO THE PROPOSED CURB AND PAINTED BLUE.
9. WATER VALVE LOCATIONS SHOULD BE MARKED WITH A "V" CUT INTO THE PROPOSED CURB AND PAINTED BLUE.
10. TRENCHES MUST BE INSPECTED BY BELMONT BEFORE IT IS ALLOWED TO BE FILLED.
11. CONCRETE THRUST BLOCKING IS ONLY NECESSARY WHERE CONNECTION IS MADE TO EXISTING WATER MAINS.
12. PIPE JOINTS FOR ALL SIZE PIPES SHALL BE "PUSH ON" OR MECHANICAL JOINT. AT PIPE BENDS, TEES AND OTHER LOCATIONS WHERE PIPE JOINT RESTRAINT IS REQUIRED, MECHANICALLY RESTRAINED JOINTS ARE REQUIRED.
13. ALL FIRE HYDRANTS MUST BE AMERICAN DARLING 4-1/2" MARK 73-5. FIRE HYDRANTS SHALL BE PAINTED CHROME YELLOW. BELMONT TAKES STAND OVER MAINTENANCE OF THE SYSTEM. IT IS SUGGESTED THAT THE FIRST INSPECTION BE SCHEDULED BEFORE STONE IS PLACED IN THE ROADWAY. THE PUBLIC WORKS DIVISION SHOULD BE CONTACTED AT (704) 825-0507 TO SCHEDULE INSPECTIONS.

DRAINAGE NOTES:

1. THE PROPOSED CONTOURS WITHIN PAVED AREAS ARE GRAPHICAL REPRESENTATIONS ONLY. THE CONTRACTOR IS RESPONSIBLE FOR GRADING UNIFORMLY BETWEEN SPOT ELEVATIONS.
2. CONTRACTOR TO GRADE ALL AREAS WITHIN PROJECT TO DRAIN STORM WATER. CARE SHALL BE TAKEN TO ENSURE THAT ALL AREAS WITHIN PARKING LOTS, ROADS, AND LANDSCAPED ISLANDS SHALL NOT HOLD WATER UPON PROJECT COMPLETION.
3. MIN. SLOPE ON ALL ASPHALT TO BE 1:5%.
4. MIN. SLOPE ON CURB AND GUTTER CARRYING STORM WATER TO BE 0.5%.
5. ALL PROPOSED STORMWATER DRAINAGE SYSTEMS TO BE MAINTAINED BY BELMONT SHALL BE INSPECTED. THE CITY OF BELMONT SHALL PERFORM AT LEAST TWO INSPECTIONS. ONE BEFORE THE ASPHALT IS PLACED AND THE OTHER BEFORE BELMONT TAKES OVER MAINTENANCE OF THE SYSTEM. IT IS SUGGESTED THAT THE FIRST INSPECTION BE SCHEDULED BEFORE STONE IS PLACED IN THE ROADWAY. THE PUBLIC WORKS DIVISION SHOULD BE CONTACTED AT (704) 825-0507 TO SCHEDULE INSPECTIONS.

STORM DRAINAGE & EROSION CONTROL NOTES:

1. ALL STORM DRAINAGE SYSTEMS FOR THIS PROJECT SHALL BE PUBLICLY MAINTAINED
2. ALL STORM DRAINAGE SYSTEM MATERIALS FOR THIS PROJECT SHALL BE REINFORCED CONCRETE PIPES WITH PRECAST CONCRETE DRAINAGE STRUCTURES
3. DEVELOPER SHALL CONSTRUCT A STORM WATER MANAGEMENT FACILITIES AS SHOWN ON PLAN. THE BASIN SHALL FUNCTION AS A STORM WATER DETENTION AND WATER QUALITY BASIN.
4. THE BASIN WILL BE DESIGNED AND CONSTRUCTED TO MEET OR EXCEED THE BELMONT WATERSHED ORDINANCE CHAPTER 153.
5. THE PROPOSED PROJECT SHALL COMPLY WITH THE BELMONT LAND DEVELOPMENT CODE CHAPTER 5.14.3 CATAMBA RIVER WS-IV-PA (PROTECTED AREA) DISTRICT DESIGNATION AND DEVELOPMENT REGULATIONS (CR-PA)
6. STORM WATER PIPES AND BMP POND WILL BE REQUIRED TO BE AS-BUILT AT PROJECT COMPLETION.

LANDSCAPING NOTES:

1. ALL SPECIFICATIONS FOR THE MEASUREMENTS, QUALITY, AND INSTALLATION OF TREES AND SHRUBS SHALL BE IN ACCORDANCE WITH THE "AMERICAN STANDARDS FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERMEN.
2. THE LANDSCAPE ARCHITECT AND/OR LANDSCAPE DESIGNER RESERVES THE RIGHT TO SELECT PLANT MATERIALS IN NURSERY.
3. ALL PLANTING OPERATIONS SHALL BE UNDER THE SUPERVISION OF AN EXPERIENCED PLANTSMAN.
4. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE FULL YEAR TO BE IN A HEALTHY GROWING CONDITION. PLANT MATERIALS WHICH DO NOT FULFILL THIS GUARANTEE SHALL BE REPLACED AT NO COST TO THE OWNER. REPLACEMENT SHALL BE GUARANTEED THROUGHOUT THE ORIGINAL GUARANTEE PERIOD. PLANTS THAT DIE WITHIN 30-60 DAYS SHALL BE REPLACED IMMEDIATELY.
5. ALL PLANT MATERIALS, TOPSOIL, PINEBARK MULCH, PINE NEEDLES, FERTILIZERS, ETC., SHALL BE SUBJECT TO OWNERS APPROVAL. REJECTED MATERIALS SHALL BE REMOVED FROM SITE WITHOUT DELAY.
6. BEDS CONTAINING BED AREAS SHALL BE TILLED TO A DEPTH OF 12" AND THE SOIL CONDITIONED BY CLEAN WEED ROTTED MANURE. EXISTING SOIL IS CONSIDERED AS UNDESIRABLE. IF DESIRED, IT SHALL BE REPLACED WITH APPROVED TOPSOIL. BEDS SHALL BE TREATED TO ELIMINATE WEEDS AND WEED SEEDS.
7. QUANTITIES SHOWN ARE FOR THE CONVENIENCE OF CONTRACTOR IN ESTIMATING ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PLANTS SHOWN ON PLAN, AND SHALL CHECK QUANTITIES ON PLAN PRIOR TO BIDDING.
8. PLANTINGS AT ENTRANCE/EXITS MUST BE LOCATED AND/OR INSTALLED IN A MANNER SO AS NOT TO RESTRICT SIGHT DISTANCE.
9. THE DEVELOPER SHALL PLANT TREES ALONG ALL STREET FRONTS AT A DISTANCE OF 40' ON CENTER ACCORDING TO CHAPTER 11.2 (D) OF THE BELMONT LAND DEVELOPMENT CODE.
10. CHAPTER 11.2 (E) OF THE BELMONT LAND DEVELOPMENT CODE REQUIRES 1 CANOPY TREE IN THE FRONT YARD AND 1 CANOPY TREE IN THE REAR YARD OF ANY LOTS 5,001-10,000 S.F.
11. A STREET LIGHTING PLAN WILL BE REQUIRED (NOT SHOWN ON THIS PLAN)
12. STREET TREES SHALL BE INSTALLED A MIN. DISTANCE OF 15 FT. FROM PROPOSED LIGHT FIXTURES, 5 FT. FROM FIRE HYDRANTS, 5 FT. FROM WATER METERS, 5 FT. FROM ELECTRICAL TRANSFORMERS, & 2 FT. FROM DRIVEWAYS.
13. STREET TREE SELECTION MUST BE COMPRISED OF A MIN. OF TWO APPROVED SPECIES TO PROTECT AGAINST PROBLEMS ASSOCIATED WITH MONOCULTURES.
14. RED MAPLE WILL NOT BE ALLOWED AS A STREET TREE SPECIES SELECTION IN THIS SUBDIVISION.
15. WITHIN THE BOUNDARY OF THIS PROJECT, NO TREE WAS FOUND TO BE 36 INCH OR LARGER.
16. UPON FINAL DESIGN, STREET TREE SPACING SHALL BE ADJUSTED SO AS NOT TO CONFLICT WITH RESIDENTIAL DRIVEWAYS.
17. STREET TREES SHALL NOT BE INSTALLED WITHIN AN UTILITY EASEMENT OR OVER PUBLIC UTILITY LINES.
18. PUBLIC UTILITY EASEMENTS SHALL NOT BE ENCUMBERED BY FENCES, LARGE SHRUBBERY, ACCESSORY BUILDINGS, POOLS, PATOS, STRUCTURE OVERHANGS, OR YARD STRUCTURES.

CITY OF BELMONT PLANTING STANDARDS:

1. ALL NEW PLANT MATERIAL SHALL BE OF GOOD QUALITY, INSTALLED IN A SOUND, WORKMAN-LIKE MANNER AND MEET THE STANDARDS SET FORTH IN THE AMERICAN STANDARD FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSEYMEN. CONTRACTOR SHALL WARRANT ALL NEW PLANT MATERIAL FOR 2 YEARS FROM DATE OF INSTALLATION.
2. ALL TREES SHALL BE PROPERLY GUIED OR STAKED AND MULCHED (3"-4" LAYER) IN ACCORDANCE WITH ACCEPTED PRACTICES IN THE LANDSCAPE INDUSTRY, TO PREVENT WINDS FROM LOOSENING THE ROOTS.
3. WHERE LARGE MATURING TREES ARE REQUIRED AND OVERHEAD UTILITY LINES EXIST, SMALL MATURING TREES PLANTED 1 PER 30 LINEAL FEET SHALL BE SUBSTITUTED WITH THE APPROVAL OF THE PLANNING DIRECTOR.
4. THE OWNER OF THE PROPERTY IS RESPONSIBLE FOR THE CONTINUED PROPER MAINTENANCE OF ALL LANDSCAPING MATERIALS AND SHALL KEEP THEM IN A PROPER, NEAT AND ORDERLY APPEARANCE, FREE FROM REFUSE AND DEBRIS. ALL DEAD OR UNHEALTHY PLANT MATERIAL SHALL BE REPLACED WITHIN 180 DAYS TO MAINTAIN THE QUALITY OF THE LANDSCAPING. IN NO INSTANCE WILL THE CITY OF BELMONT BE RESPONSIBLE FOR THE MAINTENANCE OF ANY VEGETATION UNLESS SUCH VEGETATION IS LOCATED WITHIN THE PUBLIC RIGHT OF WAY OF A CITY MAINTAINED STREET OR IS LOCATED ON PROPERTY OWNED BY THE CITY OF BELMONT.
5. WHERE NEW LANDSCAPE MATERIALS ARE TO BE INSTALLED, THE TYPE OF MATERIAL USED SHALL BE COMPLEMENTARY TO PLANT MATERIALS EXISTING ON THE PROPERTY AND ON ADJOINING PROPERTIES. USE OF NATIVE PLANT MATERIAL IS ENCOURAGED.
6. AT INSTALLATION, LARGE MATURING TREES SHALL NOT BE LESS THAN 10' IN HEIGHT WITH A MINIMUM 2-1/2" CALIPER. SMALL MATURING TREES SHALL BE A MINIMUM OF 1-1/4" CALIPER AND HAVE A MINIMUM HEIGHT OF 6'. INSTALLATION AND CONSTRUCTION PRACTICES SHALL BE UTILIZED WHICH PRESERVE AND REPLACE EXISTING TOPSOIL OR AMEND THE SOIL TO REDUCE COMPACTION.
7. AT INSTALLATION, EVERGREEN TREES SHALL NOT BE LESS THAN 8' IN HEIGHT WITH A MINIMUM 2" CALIPER.
8. AT INSTALLATION, SMALL SHRUBS SHALL BE A MINIMUM 18" IN HEIGHT AND MEDIUM OR LARGE SHRUBS A MINIMUM 30". INSTALLATION AND CONSTRUCTION PRACTICES SHALL BE UTILIZED WHICH PRESERVE EXISTING TOPSOIL OR AMEND THE SOIL TO REDUCE COMPACTION.
9. NO PLANTS SHALL BE PLANTED WITHIN THE SIGHT DISTANCE TRIANGLE AT AN INTERSECTION, OR DRIVEWAY ACCESS POINTS UNLESS AN UNOBSTRUCTED VIEW BETWEEN 30" AND 72" IN HEIGHT IS MAINTAINED.

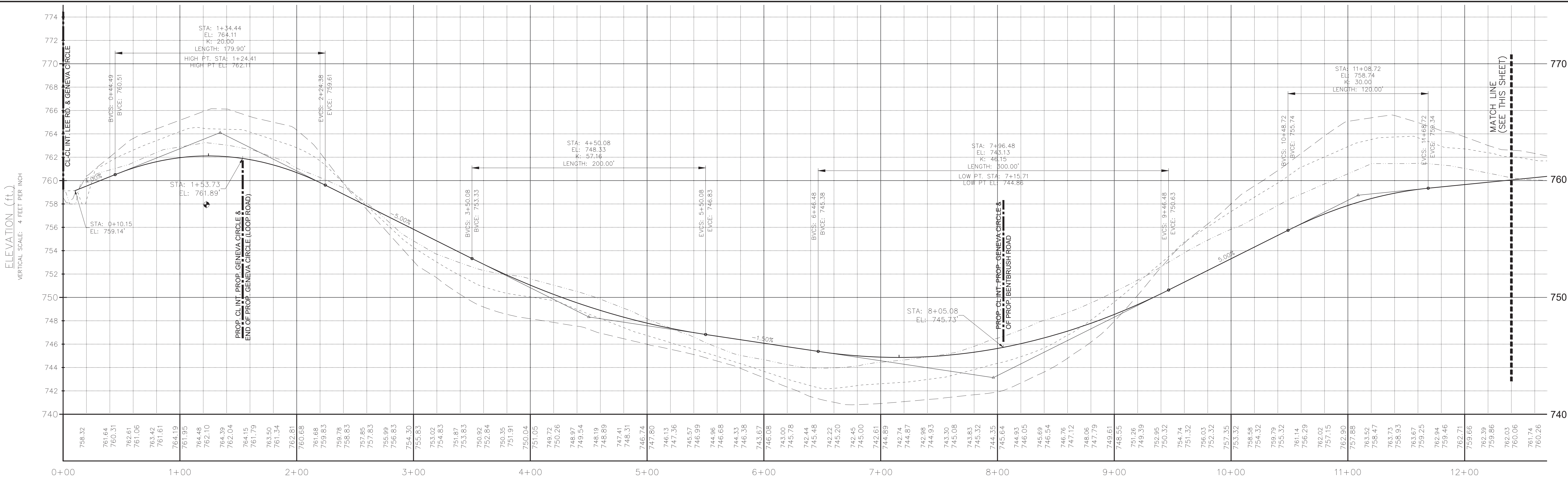
EXISTING VEGETATION MAY BE APPLIED TOWARD THE REQUIREMENTS OF THIS ORDINANCE.

TREE PROTECTION NOTES:

1. TREE PROTECTION BARRICADES MUST MEET OR EXCEED TREE ORDINANCE GUIDELINE STANDARDS. TREE PROTECTION SHALL BE REQUIRED FOR ALL TREES WITHIN A 10' HIGH HEAVY DUTY BARRIER FENCING. SIGNAGE WITH VISIBILITY ORANGE COLOR ATTACHED 2X4 POSTS, OR ATTACHED TO STEEL POSTS USED FOR SILT FENCE INSTALLATIONS.
2. WEATHERPROOF SIGNAGE SHALL BE ATTACHED TO THE TREE PROTECTION BARRICADES EVERY 30 FEET AND POSTED AT THE CONSTRUCTION OFFICE OR ATTACHED TO THE ON-SITE PERMIT BOARD. THE SIGN SHALL STATE IN BOTH ENGLISH AND SPANISH: TREE PROTECTION AREA. DO NOT ENTER. SIGNAGE SHALL STATE THAT ANY ENCRoACHMENT INTO A DESIGNATED TREE PROTECTION ZONE WILL RESULT IN A CIVIL PENALTY ISSUED BY THE CITY OF BELMONT OF UP TO \$1,000 PER INCIDENT. SIGNAGE SHALL REFERENCE CHAPTER 11 AND INCLUDE THE CITY SEAL.
3. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION/CLEARING/GRADING/CONSTRUCTION, AND NOT REMOVED UNTIL AFTER FINAL INSPECTION
4. THE AREA WITHIN THE PROTECTIVE BARRICADE SHALL REMAIN FREE OF ALL BUILDING MATERIALS, STOCKPILED SOIL, OR OTHER CONSTRUCTION DEBRIS. CONSTRUCTION TRUCK STORAGE OF VEHICLES AND MATERIALS, AND GRADING IS PROHIBITED WITHIN DESIGNATED TREE PROTECTION ZONES.
5. VIOLATIONS OF THE TREE PROTECTION REQUIREMENTS ARE SUBJECT TO FINES, AND /OR IMMEDIATE CORRECTIVE ACTION/MITIGATION.
6. TREESAVE AREAS MUST BE IDENTIFIED DURING THE PRE-CONSTRUCTION MEETING, AND COMPLIANCE WILL BE INSPECTED BY CITY STAFF PRIOR TO APPROVING CERTIFICATE OF OCCUPANCY.
7. TREE PROTECTION FENCING TO BE PLACED AT THE DRIPLINE PLUS ONE (1.0) FEET, PRIOR TO ANY DEMOLITION OR GRADING ACTIVITY.

TREE PLANTING NOTES:

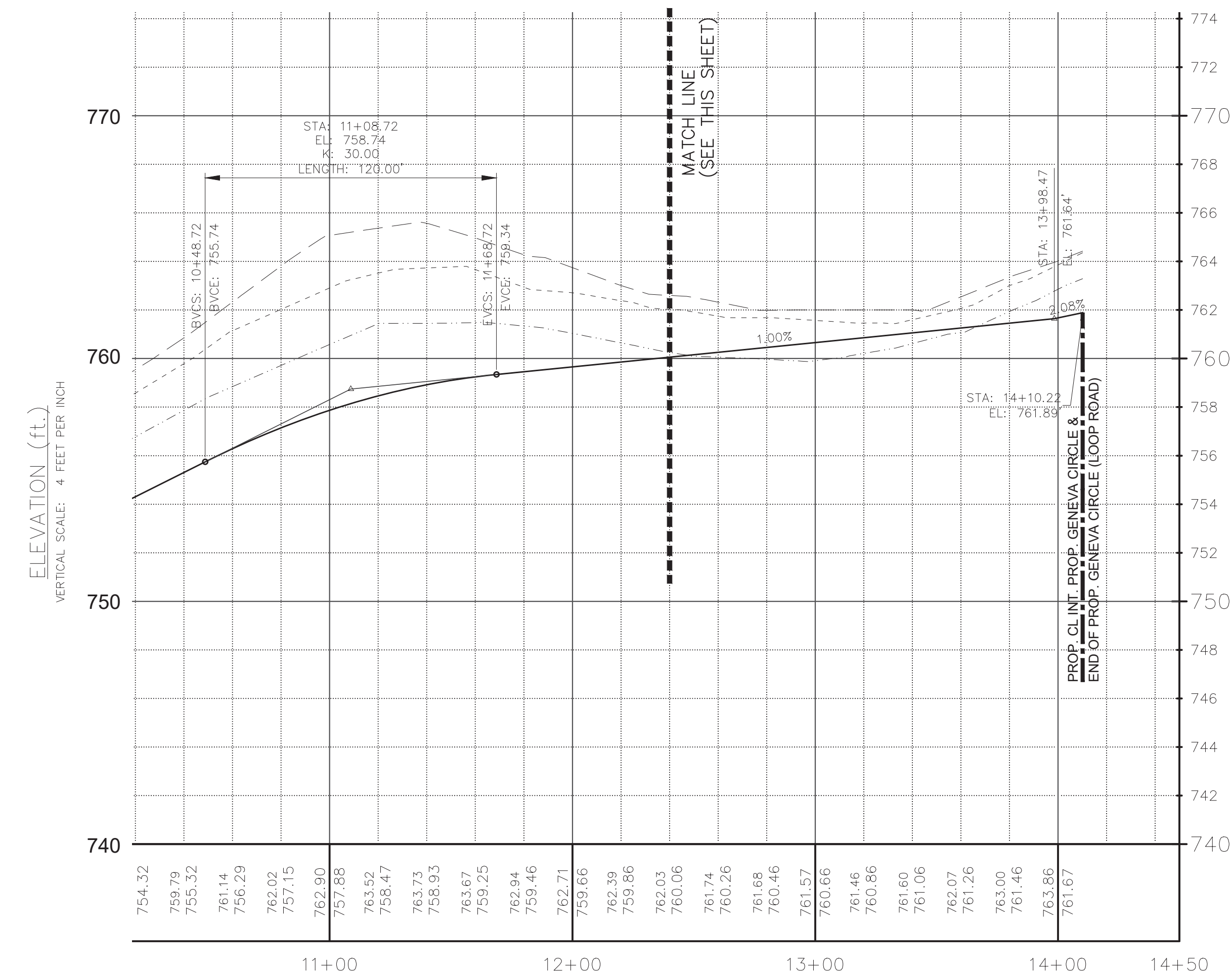
1. MINIMUM TREE SIZE AT PLANTING IS 2"-2 1/2" CALIPER (FOR SINGLE STEM TREES). ALL MULTI-STEM PLANTS MUST BE TREE FORM, MAXIMUM 3 TO 5 TRUNKS AND MINIMUM 10 FEET TALL.
2. ALL STRAPPING AND TOP 2/3 OF WIRE BASKET MUST BE CUT AWAY AND REMOVED FROM ROOT BALL PRIOR TO BACKFILLING PLANTING PIT. REMOVE TOP 1/3 OF BURLAP FROM ROOT BALL
3. FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL SUB-BASE AND CONSTRUCTION DEBRIS; REMOVE COMPACTED SOIL AND ADD 24" NEW TOPSOIL - OR - COMPACT AND AMEND THE TOP 24" OF EXISTING SOIL TO MEET TOPSOIL/PLANTING MIX FOR TREES (WITHIN ENTIRE MINIMUM AREA OF 200 SQUARE FEET PER TREE).
4. LARGE MATURING TREES MUST BE A MINIMUM 25 TO 30 FEET FROM OVERHEAD DISTRIBUTION OR TRANSMISSION LINES. IF TREES CONFLICT WITH POWER LINES OR SIGNS, CALL URBAN FORESTER TO RESOLVE BEFORE PLANTING.
5. PLEASE CALL URBAN FORESTER FOR AN INSPECTION OF TREE PROTECTION AND/OR TREE PLANTING AREAS, 7 TO 10 DAYS BEFORE THE TEMPORARY OR FINAL CERTIFICATE OF OCCUP



GENEVA CIRCLE - STATION (ft.)

HORIZONTAL SCALE: 40 FEET PER INCH

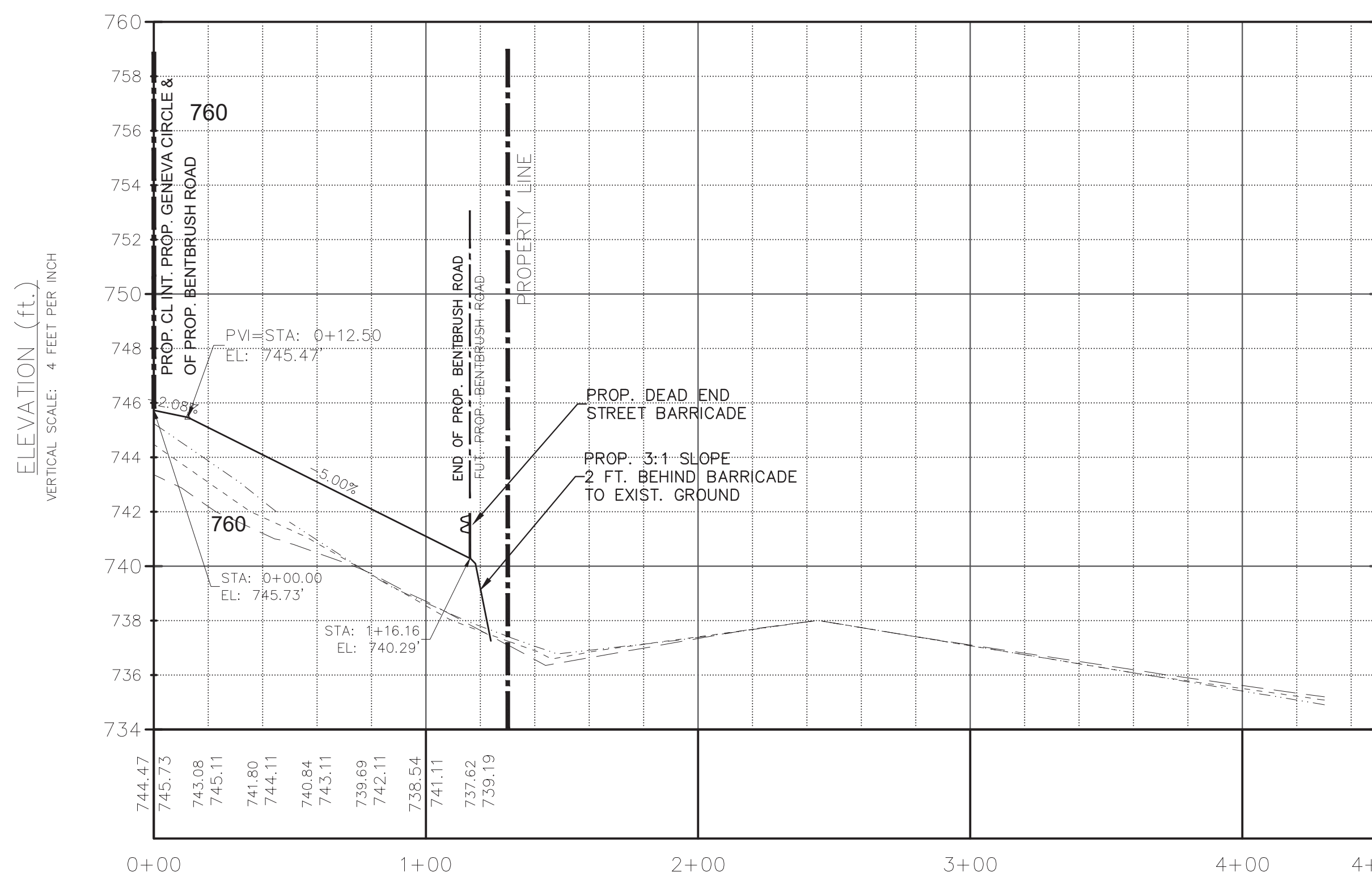
EXISTING GROUND AT CL
EXISTING GROUND 35' LEFT OF CL
EXISTING GROUND 35' RIGHT OF CL
PROPOSED GROUND AT CL



GENEVA CIRCLE - STATION (ft.)

HORIZONTAL SCALE: 40 FEET PER INCH

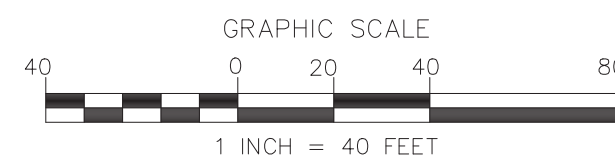
EXISTING GROUND AT CL
EXISTING GROUND 35' LEFT OF CL
EXISTING GROUND 35' RIGHT OF CL
PROPOSED GROUND AT CL



BENTBRUSH ROAD - STATION (ft.)

HORIZONTAL SCALE: 40 FEET PER INCH

EXISTING GROUND AT CL
EXISTING GROUND 35' LEFT OF CL
EXISTING GROUND 35' RIGHT OF CL
PROPOSED GROUND AT CL



NO.	BY	DATE	REVISION
1	RER	3/15/10	PER CITY OF BELMONT COMMENTS
2	RER	4/19/21	REVISED DUE TO ZONING
3	RER	5/17/21	PER CITY REVIEW
4	ABC	7/12/21	PER CITY 2ND REVIEW



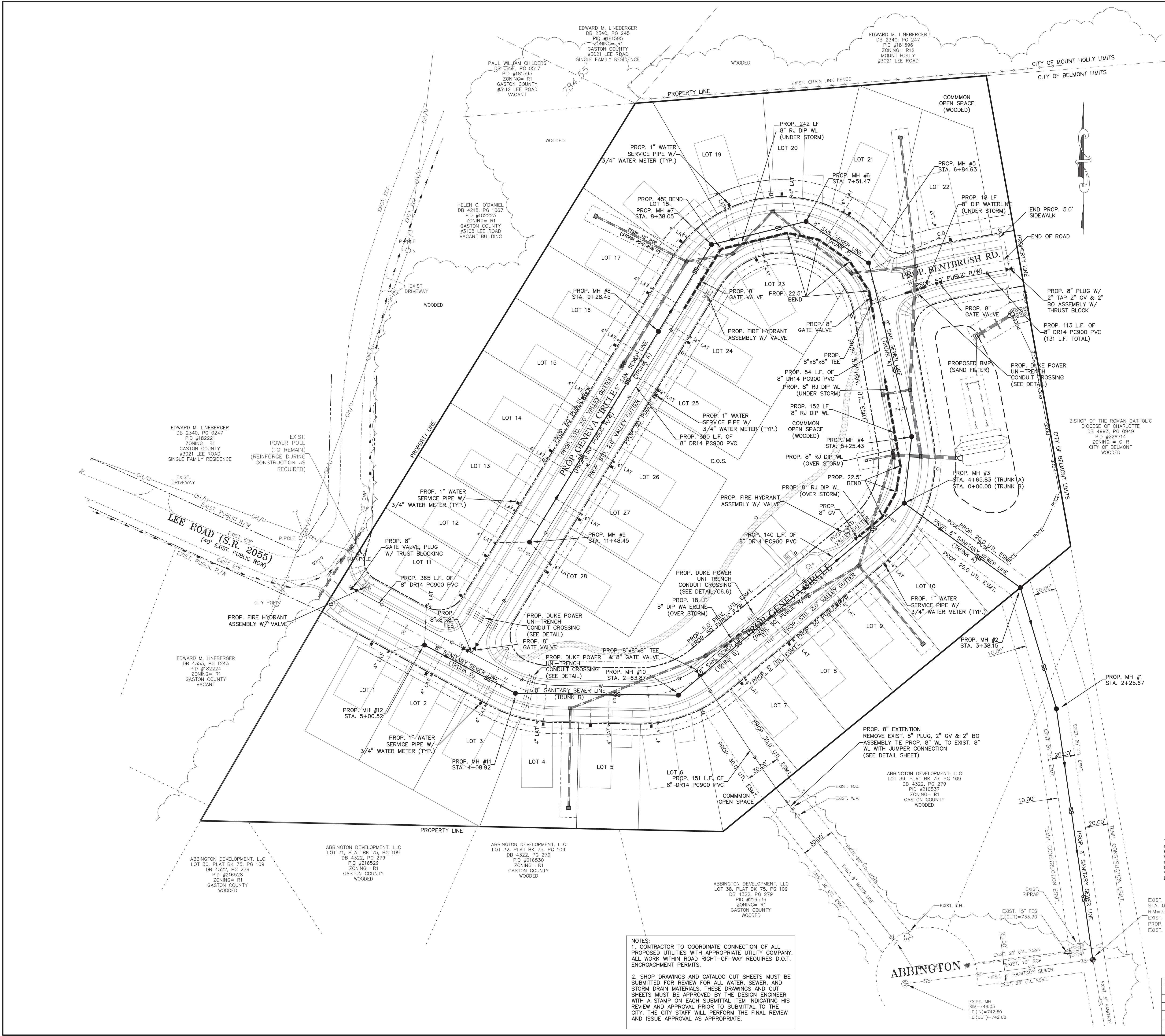
Know what's below.
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Digitally signed by
Anthony B. Cowan, P.E.
Date: 2021.07.13
09:58:52-04'00'

Project: DIXON VILLAGE BELMONT, NORTH CAROLINA	
Title: ROAD PROFILES	
File #: 20162-PB.dwg	Date: 11/13/2020
Project Egr: ABC	Design By: ABC
Drawn By: RER	Scale: 1" = 40'
8720 RED OAK BOULEVARD, SUITE 420 CHARLOTTE, N.C. 28217 PHONE (704) 527-3440 FAX (704) 527-8335	
C2.0	



4/18/2021

dipra
Ductile Iron Pipe Research Association

Thrust Restraint Calculator

Thrust Restraint Design for Ductile Iron Pipe

Project Name
DIXON VILLA Save Load

Horizontal Bend
Unit Frictional Force 284 lbs/ft
Unit Bearing Resistance 695 lbs/ft

Project Data
Type of Fitting Horizontal Bend
Angle of Bend ? 22.5°
Diameter of Bend ? 8 in.

Required Restraint Length for each side of the bend:
Bare 10.6 ft
Polywrapped 12.3 ft

Laying Condition Type 5
Soil Designation Clay 1
Depth of Cover 5 ft
Design Pressure ? 350 psi
Safety Factor ? 1.5

4/18/2021

dipra
Ductile Iron Pipe Research Association

Thrust Restraint Calculator

Thrust Restraint Design for Ductile Iron Pipe

Project Name
DIXON VILLA Save Load

Horizontal Bend
Unit Frictional Force 284 lbs/ft
Unit Bearing Resistance 695 lbs/ft

Project Data
Type of Fitting Horizontal Bend
Angle of Bend ? 45°
Diameter of Bend ? 8 in.

Required Restraint Length for each side of the bend:
Bare 22.1 ft
Polywrapped 25.6 ft

Laying Condition Type 5
Soil Designation Clay 1
Depth of Cover 5 ft
Design Pressure ? 350 psi
Safety Factor ? 1.5

LEGEND

SS

EXISTING SANITARY SEWER LINE

W

EXISTING WATER LINE

EXISTING STORM DRAINAGE PIPE

▣

EXISTING CATCH BASIN

⊙

EXISTING SAN. SEWER MH

⊙

EXISTING UTILITY POLE

⊙

EXISTING WATER VALVE

▣

PROPOSED CATCH BASIN

SS

PROPOSED SANITARY SEWER LINE

W

PROPOSED WATER LINE

4" LAT.

PROPOSED 4" SEWER LATERAL

PROPOSED STORM DRAINAGE PIPE

⊙

PROPOSED MANHOLE

⊙

PROPOSED FIRE HYDRANT

⊙

PROPOSED WATER VALVE

PROPOSED 3/4" WATER METER/SERVICE

PROPOSED SS LATERAL AND CLEANOUT

⊙

BENCHMARK

811

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Digitally signed by
Anthony B. Cowan, P.E.
Date: 2021.08.04
12:19:27-04'00'

GRAPHIC SCALE
40 0 20 40 80
1 INCH = 40 FEET

Project:
DIXON VILLAGE
BELMONT, NORTH CAROLINA

Title:
UTILITY PLAN

File #: 20162-PB.dwg Date: 11/13/2020 Project Egr: ABC

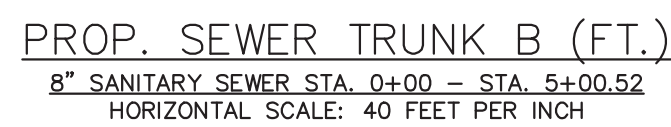
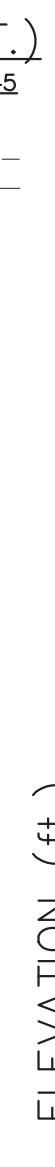
Drawn By: RER Scale: 1" = 40'

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

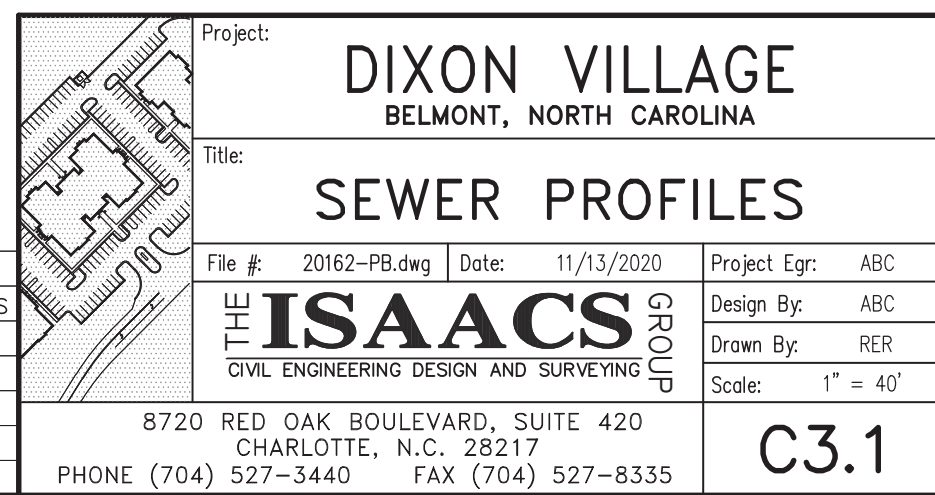
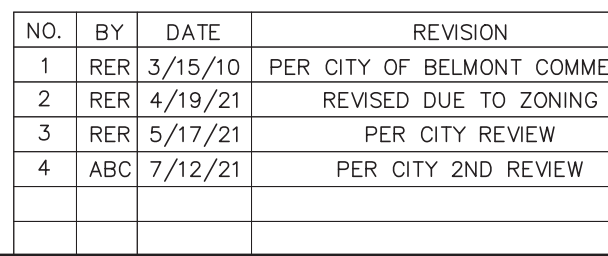
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NO.	BY	DATE	REVISION
1	REB	3/15/10	PER CITY OF BELMONT COMMENTS
2	MAO	9/23/10	SHIFT LOTS 26,27,28 PER TRANSFORMERS
3	REB	4/19/21	REVISED DUE TO ZONING
4	REB	5/17/21	PER CITY REVIEW
5	ABC	7/12/21	PER CITY 2ND REVIEW
6	OTH	8/03/21	UPDATED LOTS TO GET 55 FT.

NOTES:
1. CONTRACTOR TO COORDINATE CONNECTION OF ALL PROPOSED UTILITIES WITH APPROPRIATE UTILITY COMPANY. ALL WORK WITHIN ROAD RIGHT-OF-WAY REQUIRES D.O.T. ENCROACHMENT PERMITS.
2. SHOP DRAWINGS AND CATALOG CUT SHEETS MUST BE SUBMITTED FOR REVIEW FOR ALL WATER, SEWER, AND STORM DRAIN MATERIALS. THESE DRAWINGS AND CUT SHEETS MUST BE APPROVED BY THE DESIGN ENGINEER WITH A STAMP ON EACH SUBMITTAL ITEM INDICATING HIS REVIEW AND APPROVAL PRIOR TO SUBMITTAL TO THE CITY. THE CITY STAFF WILL PERFORM THE FINAL REVIEW AND ISSUE APPROVAL AS APPROPRIATE.



CONTRACTOR TO USE HARCO PVC SDR35
ADAPTORS OR APPROVED EQUAL TO JOIN
PVC TO DIP WHERE PIPE HAS BEEN CUT.



TREE PROTECTION NOTES:

1. TREE PROTECTION BARRICADES MUST MEET OR EXCEED TREE ORDINANCE GUIDELINE STANDARDS. TREE PROTECTION SHALL CONSIST OF MIN. 4 FT. HIGH HEAVY DUTY WARNING BARRIER FENCING IN A HIGH VISIBILITY ORANGE COLOR ATTACHED 2X4 POSTS, OR, ATTACHED TO STEEL POSTS USED FOR SILT FENCE INSTALLATIONS.
2. WEATHERPROOF SIGNAGE SHALL BE ATTACHED TO THE TREE PROTECTION BARRICADES EVERY 30 FEET AND POSTED AT THE CONSTRUCTION OFFICE OR ATTACHED TO THE ON-SITE PERMIT BOARD. THE SIGN SHALL STATE IN BOTH ENGLISH AND SPANISH, "TREE PROTECTION AREA- DO NOT ENTER." SIGNAGE SHALL STATE THAT ANY ENCROACHMENT INTO A DESIGNATED TREE PROTECTION ZONE WILL RESULT IN A CIVIL PENALTY ISSUED BY THE CITY OF BELMONT OF UP TO \$1,000 PER INCIDENT. SIGNAGE SHALL REFERENCE CHAPTER 11 AND INCLUDE THE CITY SEAL.
3. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION/CLEARING/GRADING/CONSTRUCTION, AND NOT REMOVED UNTIL AFTER FINAL INSPECTION.
4. THE AREA WITHIN THE PROTECTIVE BARRICADE SHALL REMAIN FREE OF ALL BUILDING MATERIALS, STOCKPILED SOIL, OR OTHER CONSTRUCTION DEBRIS. CONSTRUCTION TRAFFIC, STORAGE OF VEHICLES AND MATERIALS, AND GRADING IS PROHIBITED WITHIN DESIGNATED TREE PROTECTION ZONES.
5. VIOLATIONS OF THE TREE PROTECTION REQUIREMENTS ARE SUBJECT TO FINES, AND /OR IMMEDIATE CORRECTIVE ACTION/MITIGATION.
6. TREESAVE AREAS MUST BE IDENTIFIED DURING THE PRE-CONSTRUCTION MEETING, AND COMPLIANCE WILL BE INSPECTED BY CITY STAFF PRIOR TO APPROVING CERTIFICATE OF OCCUPANCY.
7. TREE PROTECTION FENCING TO BE PLACED AT THE DRIPLINE PLUS ONE (1.0) FEET, PRIOR TO ANY DEMOLITION OR GRADING ACTIVITY.

EDWARD M. LINEBERGER
DB 2340, PG 0247
PID #182221
ZONING= R1
GASTON COUNTY
#3021 LEE ROAD
SINGLE FAMILY RESIDENCE

EDWARD M. LINEBERGER
DB 4353, PG 1243
PID #182224
ZONING= R1
GASTON COUNTY
VACANT

HELEN C. O'DANIEL
DB 4218, PG 1067
PID #182223
ZONING= R1
GASTON COUNTY
#3108 LEE ROAD
VACANT BUILDING

ABBINGTON DEVELOPMENT, LLC
LOT 39, PLAT BK 75, PG 109
DB 4322, PG 279
PID #216537
ZONING= R1
GASTON COUNTY
WOODED

- LEGEND
- ELEV--- EXISTING CONTOUR
 - ELEV--- PROPOSED CONTOUR
 - ===== EXISTING STORM PIPE
 - ===== PROPOSED STORM PIPE
 - PERMANENT 20' CHANNEL EASEMENT
 - EXISTING TOP OF CREEK BANK
 - PROPOSED TREE SAVE AREA (APPROXIMATE)
 - ELEV PROP. SPOT ELEVATION
 - TYPE 'A' SWALE (TYP.)
 - PROP. PERMANENT MATTING FOR CHANNEL STABILIZATION (NAG C350 OR APPROVED EQUIVALENT)
 - W---W--- EXIST. WATER MAIN

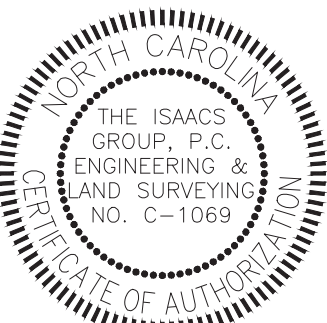
BMP PARCEL NOTE:

THE PARCEL FOR THE BMP/SAND FILTER MUST BE LEGALLY ENCUMBERED SO THAT THE CITY CAN ASSUME RESPONSIBILITY FOR MAINTENANCE OF THE WATER QUALITY FACILITY. SHOULD THE OWNER/POA ABANDON THE SITE, THE DEVELOPER MUST PROVIDE A SEPARATE DEED FOR RECORDATION IN ACCORDANCE WITH 153.47(D) OF THE WATERSHED ORDINANCE.



Know what's below.
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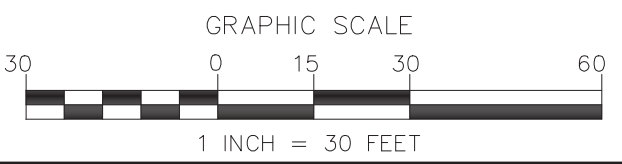
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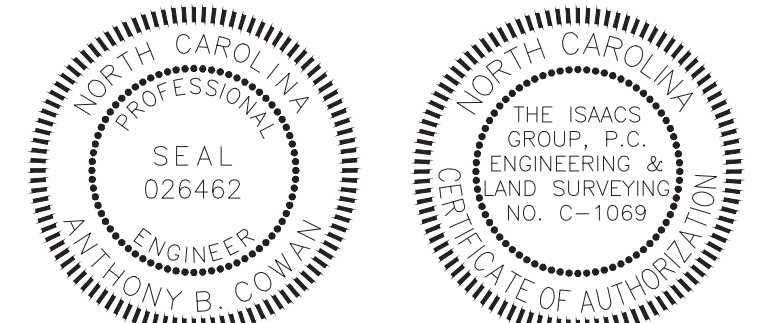
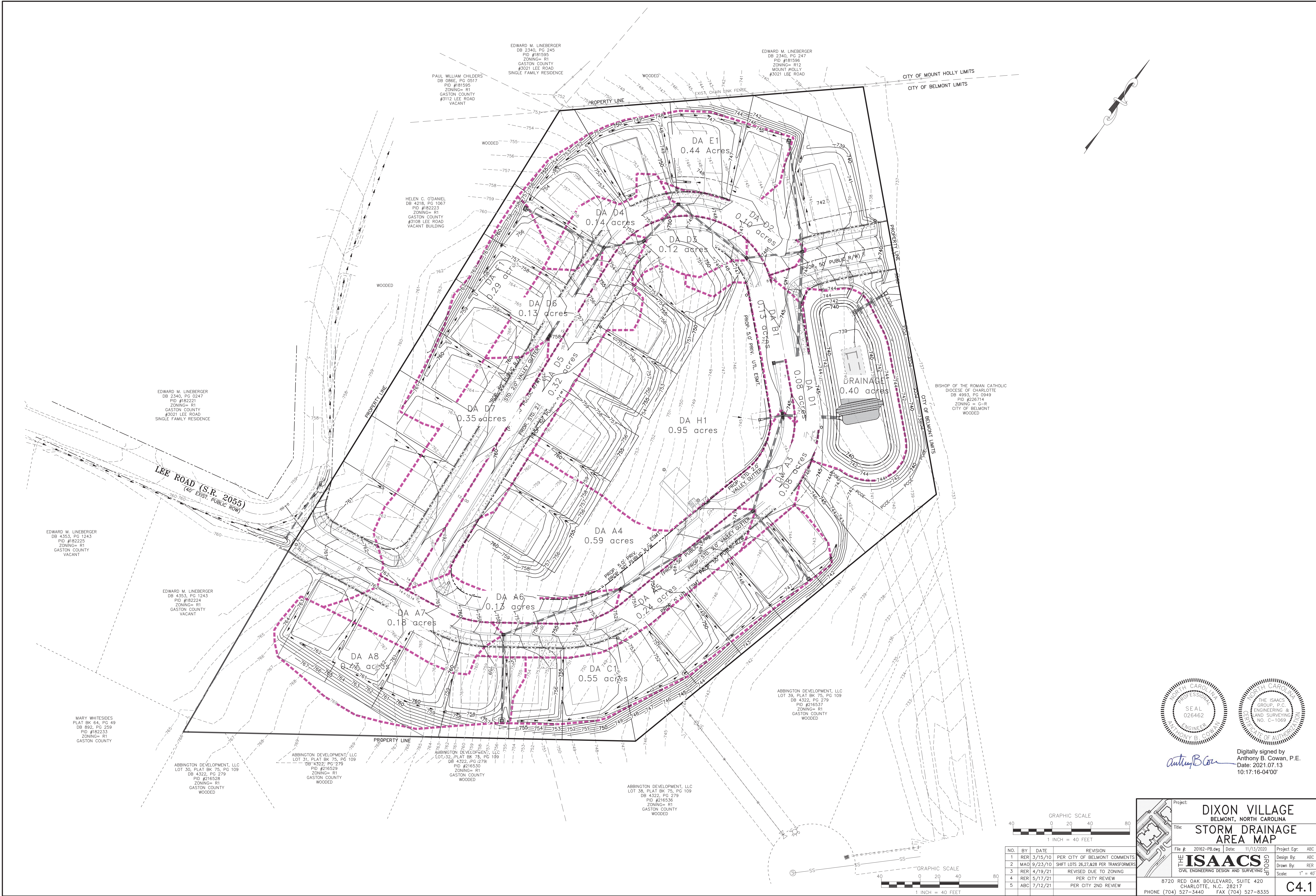


Digitally signed by
Anthony B. Cowan, P.E.
Date: 2021.08.04
12:19:12-04'00'

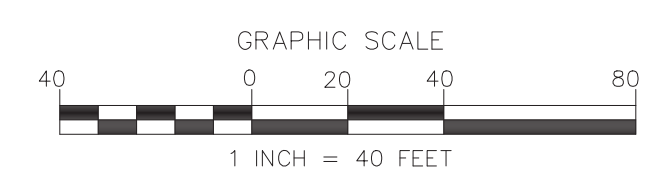
	Project:	DIXON VILLAGE BELMONT, NORTH CAROLINA		
	Title:	GRADING PLAN		
	File #:	20162-PB.dwg	Date:	11/13/2020
	Project Egr:	ABC	Design By:	ABC
	Drawn By:	REB	Scale:	1" = 30'
	8720 RED OAK BOULEVARD, SUITE 420 CHARLOTTE, N.C. 28217			
	PHONE (704) 527-3440 FAX (704) 527-8335			
	C4.0			

NO.	BY	DATE	REVISION
1	REB	3/15/10	PER CITY OF BELMONT COMMENTS
2	MAO	9/23/10	SHIFT LOTS 26,27,28 PER TRANSFORMERS
3	REB	4/19/21	REVISED DUE TO ZONING
4	REB	5/17/21	PER CITY REVIEW
5	ABC	7/12/21	PER CITY AND REVIEW





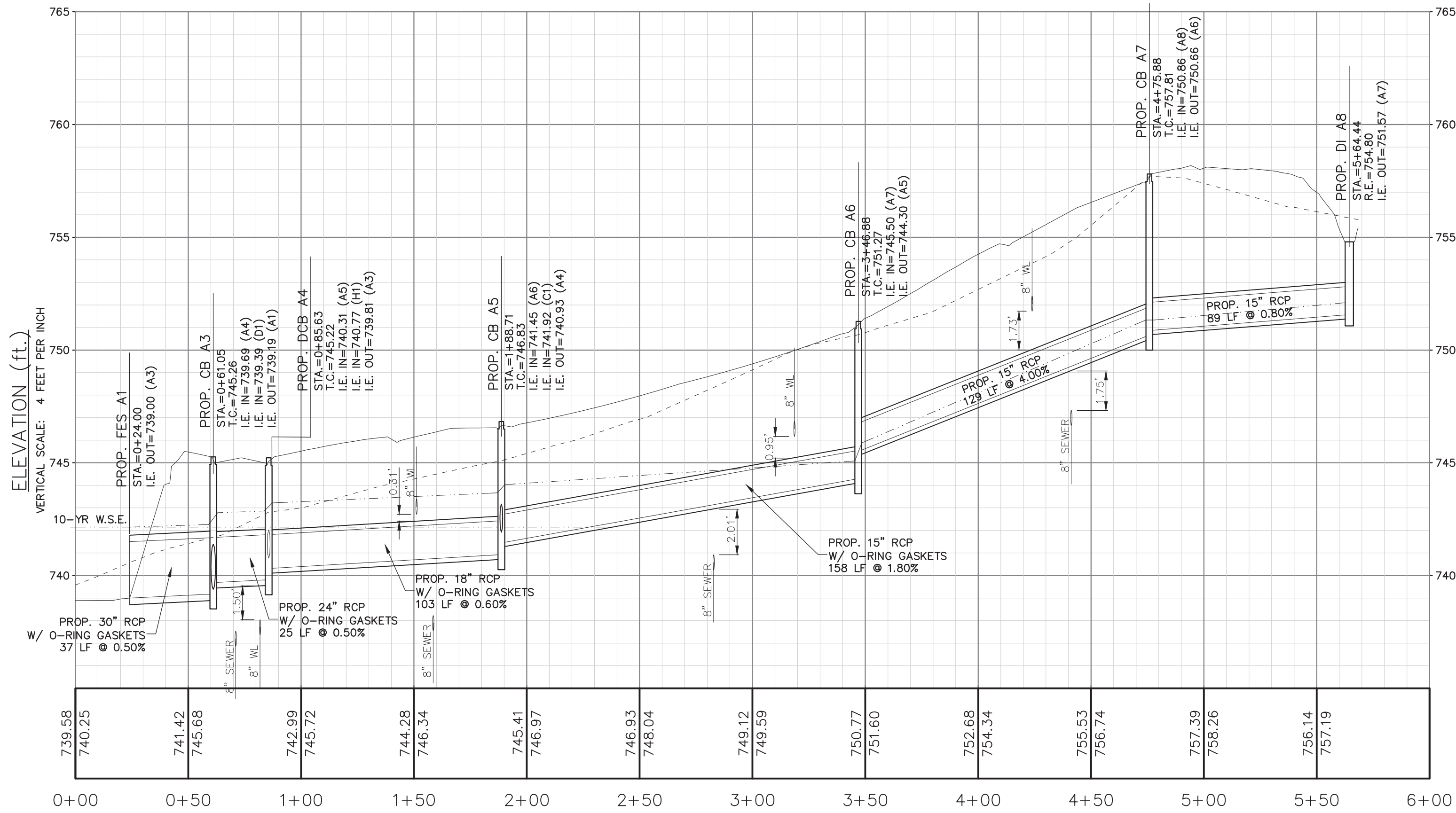
Digitally signed by
Anthony B. Cowan, P.E.
Date: 2021.07.13
10:17:16-04'00'



NO.	BY	DATE	REVISION
1	NER	3/15/10	PER CITY OF BELMONT COMMENTS
2	MAO	9/23/10	SHIFT LOTS 26.27, 28 PER TRANSFORMERS
3	NER	4/19/21	REVISED DUE TO ZONING
4	NER	5/17/21	PER CITY REVIEW
5	ABC	7/12/21	PER CITY 2ND REVIEW

Project: DIXON VILLAGE	
Title: STORM DRAINAGE AREA MAP	
File #: 20162-PB.dwg	Date: 11/13/2020
Project Egr: ABC	Design By: ABC
Drawn By: NER	Scale: 1" = 40'
8720 RED OAK BOULEVARD, SUITE 420 CHARLOTTE, N.C. 28217 PHONE (704) 527-3440 FAX (704) 527-8335	
C4.1	

GENEVA CIRCLE
(RD. STA. 6+60 - 2+60)

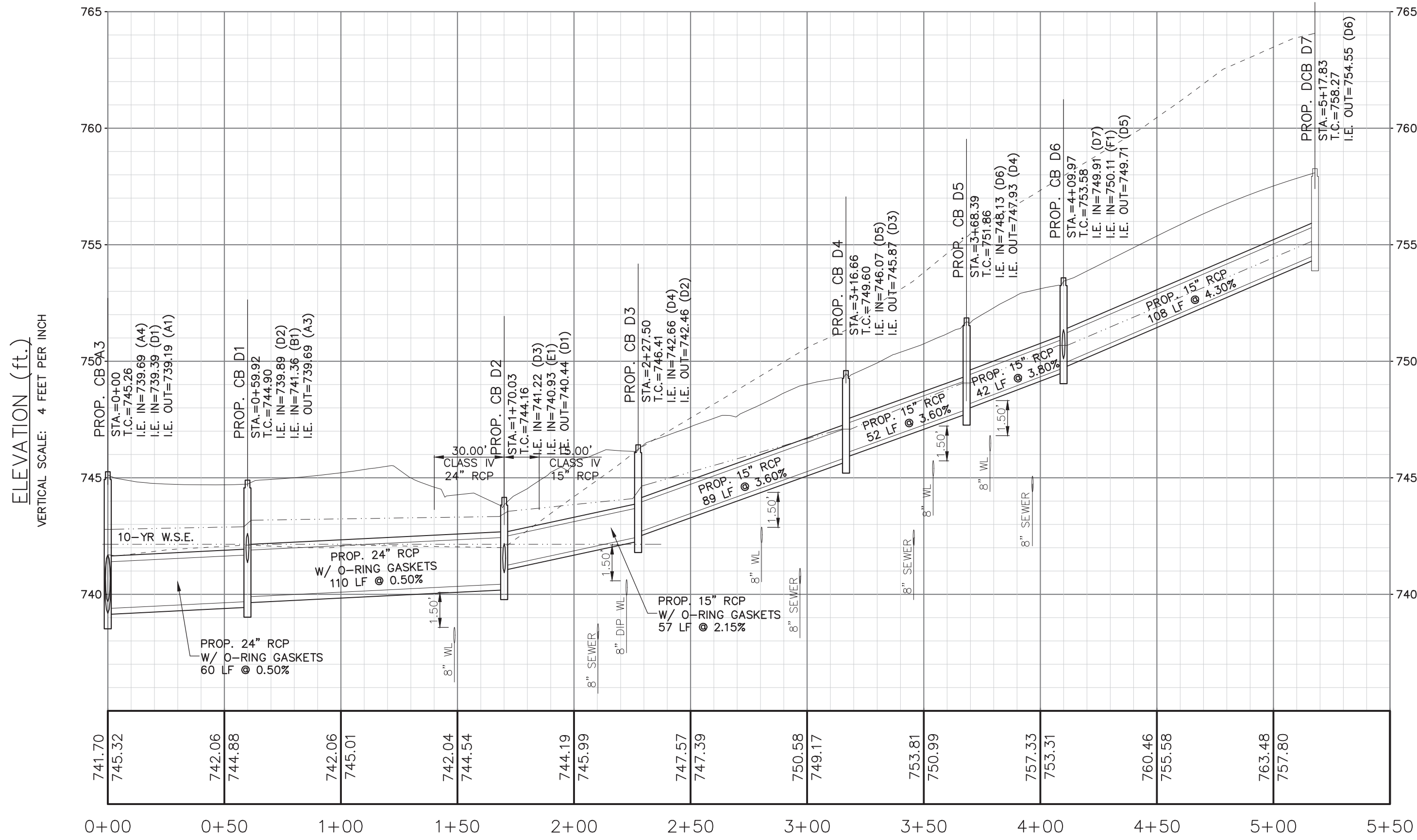


STORM PIPE RUN A (ft.)

HORIZONTAL SCALE: 40 FEET PER INCH

EXISTING GROUND
PROPOSED GROUND
HYDRAULIC GRADELINE

GENEVA CIRCLE
(RD. STA. 6+60 - 11+25)

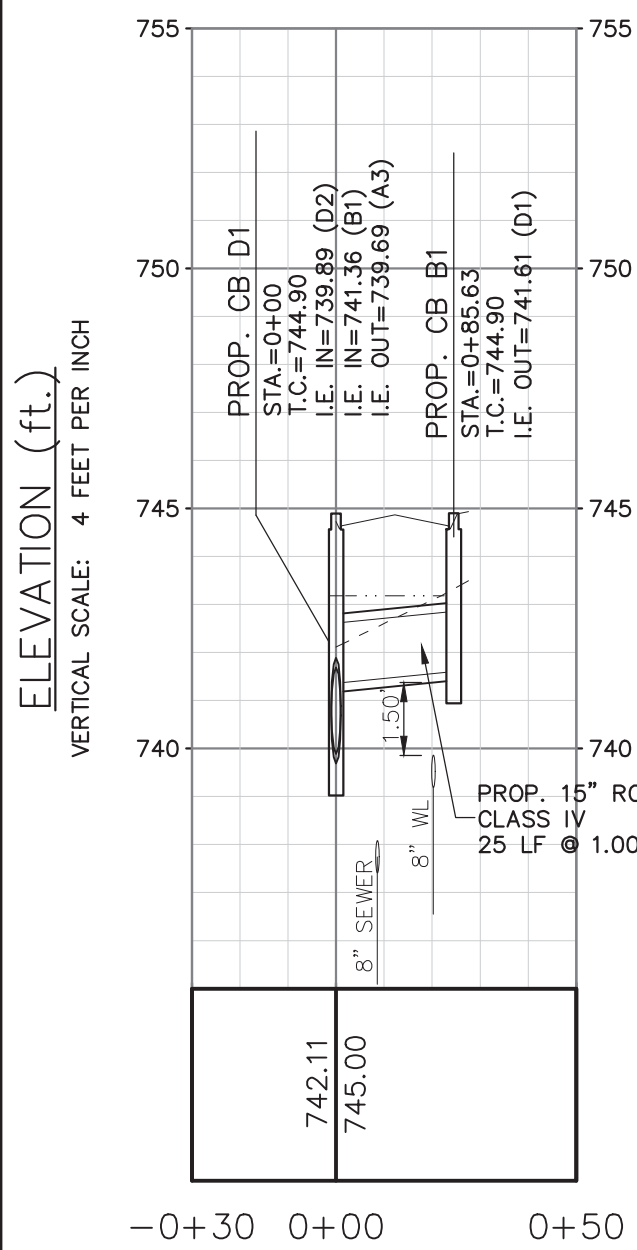


STORM PIPE RUN D (ft.)

HORIZONTAL SCALE: 40 FEET PER INCH

EXISTING GROUND
PROPOSED GROUND
HYDRAULIC GRADELINE

GENEVA CIRCLE
(RD. STA. 7+16)

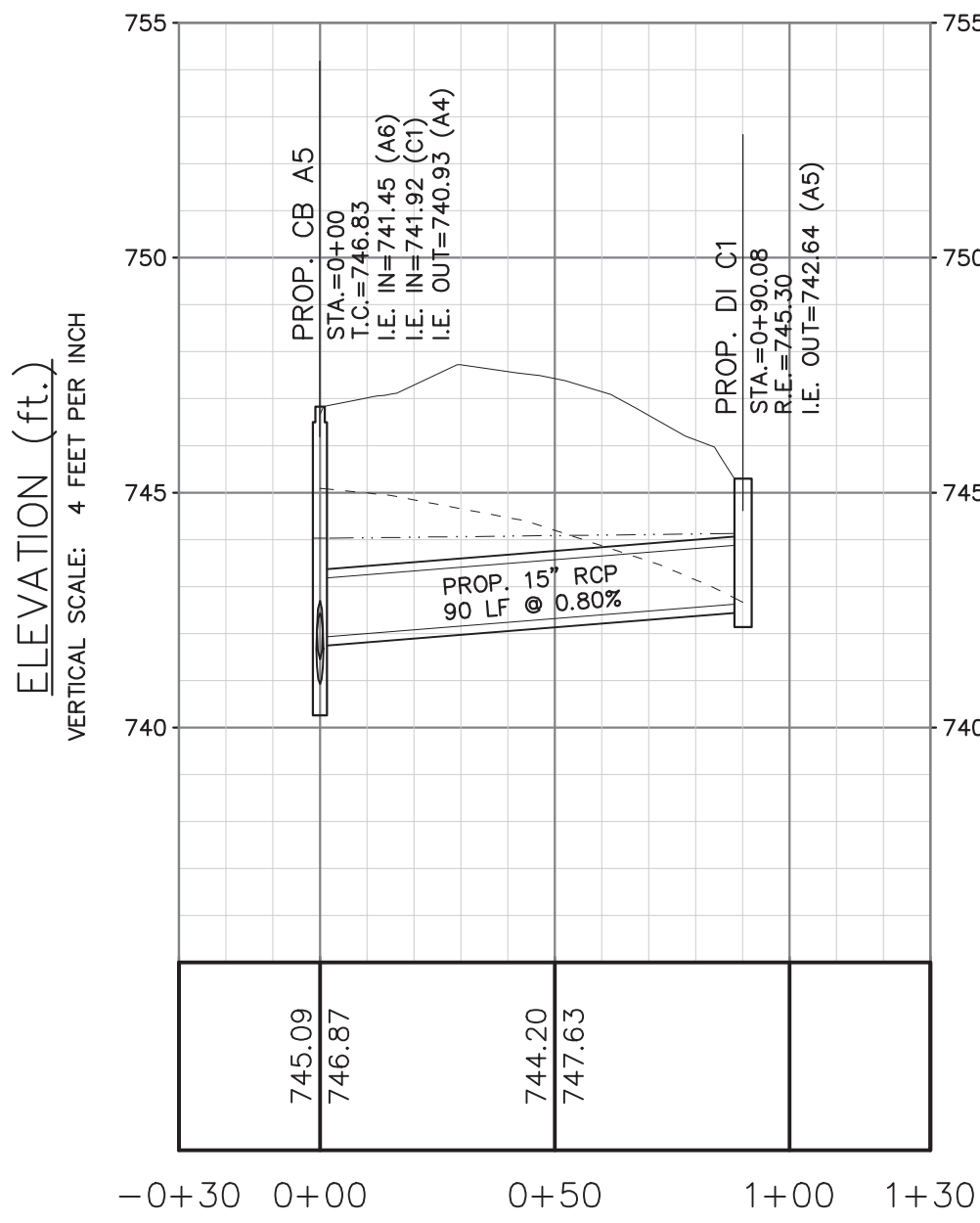


STORM PIPE RUN B (ft.)

HORIZONTAL SCALE: 40 FEET PER INCH

EXISTING GROUND
PROPOSED GROUND
HYDRAULIC GRADELINE

GENEVA CIRCLE
(RD. STA. 5+50)

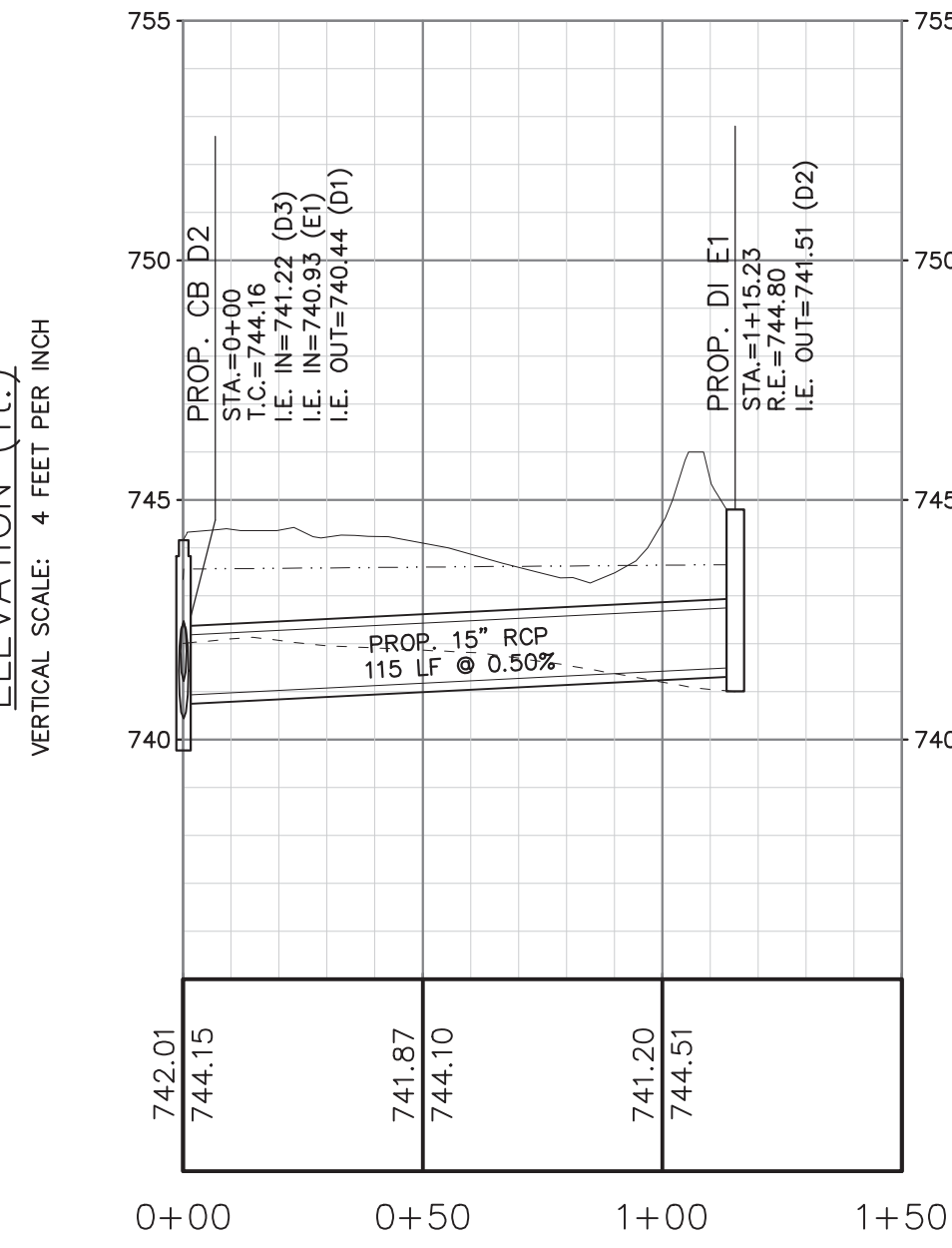


STORM PIPE RUN C (ft.)

HORIZONTAL SCALE: 40 FEET PER INCH

EXISTING GROUND
PROPOSED GROUND
HYDRAULIC GRADELINE

BENTBRUSH LANE
(RD. STA. 0+30)

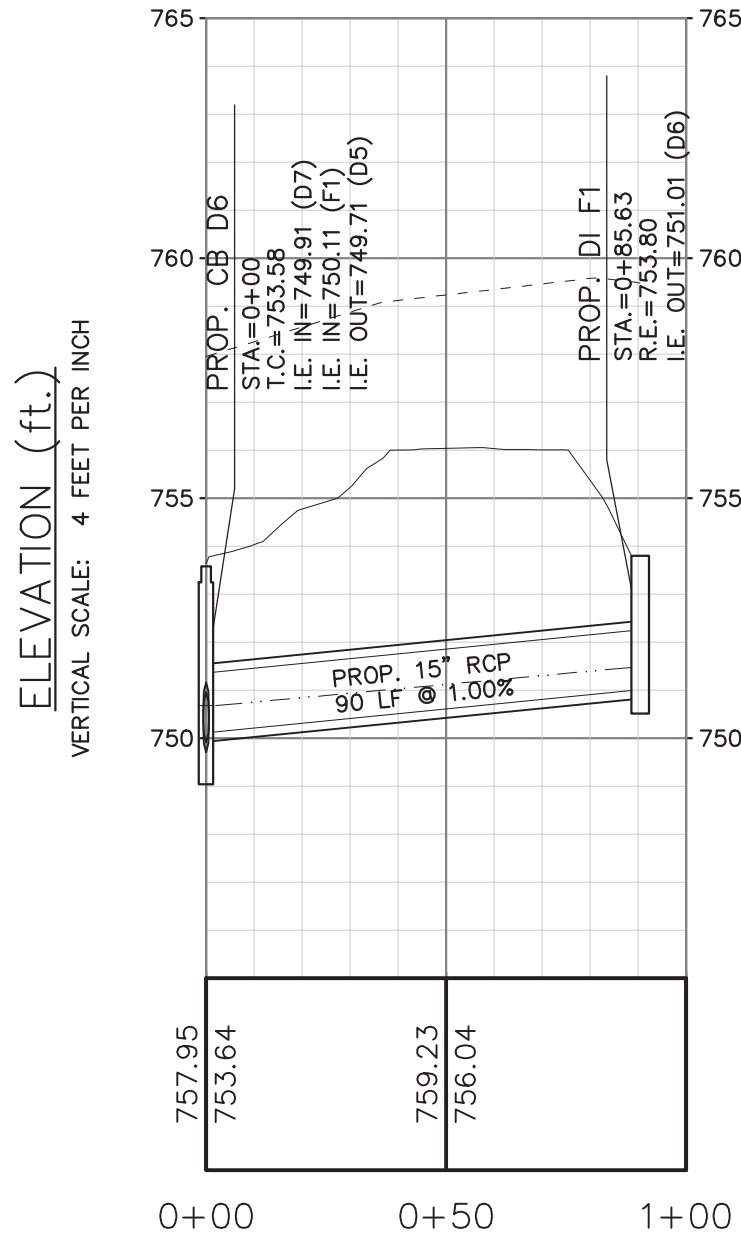


STORM PIPE RUN E (ft.)

HORIZONTAL SCALE: 40 FEET PER INCH

EXISTING GROUND
PROPOSED GROUND
HYDRAULIC GRADELINE

GENEVA CIRCLE
(RD. STA. 10+10)

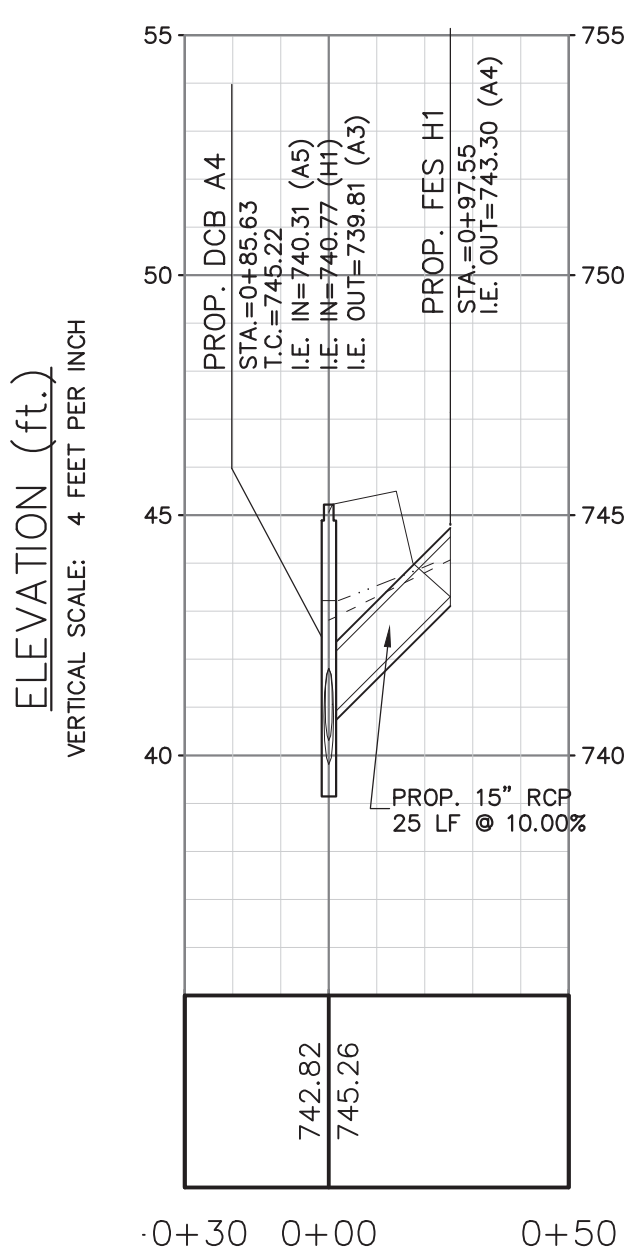


STORM PIPE RUN F (ft.)

HORIZONTAL SCALE: 40 FEET PER INCH

EXISTING GROUND
PROPOSED GROUND
HYDRAULIC GRADELINE

GENEVA CIRCLE
(RD. STA. 6+60)

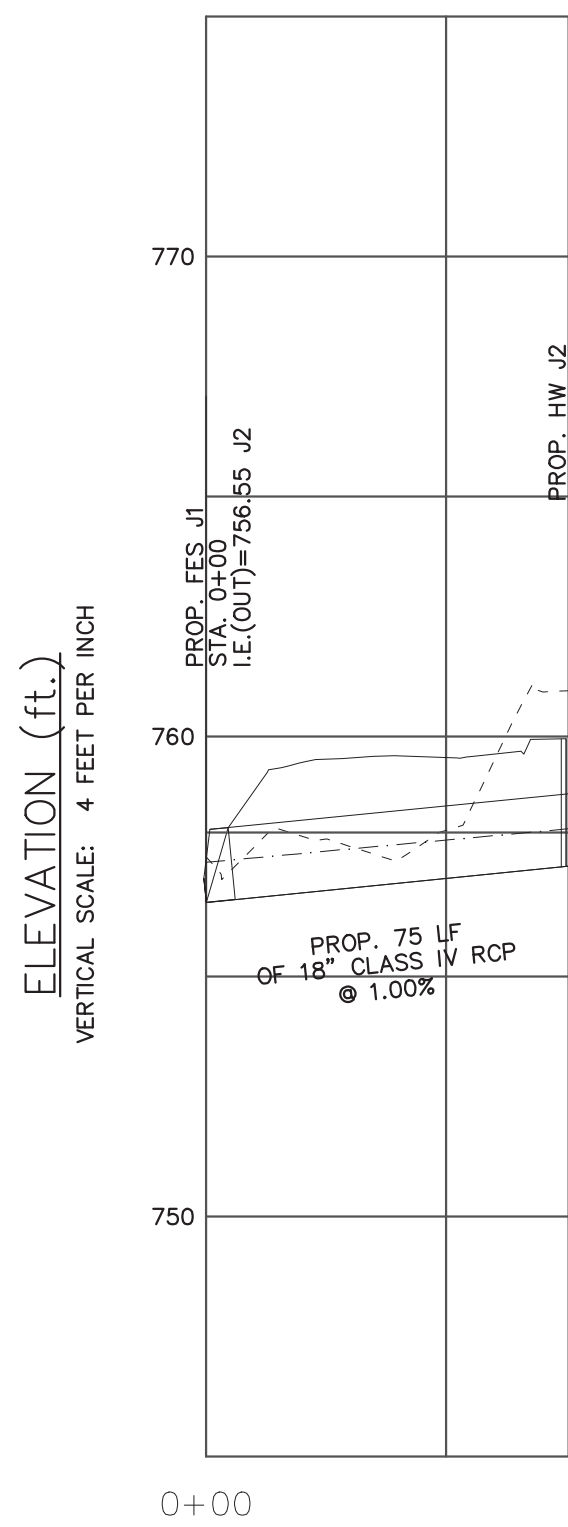


STORM PIPE RUN H (ft.)

HORIZONTAL SCALE: 40 FEET PER INCH

EXISTING GROUND
PROPOSED GROUND
HYDRAULIC GRADELINE

LEE ROAD



STORM PIPE RUN J (ft.)

HORIZONTAL SCALE: 40 FEET PER INCH

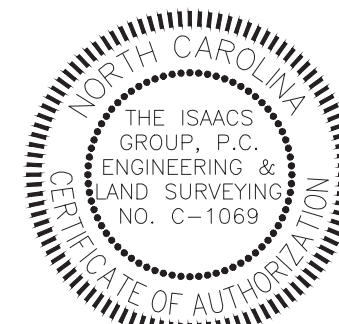
EXISTING GROUND
PROPOSED GROUND
HYDRAULIC GRADELINE

STORM PIPE RUN A
STORM PIPE RUN B
STORM PIPE RUN C
STORM PIPE RUN D
STORM PIPE RUN E
STORM PIPE RUN F
STORM PIPE RUN H
STORM PIPE RUN J

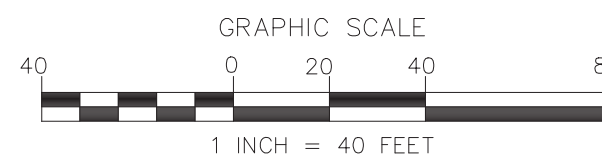


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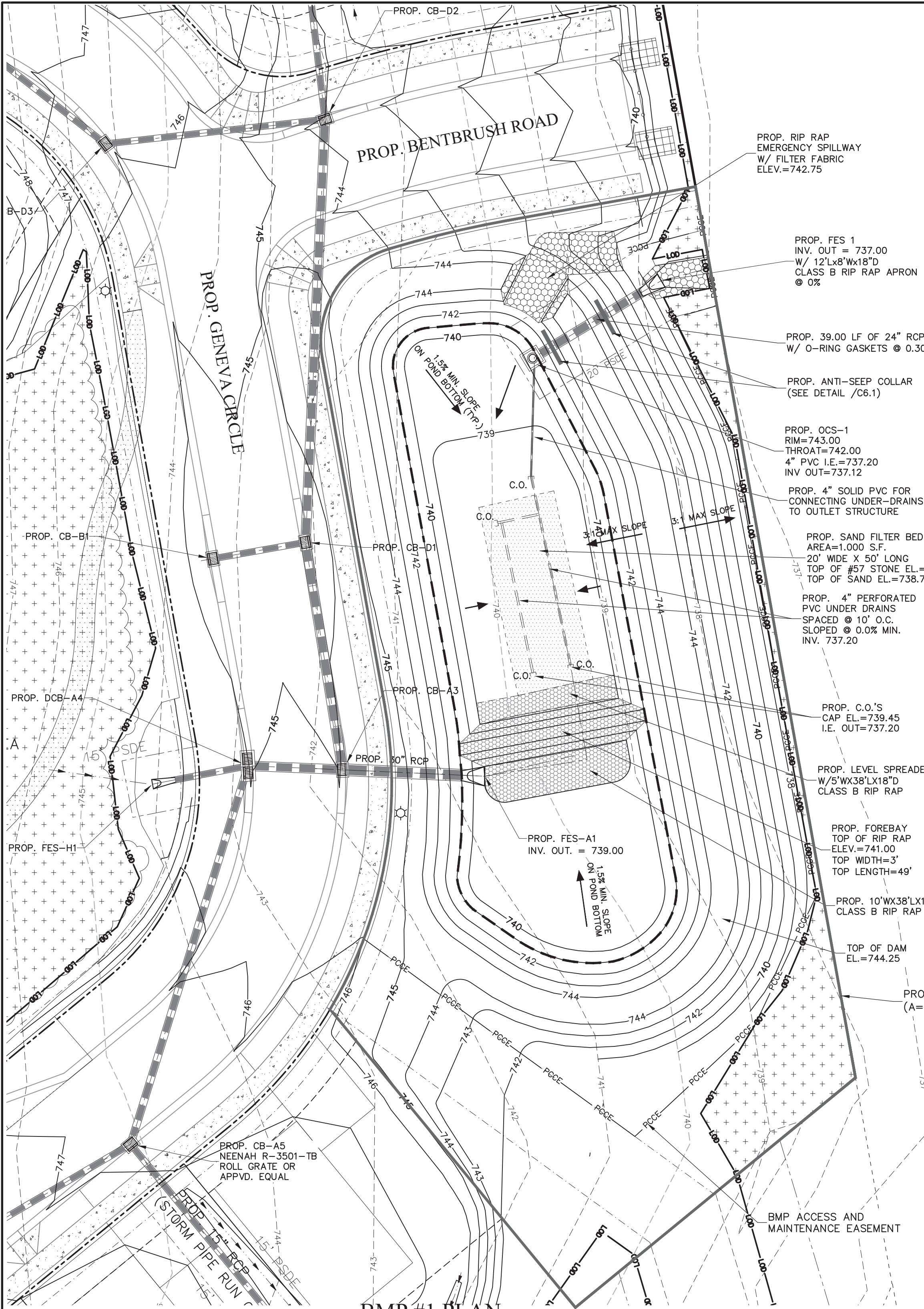


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Anthony B. Cowan, P.E.
Date: 2021.07.13
10:19:55-04'00'

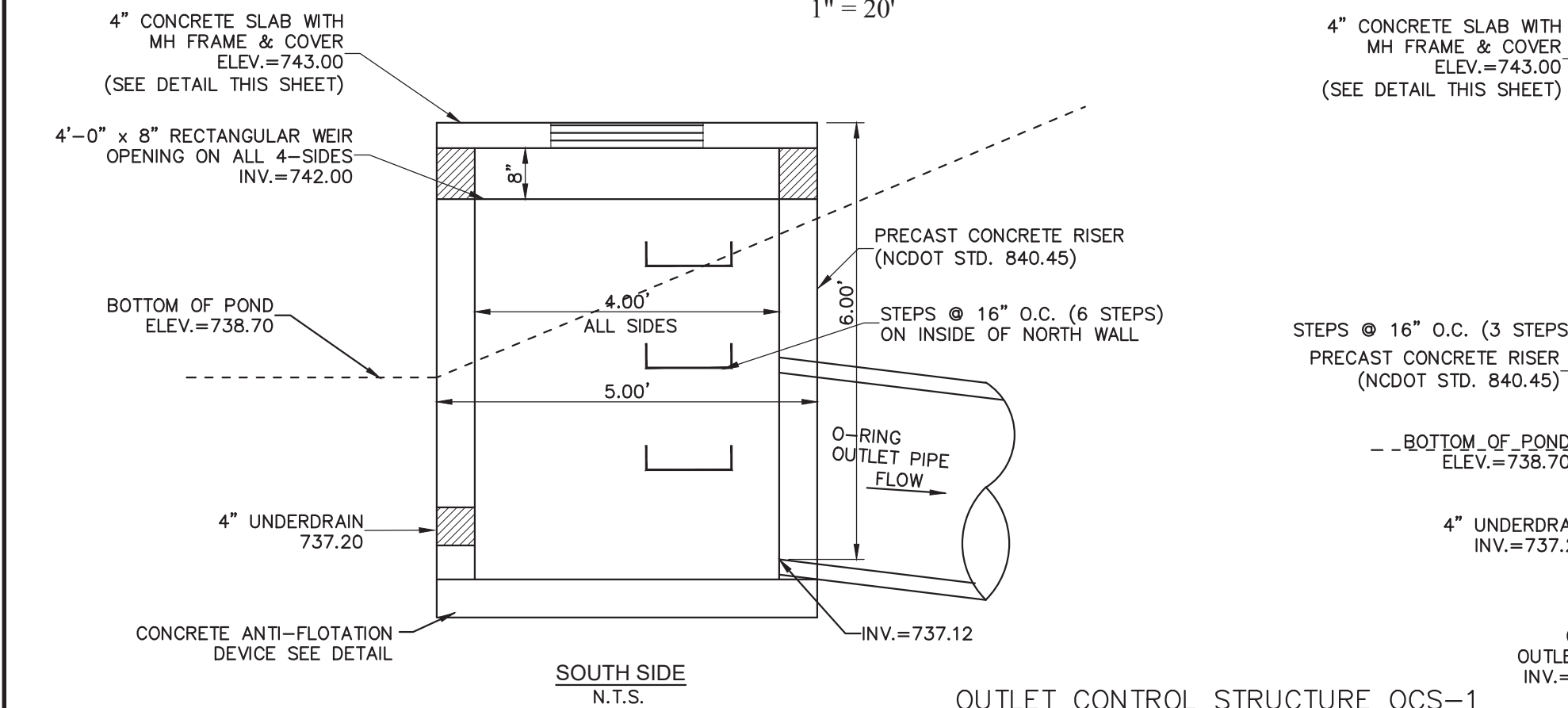


Project: DIXON VILLAGE
BELMONT, NORTH CAROLINA
Title: STORM DRAINAGE PROFILES
File #: 20162-PB.dwg | Date: 11/13/2020 | Project Egr: ABC
Design By: ABC
Drawn By: RER
Scale: 1" = 40'
8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335
C4.2

NO.	BY	DATE	REVISION
1	RER	3/15/10	PER CITY OF BELMONT COMMENTS
2	RER	4/19/21	REVISED DUE TO ZONING
3	RER	5/17/21	PER CITY REVIEW



BMP #1 PLAN
(SAND FILTER & EXTENDED DRY DETENTION)
1" = 20'



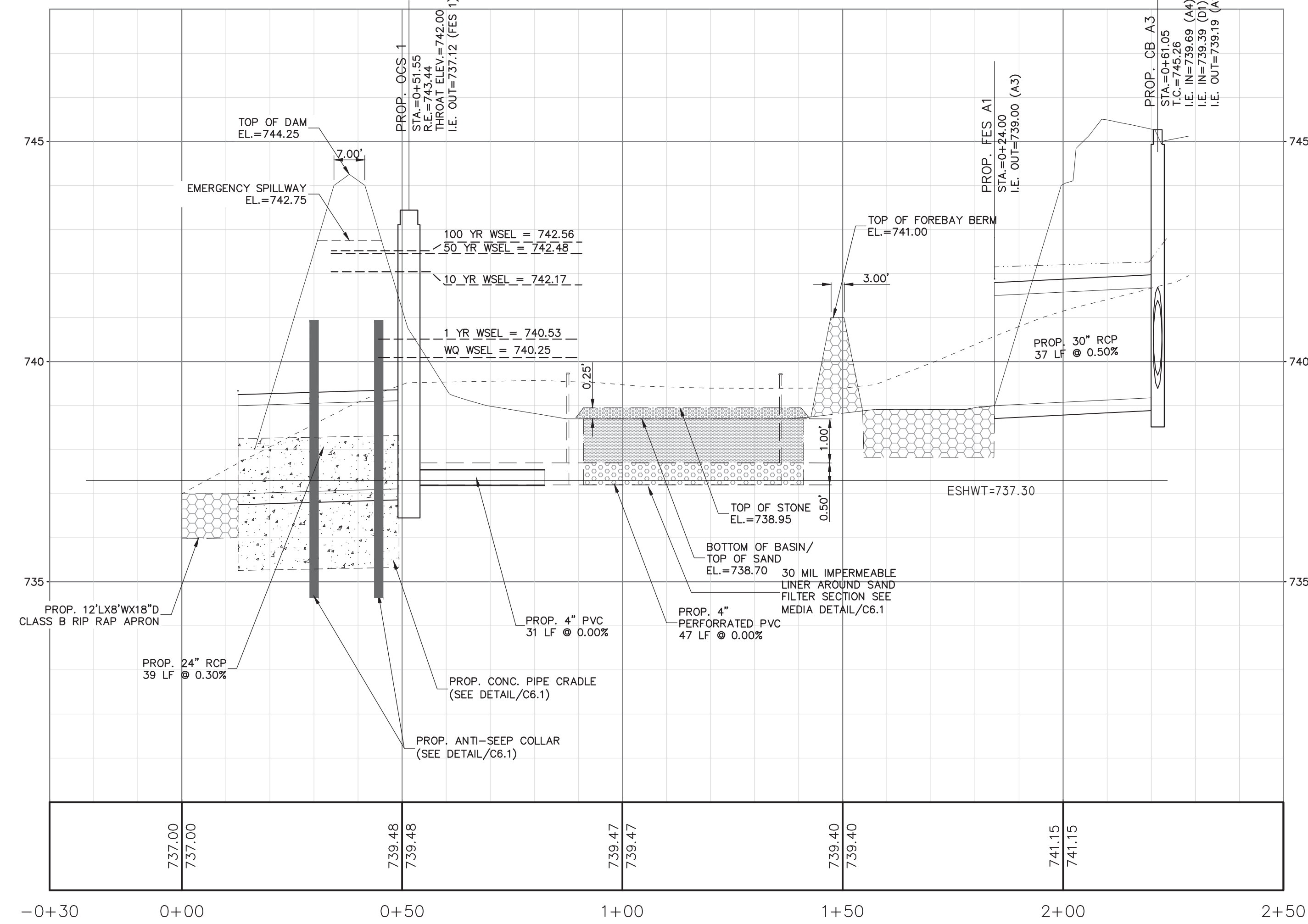
BMP #1 (SAND FILTER)
OUTLET SUMMARY

*CLEANOUTS OF 6-INCH SOLID PVC MUST BE PROVIDED FOR EVERY 50 LINEAR FEET OF UNDERDRAIN, AT ALL BENDS, AND ENDS OF THE SYSTEM FOR MAINTENANCE PURPOSES. THE TOP OF THE CLEANOUTS SHOULD EXTEND 6 INCHES ABOVE THE TOP OF FILTER AND HAVE A WATERTIGHT, VANDAL PROOF CAP. AT LEAST ONE CLEANOUT SHALL BE INSTALLED AS AN EMERGENCY DRAIN THAT IS FLUSH WITH THE TOP OF FILTER AND HAVE A 6-INCH THREADED EXTENSION PIPE THE FURTHEST CLEANOUT FROM THE OUTLET MUST HAVE THE MINIMUM REQUIRED FILTER MEDIA DEPTH.

STORMWATER BMP BONDING MAINTENANCE NOTE:

1. A PERFORMANCE BOND FOR THE BMP SHALL BE POSTED DURING FINAL PLAT PROCESS.
2. BMP MAINTENANCE WILL BE THE RESPONSIBILITY OF THE HOME OWNERS ASSOCIATION (HOA). MAINTENANCE RESPONSIBILITY SHALL BE DOCUMENTED IN RESTRICTIVE COVENANTS AND HOW ORGANIZATIONS DOCUMENTS. IT SHALL BE CLEARLY STATED IN THE HOA DOCUMENTS THAT OWNERSHIP AND MAINTENANCE OF THE SOM IS HOA RESPONSIBILITY AND A FUNDING MECHANISM ESTABLISHED. AFTER THE CITY'S REVIEW OF THESE DOCUMENTS, THEY MUST BE RECORDED WITH THE FINAL PLAT.
3. PRIOR TO THE FINAL APPROVAL OF THE WATER QUALITY FACILITY, THE DEVELOPER MUST PROVIDE AN AS-BUILT SURVEY AND A CERTIFICATION FROM A NC PROFESSIONAL ENGINEER THAT THE FACILITY IS CONSISTENT WITH APPROVED CONSTRUCTION PLANS PER 153.51(A) OF THE WATERSHED ORDINANCE. PERFORMANCE BOND WILL BE RELEASED BY CITY UPON APPROVAL.
4. A 10 YEAR WARRANTY BOND SHALL BE POSTED AS PART OF BMP AS-BUILT AND CERTIFICATION PROCESS.

PROVIDED TEMPORARY 4" COUPLING FOR SKIMMER ATTACHMENT AT ELEV. = 738.20. ONCE CONSTRUCTION IS COMPLETE AND WITH APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR, REMOVE SKIMMER ATTACHMENT AND PERMANENTLY PLUG HOLE.



BMP #1 SECTION PROFILE
HORIZONTAL SCALE 1" = 20'

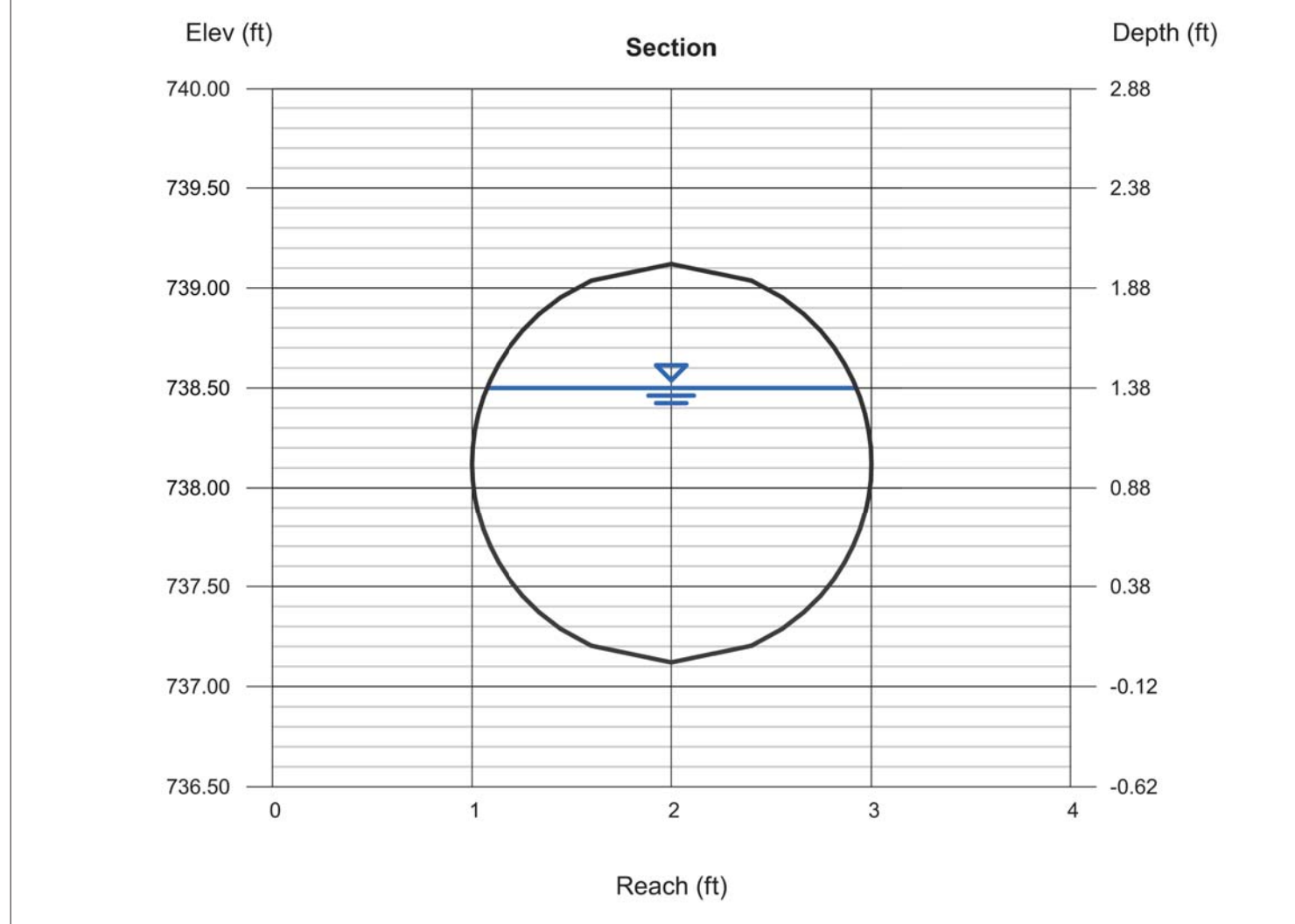
Channel Report

Hydralflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc.

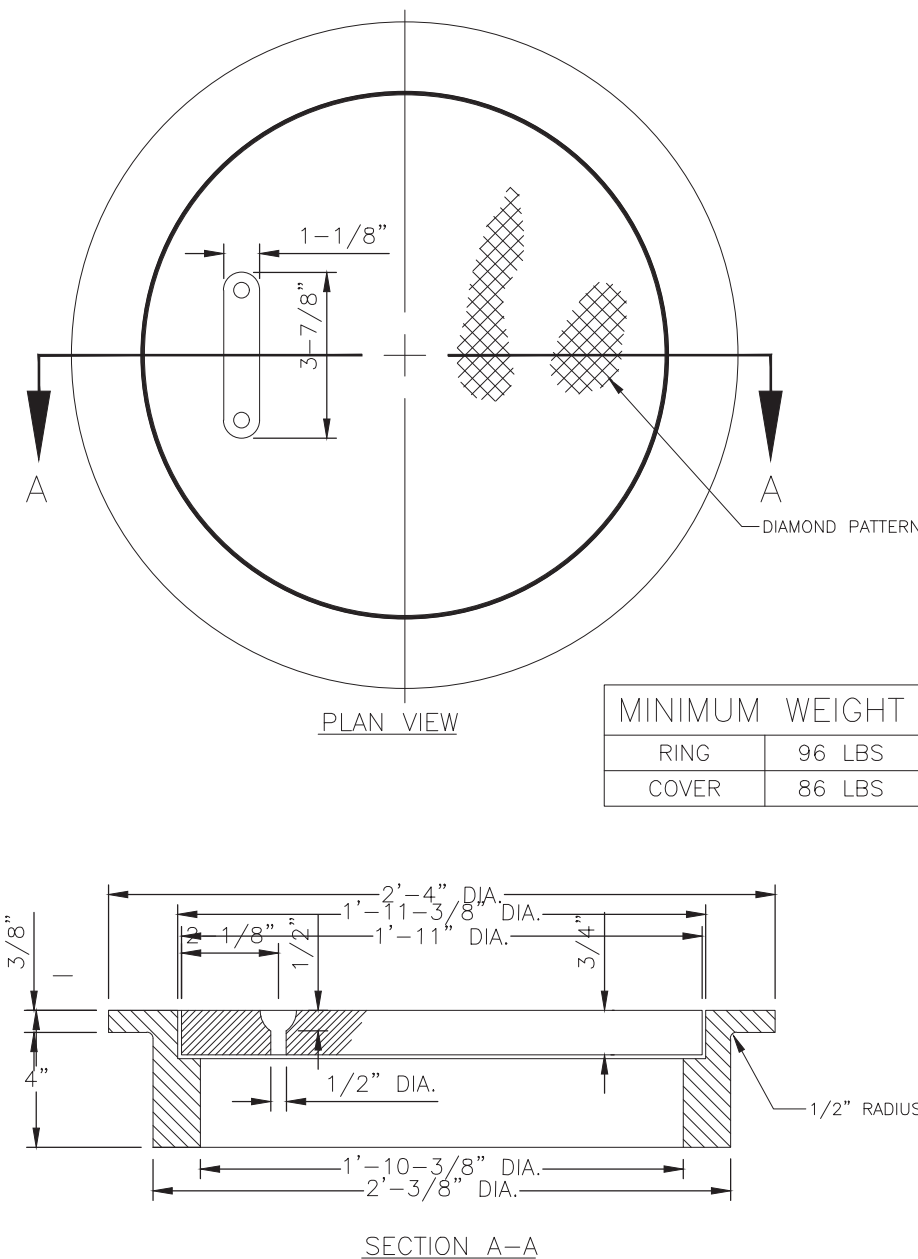
Monday, May 17 2021

CHECK CAPACITY OF 24 INCH RCP BMP OUTLET PIPE

Circular Diameter (ft)	= 2.00	Highlighted Depth (ft)	= 1.38 < 2.00' ; OK
Invert Elev (ft)	= 737.12	Q (cfs)	= 11.01
Slope (%)	= 0.30	Area (sqft)	= 2.32
N-Value	= 0.012	Velocity (ft/s)	= 4.75
Calculations Compute by:	Known Q	Wetted Perim (ft)	= 3.93
Known Q (cfs)	= 11.01	Crit Depth, Yc (ft)	= 1.19
		Top Width (ft)	= 1.85
		EGL (ft)	= 1.73



- LEGEND
- ELEV--- EXISTING CONTOUR
 - ELEV--- EXISTING PHASE 3 CONTOUR
 - ELEV--- PROPOSED CONTOUR
 - ELEV PROPOSED SPOT ELEVATION
 - (ELEV) PROPOSED BSMT. UPPER PAD ELEVATION
 - (ELEV) EXISTING CATCH BASIN
 - ===== EXISTING STORM DRAINAGE PIPE
 - ===== PROPOSED STORM DRAINAGE PIPE
 - (ELEV) PROPOSED CATCH BASIN
 - SLOPE--- PROPOSED SWALE TYPE-A SLOPED AT 1.5% (MIN.) UNLESS NOTED AS OTHERWISE
 - PCCE--- POST CONSTRUCTION ACCESS & MAINTENANCE ESMT.



MANHOLE RING AND COVER
FOR SLAB TYPE CATCH BASIN

DRY POND BMP #1 SUMMARY TABLES

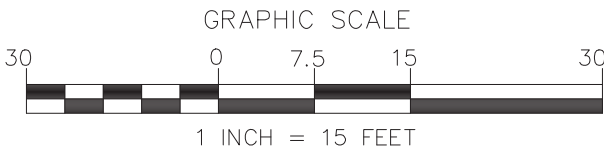
DRY DETENTION BMP #1 SUMMARY CHART				
PEAK CONTROL STORM EVENTS	PRE-DEVELOPMENT RUNOFF	POST-DEVELOPMENT RUNOFF	POST-ROUTING RUNOFF	BMP #1 ELEVATION
TOP OF DAM				744.25
100 YR - 24 HR	15.62 CFS	26.40 CFS	21.99 CFS	742.56
50 YR - 24 HR	13.20 CFS	23.70 CFS	17.53 CFS	742.48
10 YR - 24 HR	0.63 CFS	14.52 CFS	3.96 CFS	741.17
1 YR - 24 HR	0.16 CFS	3.91 CFS	0.11 CFS	740.53
BMP	REQUIRED	PROVIDED	ELEVATION	
CPv	n/a	n/a		n/a
WQv	6056.75 CF	7,419		740.25



THE EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY AND SHOULD NOT BE RELIED UPON AS THE EXACT LOCATION OR A COMPLETE INVENTORY WHEN PERFORMING SITE EXCAVATION. PRIOR TO COMMENCEMENT OF ANY EXCAVATION, CONTACT 811 OR A PRIVATE UTILITY LOCATOR AS NEEDED TO VERIFY THE LOCATIONS AND EXISTENCE OF EXISTING UTILITIES.



Digitally signed by
Anthony B. Cowan,
P.E.
Date: 2021.07.13
10:21:25-04'00'



NO.	BY	DATE	REVISION
1	RE	4/19/21	REVISED DUE TO ZONING
2	RE	5/17/21	PER CITY REVIEW
3	ABC	7/12/21	PER CITY 2ND REVIEW

Project: **DIXON VILLAGE**
BELMONT, NORTH CAROLINA

Title: **BMP PLAN**

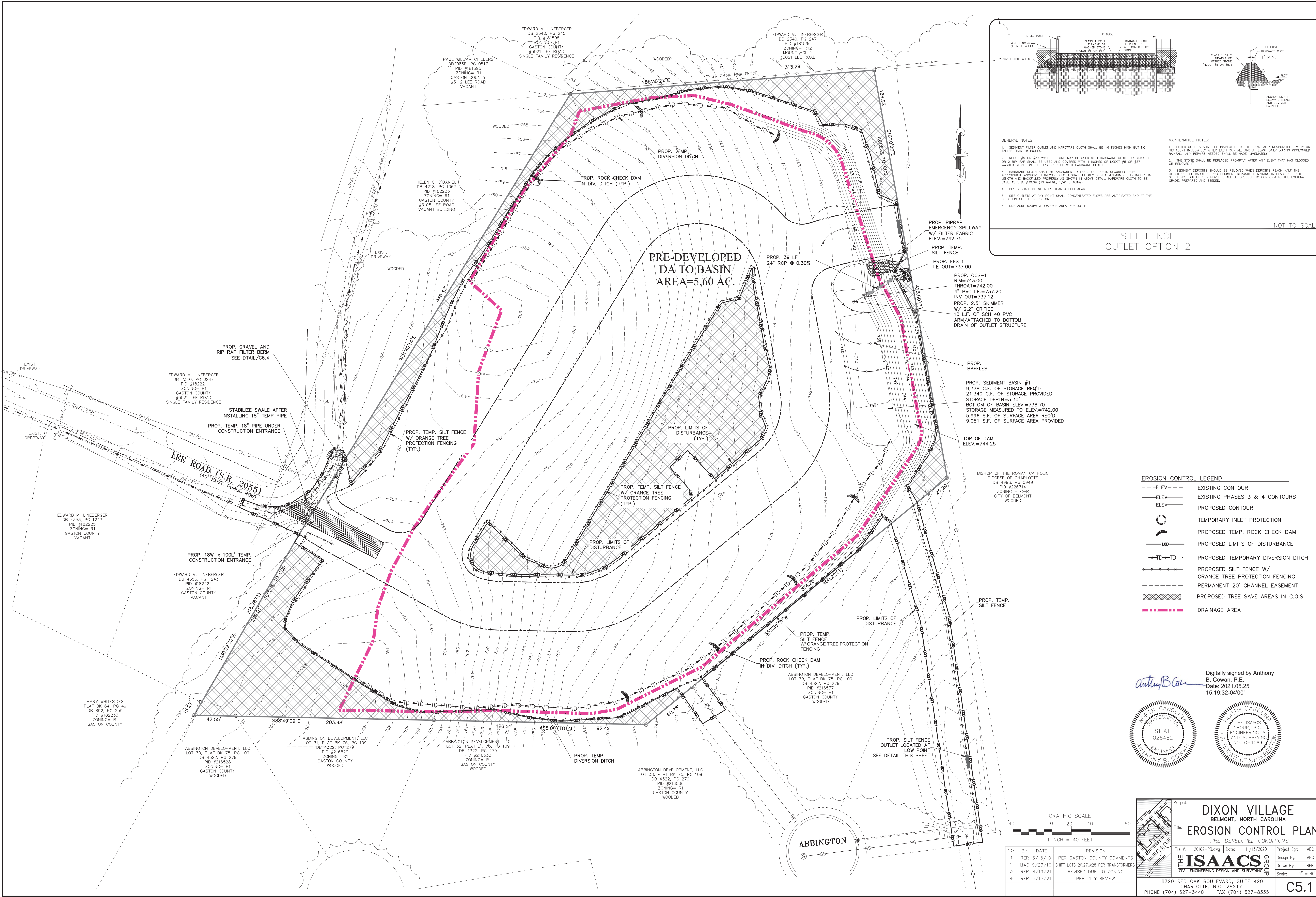
File #: 20162-PB.dwg Date: 11/13/2020 Project Egr: ABC

Drawn By: RER Scale: 1" = 20'

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

ISAACS GROUP
CIVIL ENGINEERING DESIGN AND SURVEYING

C4.3



GENERAL NOTES:

- SEDIMENT FILTER OUTLET AND HARDWARE CLOTH SHALL BE 16 INCHES HIGH BUT NO TALLER THAN 18 INCHES.
- NO. 20 OR #57 WASHED STONE MAY BE USED WITH HARDWARE CLOTH OR CLASS 1 OR 2 RIP-RAP SHALL BE USED AND COVERED WITH 4 INCHES OF NO. 20 OR #57 WASHED STONE ON THE UPSLOPE SIDE WITH HARDWARE CLOTH.
- HARDWARE CLOTH SHALL BE ANCHORED TO THE STEEL POSTS SECURELY USING APPROPRIATE ANCHORS. HARDWARE CLOTH SHALL BE KEPT IN A MINIMUM OF 12 INCHES IN LENGTH AND BUILT PROPERLY AS SHOWN IN ABOVE DETAIL. HARDWARE CLOTH TO BE SAME AS STD. #30.09 (19 GAUGE, 1/4" SPACING).
- POSTS SHALL BE NO MORE THAN 4 FEET APART.
- SITE OUTLETS AT ANY POINT SMALL CONCENTRATED FLOWS ARE ANTICIPATED AND AT THE DIRECTION OF THE INSPECTOR.
- ONE ACRE MAXIMUM DRAINAGE AREA PER OUTLET.

MAINTENANCE NOTES:

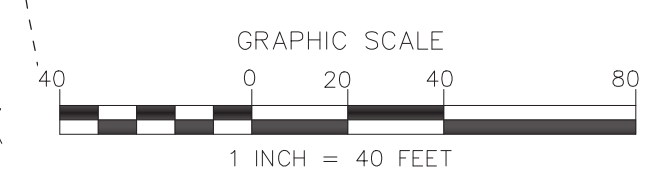
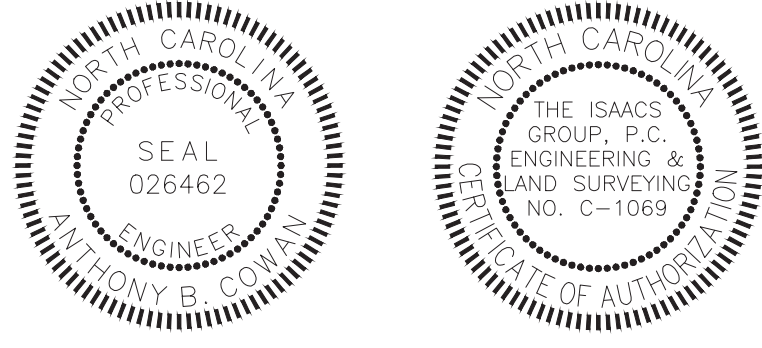
- FILTER OUTLETS SHALL BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.
- THE STONE SHALL BE REPLACED PROMPTLY AFTER ANY EVENT THAT HAS CLOGGED OR REMOVED IT.
- SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OUTLET IS REMOVED SHALL BE GRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

NOT TO SCALE

SILT FENCE OUTLET OPTION 2

EROSION CONTROL LEGEND	
---ELEV---	EXISTING CONTOUR
—ELEV—	EXISTING PHASES 3 & 4 CONTOURS
—ELEV—	PROPOSED CONTOUR
○	TEMPORARY INLET PROTECTION
⤵	PROPOSED TEMP. ROCK CHECK DAM
—LO—	PROPOSED LIMITS OF DISTURBANCE
TD	PROPOSED TEMPORARY DIVERSION DITCH
—S—S—	PROPOSED SILT FENCE W/ ORANGE TREE PROTECTION FENCING
----	PERMANENT 20' CHANNEL EASEMENT
▨	PROPOSED TREE SAVE AREAS IN C.O.S.
----	DRAINAGE AREA

Digitally signed by Anthony B. Cowan, P.E.
Date: 2021.05.25 15:19:32-04'00'



NO.	BY	DATE	REVISION
1	NER	3/15/10	PER GASTON COUNTY COMMENTS
2	MAO	9/23/10	SHIFT LOTS 76.27, 82.8 PER TRANSFORMERS
3	NER	4/19/21	REVISED DUE TO ZONING
4	NER	5/17/21	PER CITY REVIEW

Project: **DIXON VILLAGE**
BELMONT, NORTH CAROLINA

Title: **EROSION CONTROL PLAN**
PRE-DEVELOPED CONDITIONS

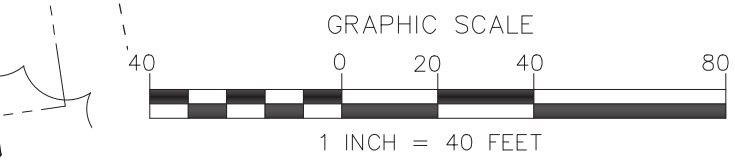
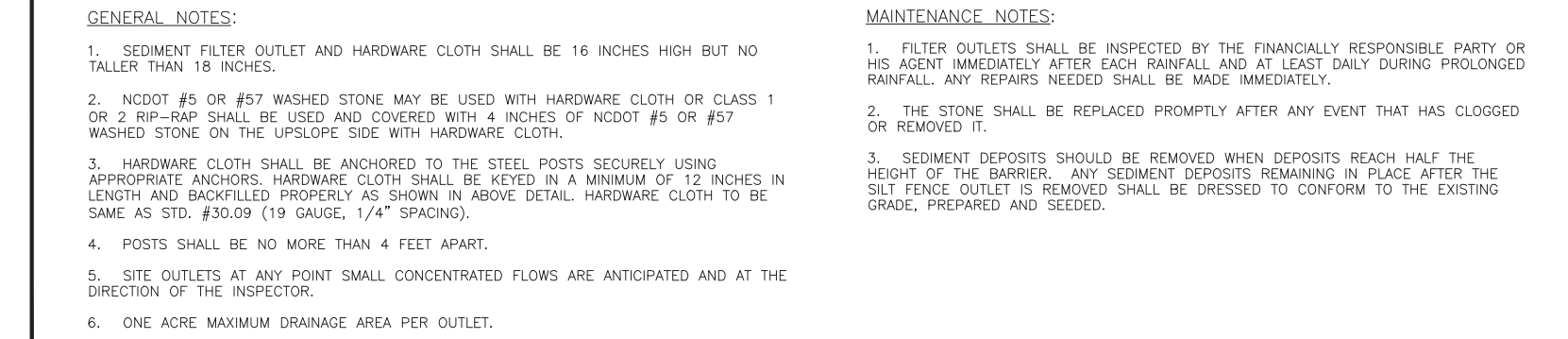
File #: 20162-PB.dwg Date: 11/13/2020 Project Egr: ABC



Design By: ABC
Drawn By: NER
Scale: 1" = 40'

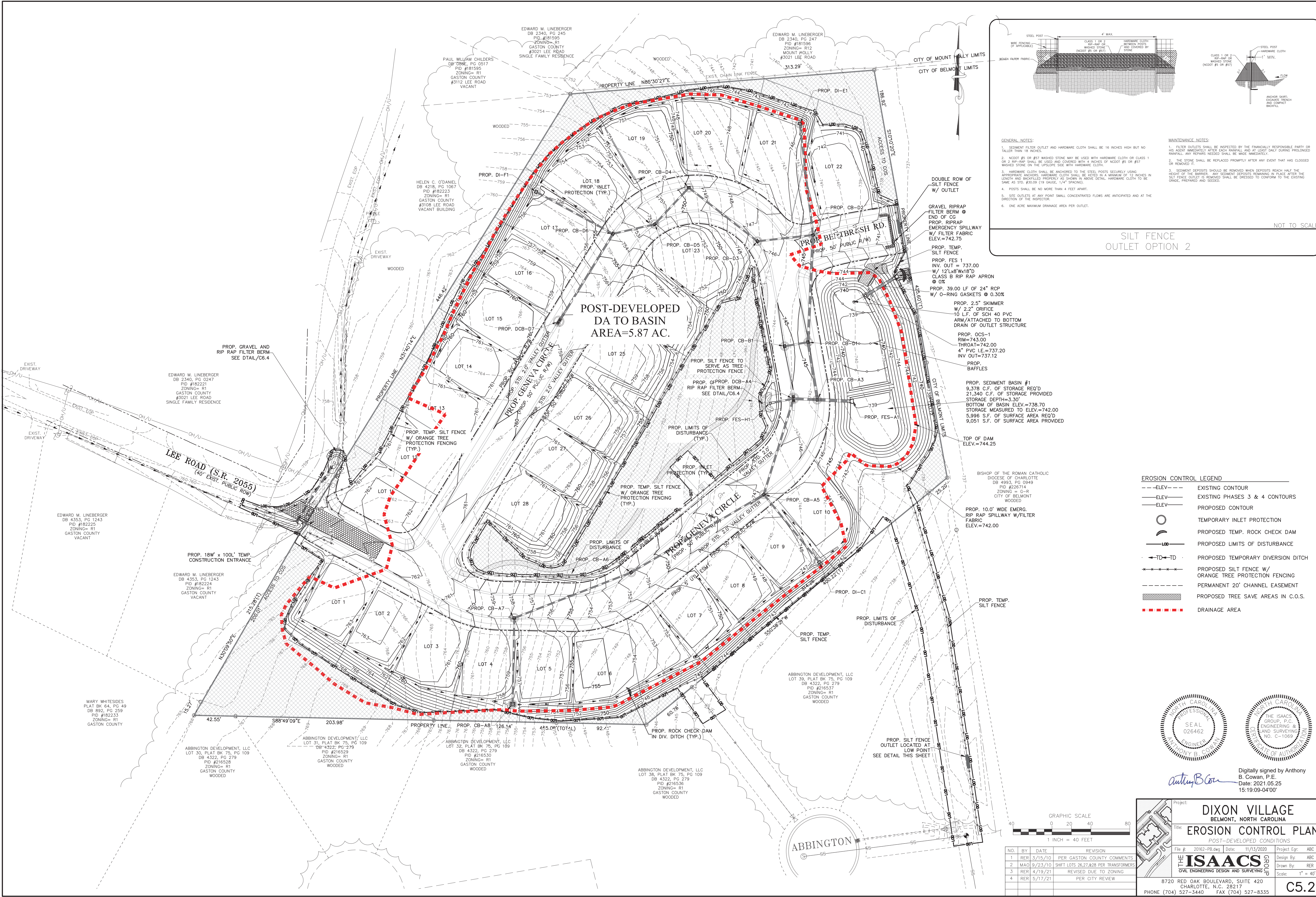
ISAACS GROUP
CIVIL ENGINEERING DESIGN AND SURVEYING
8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

C5.1

1. TREE PROTECTION BARRICADES MUST MEET OR EXCEED TREE ORNAMENTATION GUIDELINE STANDARDS. TREE PROTECTION SHALL CONSIST OF MIN. 4 FT. HIGH HEAVY DUTY WRAINING BARRIER FENCING IN A HIGH VISIBILITY ORANGE COLOR ATTACHED 2X4 POSTS, OR, ATTACHED TO STEEL POSTS USED FOR SILT FENCE INSTALLATIONS.
2. WEATHERPROOF SIGNAGE SHALL BE ATTACHED TO THE TREE PROTECTION BARRICADES EVERY 30 FEET AND POSTED ON THE CONSTRUCTION OFFICE OR ATTACHED TO THE ON-SITE PERMIT BOARD. THE SIGN SHALL STATE IN BOTH ENGLISH AND SPANISH: "TREE PROTECTION AREA"; DO NOT ENTER; "SIGNAGE SHALL STATE THAT ANY ENCROACHMENT INTO A DESIGNATED TREE PROTECTION ZONE WILL RESULT IN A CIVIL PENALTY ISSUED BY THE CITY OF BELMONT OF UP TO \$1,000 PER INCIDENT. SIGNAGE SHALL REFERENCE CHAPTER 1 AND INCLUDE THE CITY SEAL.
3. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION/CLEARING/GRADING/CONSTRUCTION, AND NOT REMOVED UNTIL AFTER FINAL INSPECTION
4. THE AREA WITHIN THE PROTECTIVE BARRICADE SHALL REMAIN FREE OF ALL BUILDING MATERIALS, STOCKPILED SOIL, OR OTHER CONSTRUCTION DEBRIS; CONSTRUCTION TRAFFIC, STORAGE OF VEHICLES AND MATERIALS, AND GRADING IS PROHIBITED WITHIN DESIGNATED TREE PROTECTION ZONES.
5. VIOLATIONS OF THE TREE PROTECTION REQUIREMENTS ARE SUBJECT TO FINES, AND /OR IMMEDIATE CORRECTIVE ACTION/MITIGATION.
6. TREES/AVE AREAS MUST BE IDENTIFIED DURING THE PRE-CONSTRUCTION MEETING, AND COMPLIANCE WILL BE INSPECTED BY CITY STAFF PRIOR TO APPROVING CERTIFICATE OF OCCUPANCY.
7. TREE PROTECTION FENCING TO BE PLACED AT THE DRIPLINE PLUS ONE (1.0) FEET, PRIOR TO ANY DEMOLITION OR GRADING ACTIVITY.



	Project:	<h1>DIXON VILLAGE</h1> <p>BELMONT, NORTH CAROLINA</p>		
	Title:	<h1>EROSION CONTROL PLAN</h1> <p>PRE-DEVELOPED CONDITIONS</p>		
	File #:	20162-PB.dwg	Date:	11/13/2020
	Project Egr:	ABC		
	Design By:	ABC		
	Drawn By:	RER		
	Scale:	1" = 40'		
<p>8720 RED OAK BOULEVARD, SUITE 420 CHARLOTTE, N.C. 28217 PHONE (704) 527-3440 FAX (704) 527-8335</p>				
				<h1>C5.1</h1>



STEEL POST
WIRE FENCING (IF APPLICABLE)
WOODEN FILTER FABRIC
CLASS 1 OR 2 RIP-RAP OR WASHED STONE (NCDOT #5 OR #57)
HARDWARE CLOTH BETWEEN POSTS AND COVERED BY WASHED STONE
4" MAX.
1" MIN.

GENERAL NOTES:

1. SEDIMENT FILTER OUTLET AND HARDWARE CLOTH SHALL BE 16 INCHES HIGH BUT NO TALLER THAN 18 INCHES.
2. RIP-RAP SHALL BE USED AND COVERED WITH 4 INCHES OF NCDOT #5 OR #57.
3. HARDWARE CLOTH SHALL BE ANCHORED TO THE STEEL POSTS SECURELY USING APPROPRIATE ANCHORS. HARDWARE CLOTH SHALL BE KEPT IN A MINIMUM OF 12 INCHES IN LENGTH AND BACKFILLS PROPERLY AS SHOWN IN ABOVE DETAIL. HARDWARE CLOTH TO BE SAME AS STD. #30.09 (19 GAUGE, 1/4" SPACING).
4. POSTS SHALL BE NO MORE THAN 4 FEET APART.
5. SITE OUTLETS AT ANY POINT SMALL CONCENTRATED FLOWS ARE ANTICIPATED AND AT THE DIRECTION OF THE INSPECTOR.
6. ONE ACRE MAXIMUM DRAINAGE AREA PER OUTLET.

MAINTENANCE NOTES:

1. FILTER OUTLETS SHALL BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.
2. THE STONE SHALL BE REPLACED PROMPTLY AFTER ANY EVENT THAT HAS CLOGGED OR REMOVED IT.
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NOT TO SCALE

SILT FENCE OUTLET OPTION 2

- EROSION CONTROL LEGEND**
- ELEV--- EXISTING CONTOUR
 - ELEV— EXISTING PHASES 3 & 4 CONTOURS
 - ELEV— PROPOSED CONTOUR
 - TEMPORARY INLET PROTECTION
 - PROPOSED TEMP. ROCK CHECK DAM
 - PROPOSED LIMITS OF DISTURBANCE
 - TD—TD— PROPOSED TEMPORARY DIVERSION DITCH
 - PROPOSED SILT FENCE W/ ORANGE TREE PROTECTION FENCING
 - PERMANENT 20' CHANNEL EASEMENT
 - PROPOSED TREE SAVE AREAS IN C.O.S.
 - DRAINAGE AREA

North Carolina
PROFESSIONAL ENGINEER
SEAL
026462
ANTHONY B. COWAN

North Carolina
THE ISAACS GROUP, P.C.
ENGINEERING AND SURVEYING
NO. C-1069
CERTIFICATE OF AUTHORIZATION

Digitally signed by Anthony B. Cowan, P.E.
Date: 2021.05.25 15:19:09-04'00'

Project: **DIXON VILLAGE**
BELMONT, NORTH CAROLINA

Title: **EROSION CONTROL PLAN**
POST-DEVELOPED CONDITIONS

File #: 20162-PB.dwg Date: 11/13/2020 Project Egr: ABC

WJ **ISAACS GROUP** Design By: ABC
CIVIL ENGINEERING DESIGN AND SURVEYING Drawn By: RER
Scale: 1" = 40'

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

C5.2

NO. BY DATE REVISION

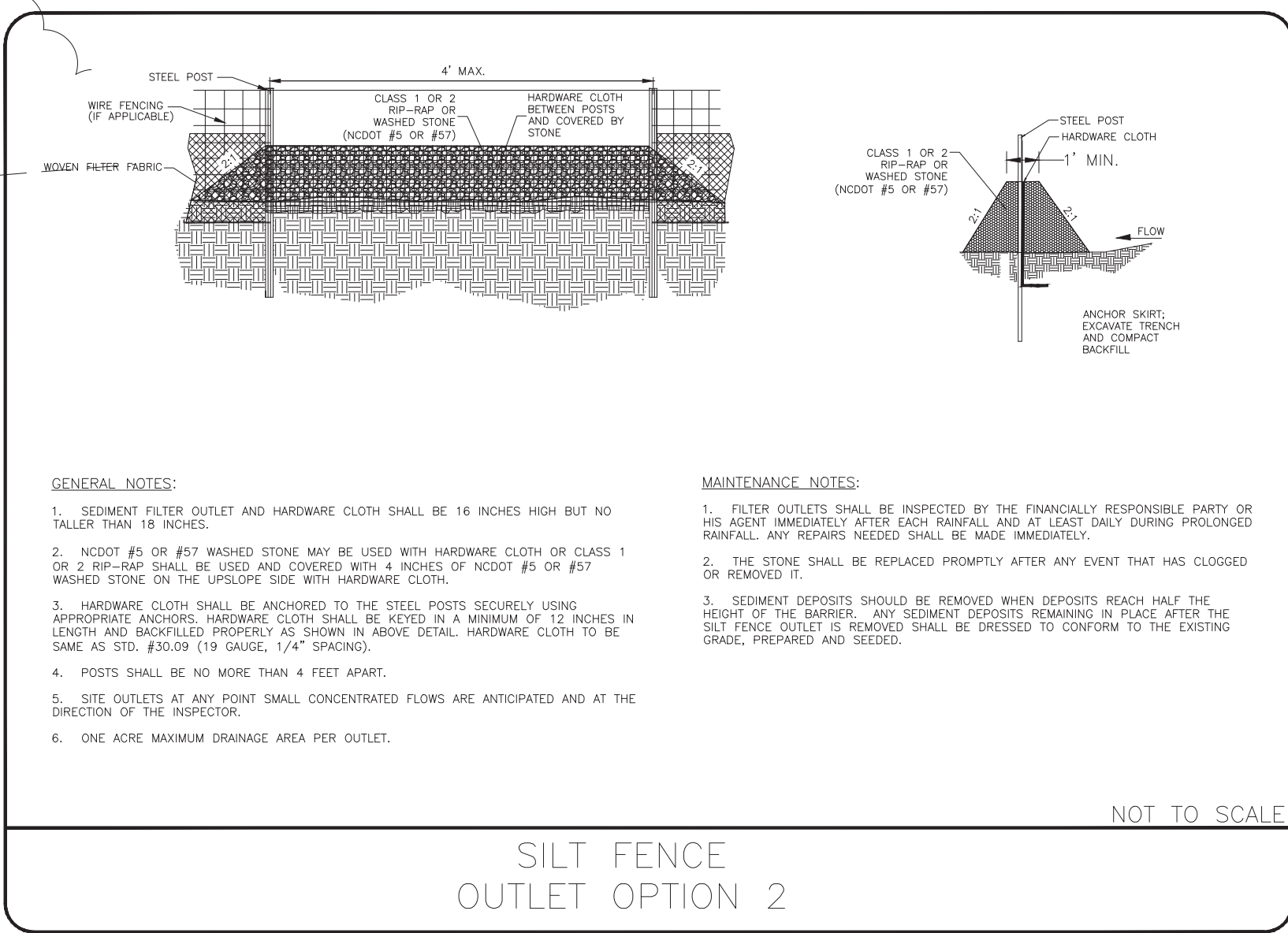
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2	MA	9/23/10	SHIFT LOTS 16,27,28 PER TRANSFORMERS
3	RE	4/19/21	REVISED DUE TO ZONING
4	RE	5/17/21	PER CITY REVIEW

GRAPHIC SCALE
1 INCH = 40 FEET

40 0 20 40 80

TREE PROTECTION NOTES:

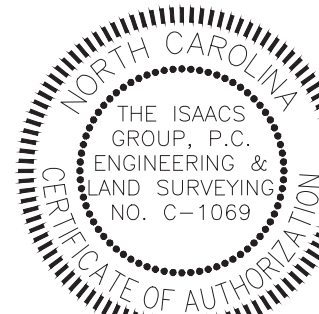
1. TREE PROTECTION BARRICADES MUST MEET OR EXCEED TREE ORDINANCE GUIDELINE STANDARDS. TREE PROTECTION SHALL CONSIST OF MIN. 4 FT. HIGH HEAVY DUTY WARNING BARRIER FENCING IN A HIGH VISIBILITY ORANGE COLOR ATTACHED 2X4 POSTS, OR, ATTACHED TO STEEL POSTS USED FOR SILT FENCE INSTALLATIONS.
2. WEATHERPROOF SIGNAGE SHALL BE ATTACHED TO THE TREE PROTECTION BARRICADES EVERY 30 FEET AND POSTED AT THE CONSTRUCTION OFFICE OR ATTACHED TO THE ON-SITE PERMIT BOARD. THE SIGN SHALL STATE IN BOTH ENGLISH AND SPANISH, TREE PROTECTION AREA: DO NOT ENTER. SIGNAGE SHALL STATE THAT ANY ENCROACHMENT INTO A DESIGNATED TREE PROTECTION ZONE WILL RESULT IN A CIVIL PENALTY ISSUED BY THE CITY OF BELMONT OF UP TO \$1,000 PER INCIDENT. SIGNAGE SHALL REFERENCE CHAPTER 11 AND INCLUDE THE CITY SEAL.
3. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION/CLEARING/GRADING/CONSTRUCTION, AND NOT REMOVED UNTIL AFTER FINAL INSPECTION
4. THE AREA WITHIN THE PROTECTIVE BARRICADE SHALL REMAIN FREE OF ALL BUILDING MATERIALS, STOCKPILED SOIL, OR OTHER CONSTRUCTION DEBRIS. CONSTRUCTION TRAFFIC, STORAGE OF VEHICLES AND MATERIALS, AND GRADING IS PROHIBITED WITHIN DESIGNATED TREE PROTECTION ZONES
5. VIOLATIONS OF THE TREE PROTECTION REQUIREMENTS ARE SUBJECT TO FINES, AND /OR IMMEDIATE CORRECTIVE ACTION/MITIGATION.
6. TREESAVE AREAS MUST BE IDENTIFIED DURING THE PRE-CONSTRUCTION MEETING, AND COMPLIANCE WILL BE INSPECTED BY CITY STAFF PRIOR TO APPROVING CERTIFICATE OF OCCUPANCY.
7. TREE PROTECTION FENCING TO BE PLACED AT THE DRIPLINE PLUS ONE (1.0) FEET, PRIOR TO ANY DEMOLITION OR GRADING ACTIVITY.



POST-DEVELOPED
DA TO BASIN
AREA=5.87 AC.

EROSION CONTROL LEGEND

- ELEV--- EXISTING CONTOUR
- ELEV— EXISTING PHASES 3 & 4 CONTOURS
- ELEV— PROPOSED CONTOUR
- TEMPORARY INLET PROTECTION
- PROPOSED TEMP. ROCK CHECK DAM
- PROPOSED LIMITS OF DISTURBANCE
- TD—TD— PROPOSED TEMPORARY DIVERSION DITCH
- PROPOSED SILT FENCE W/ ORANGE TREE PROTECTION FENCING
- PERMANENT 20' CHANNEL EASEMENT
- PROPOSED TREE SAVE AREAS IN C.O.S.
- DRAINAGE AREA



Digitally signed by
Anthony B. Cowan,
P.E.
Date: 2021.07.13
10:30:14-04'00'

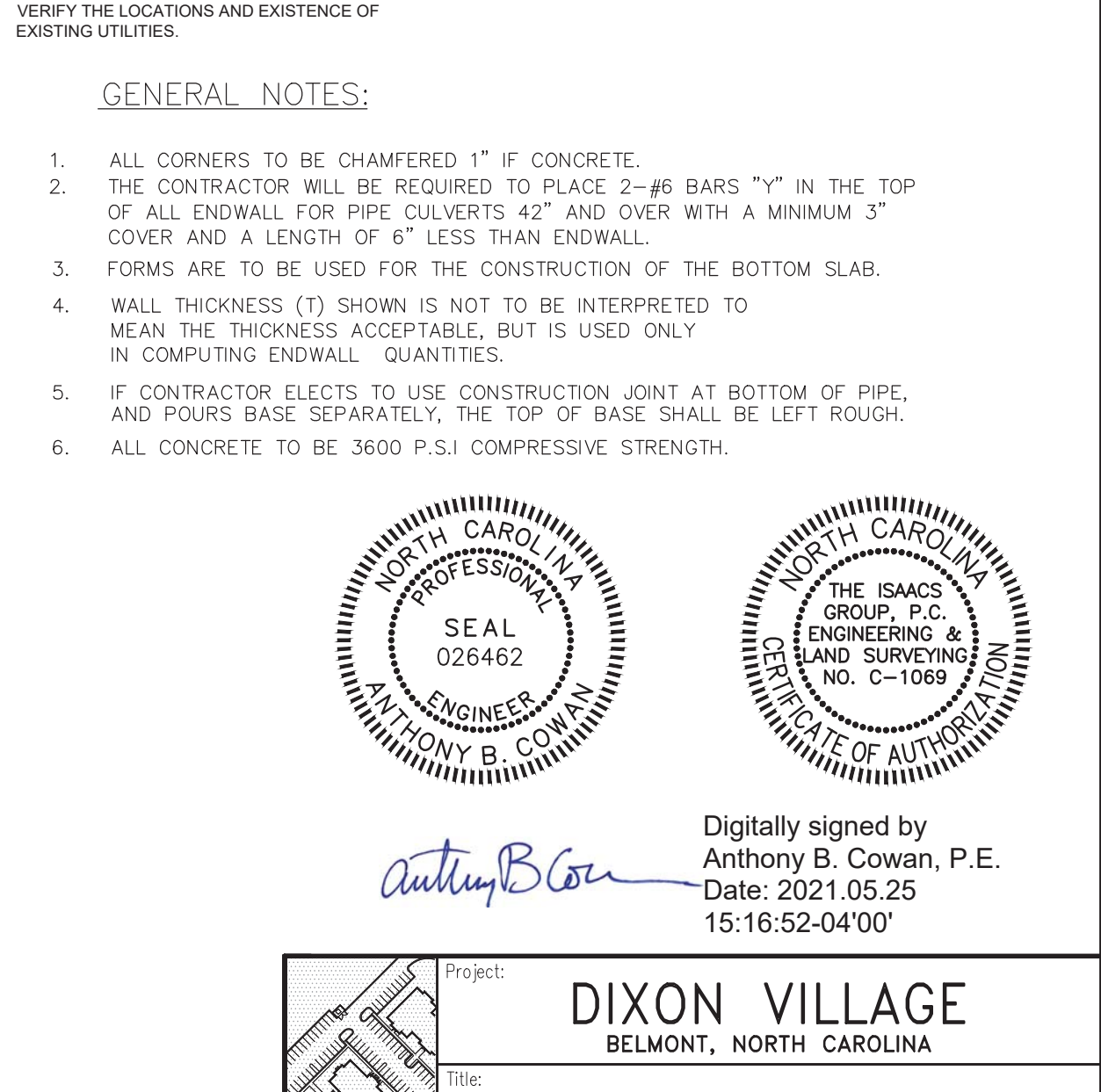
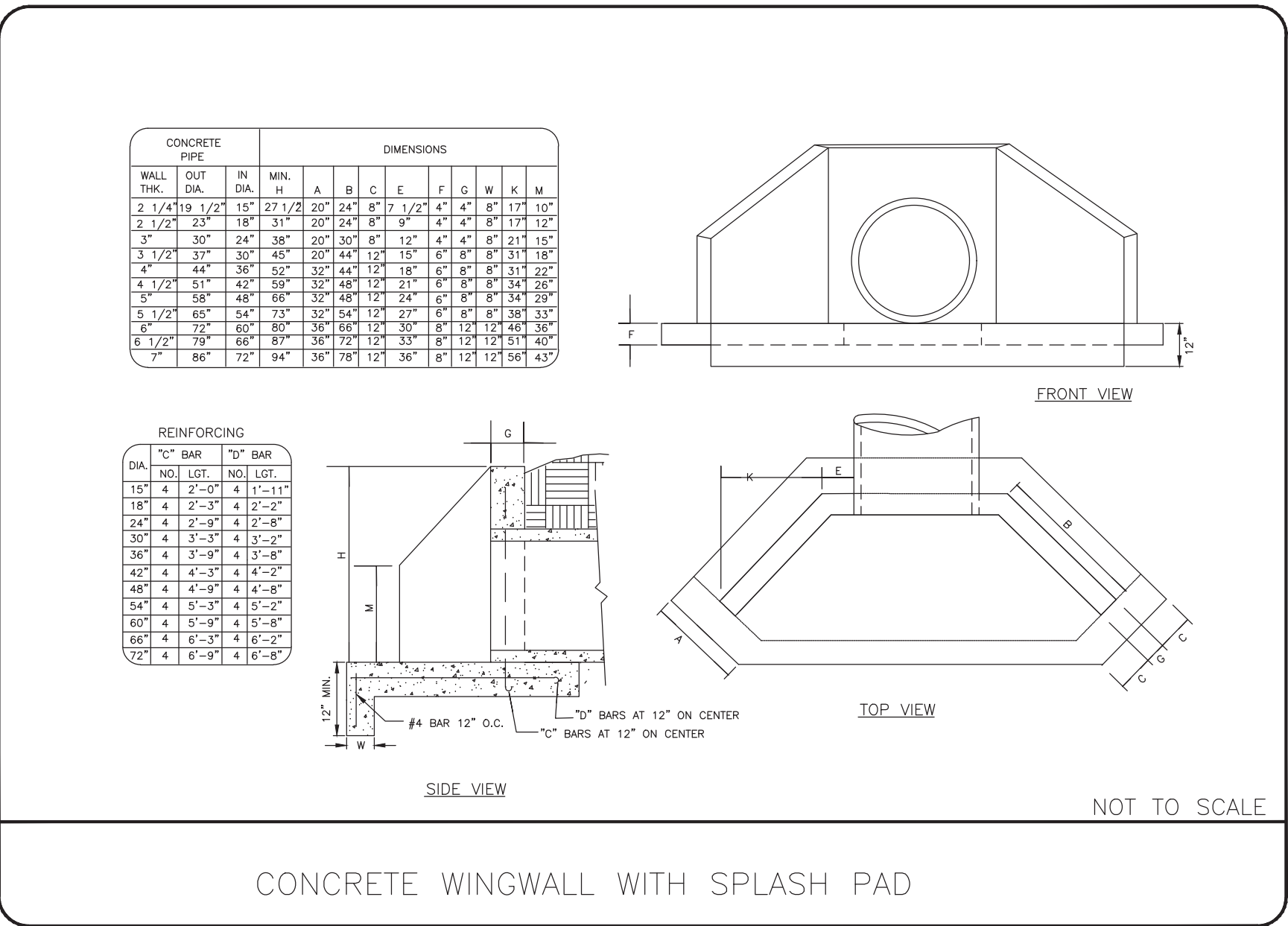
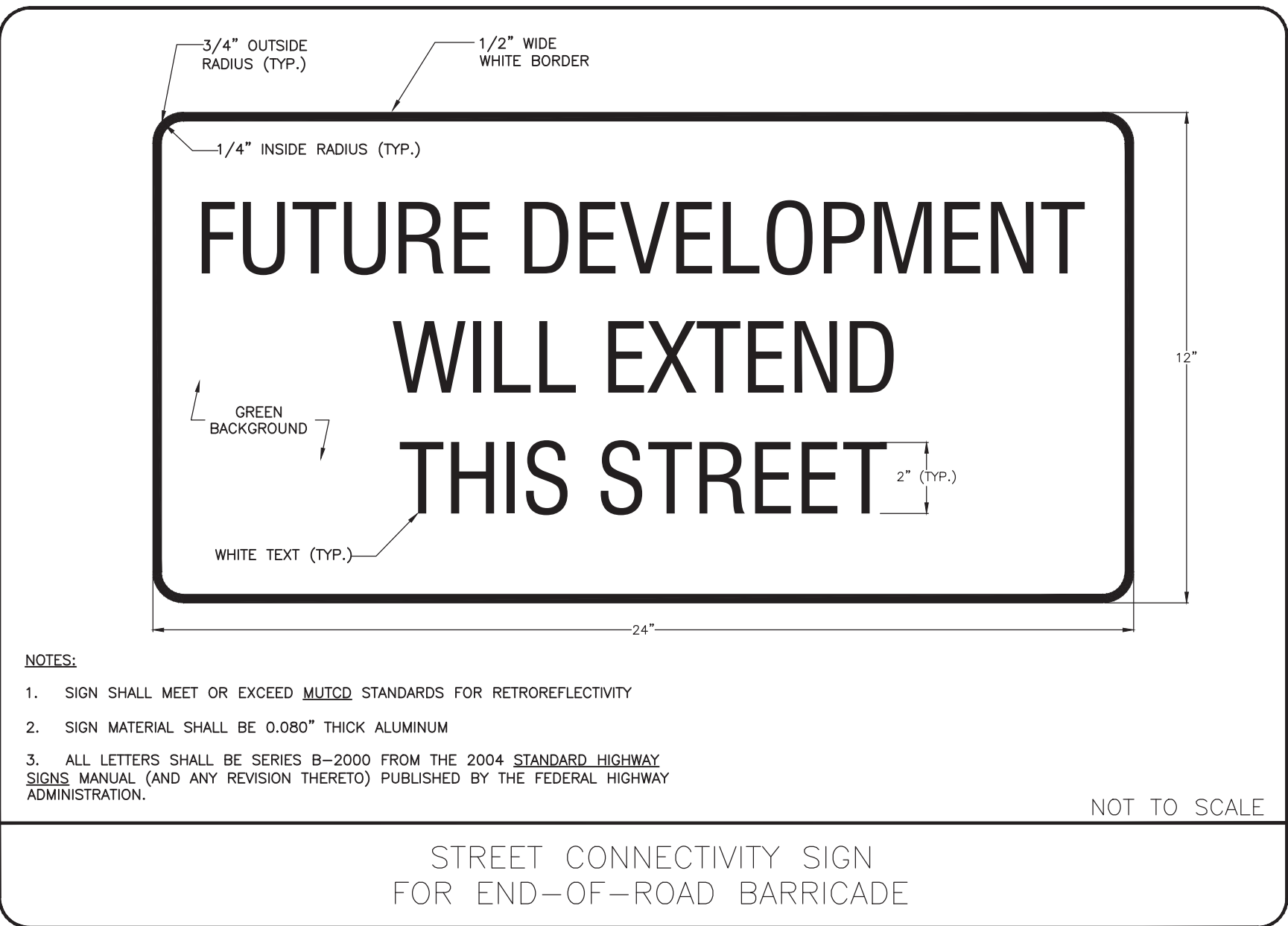
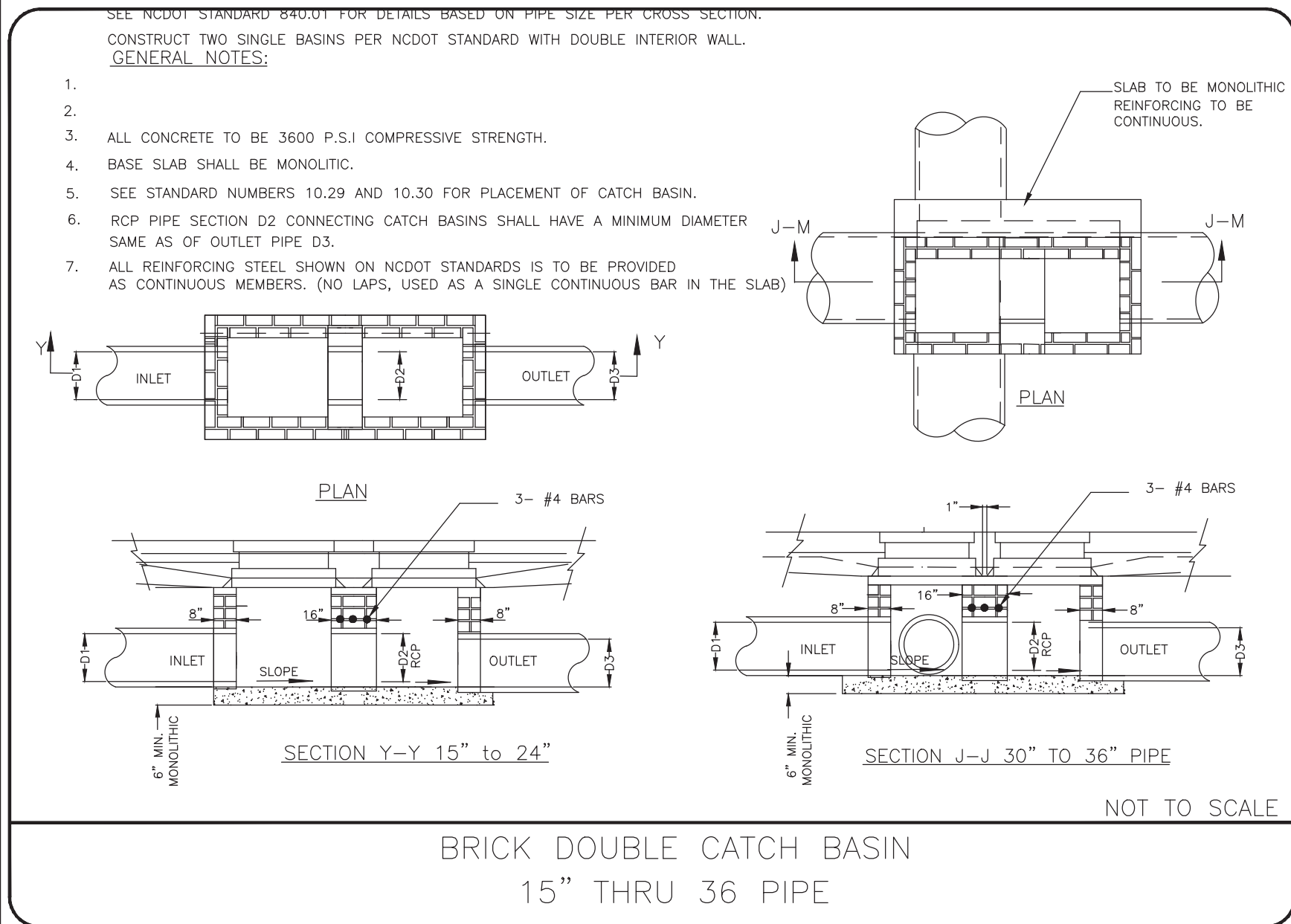
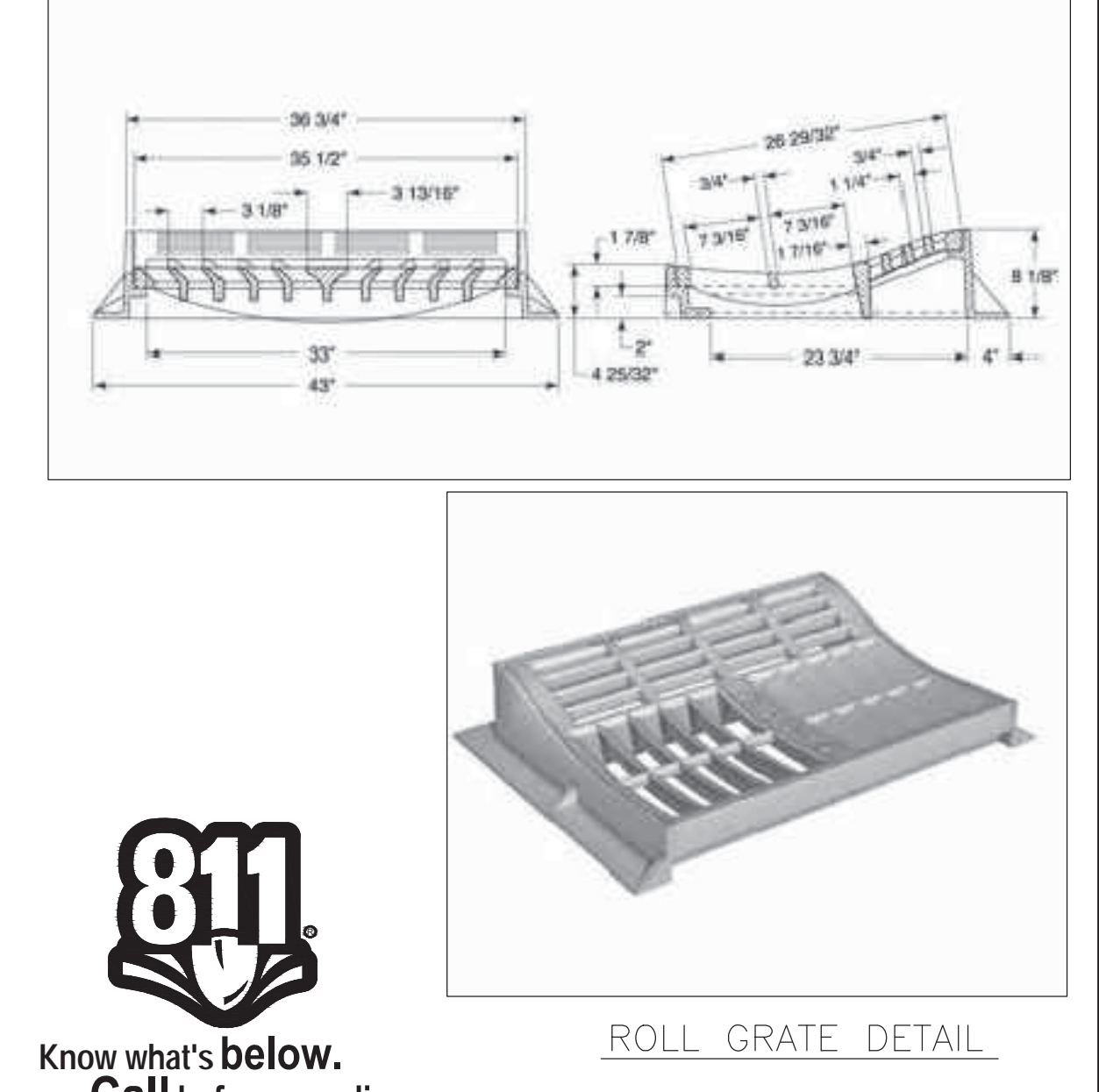
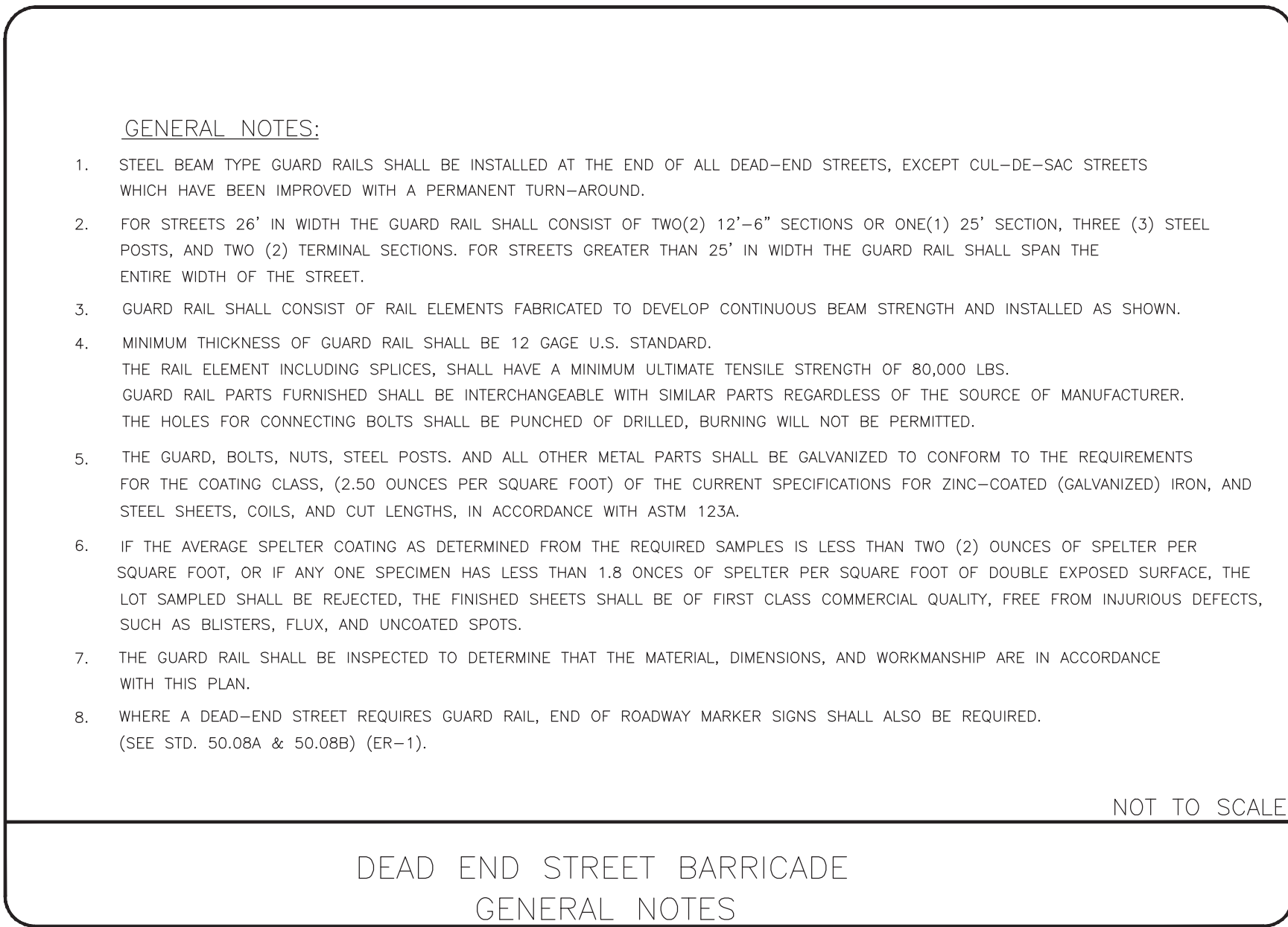
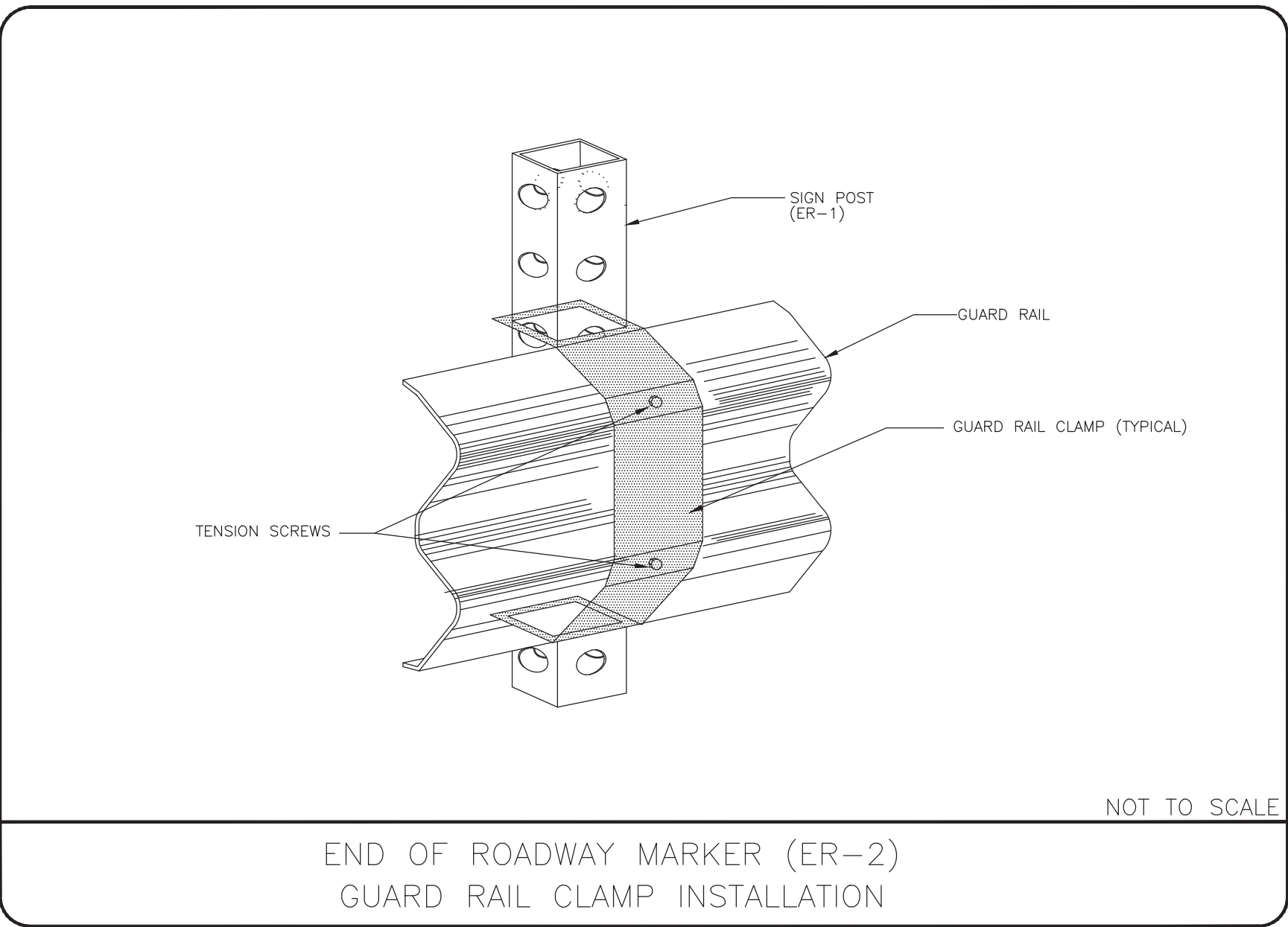
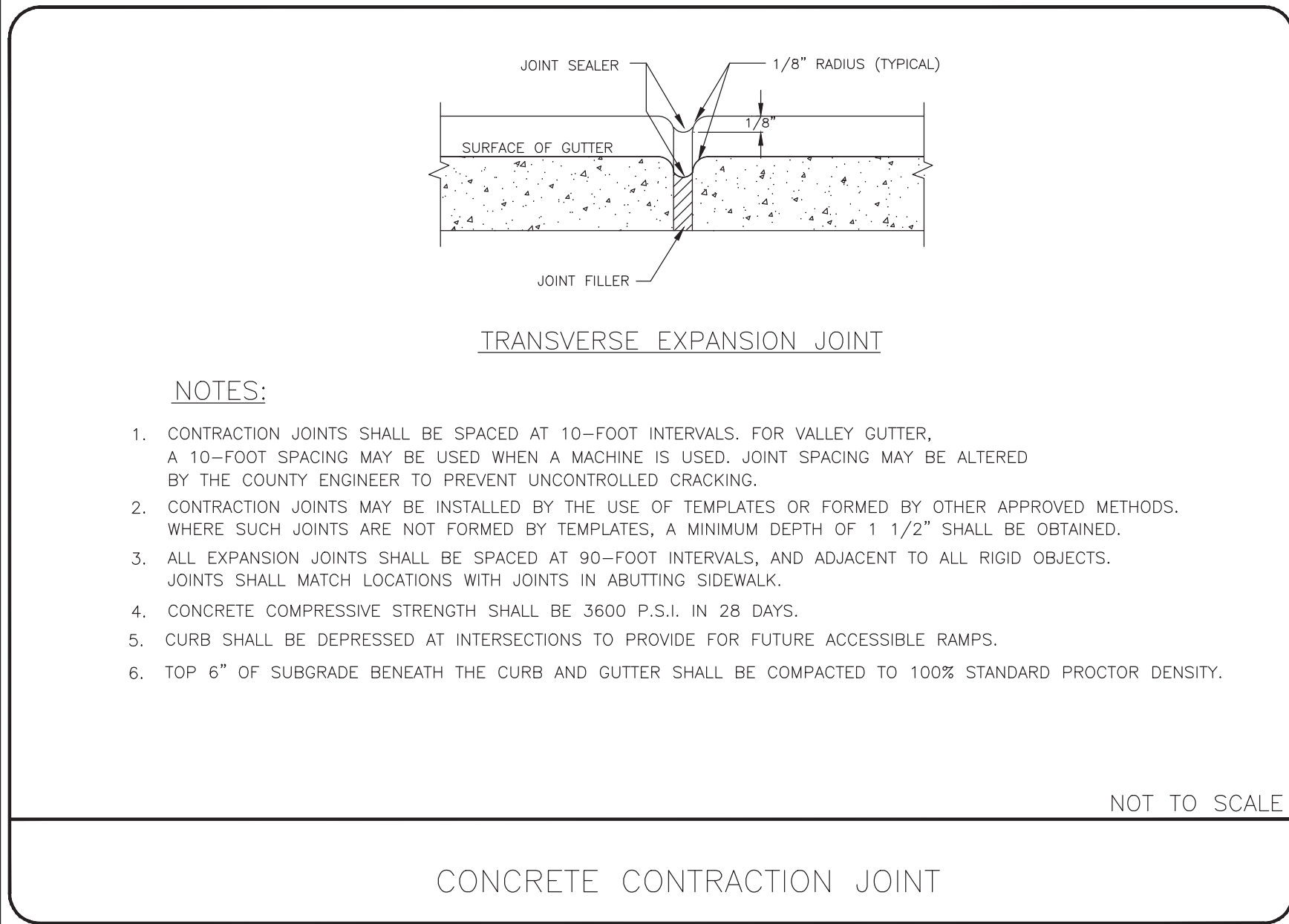
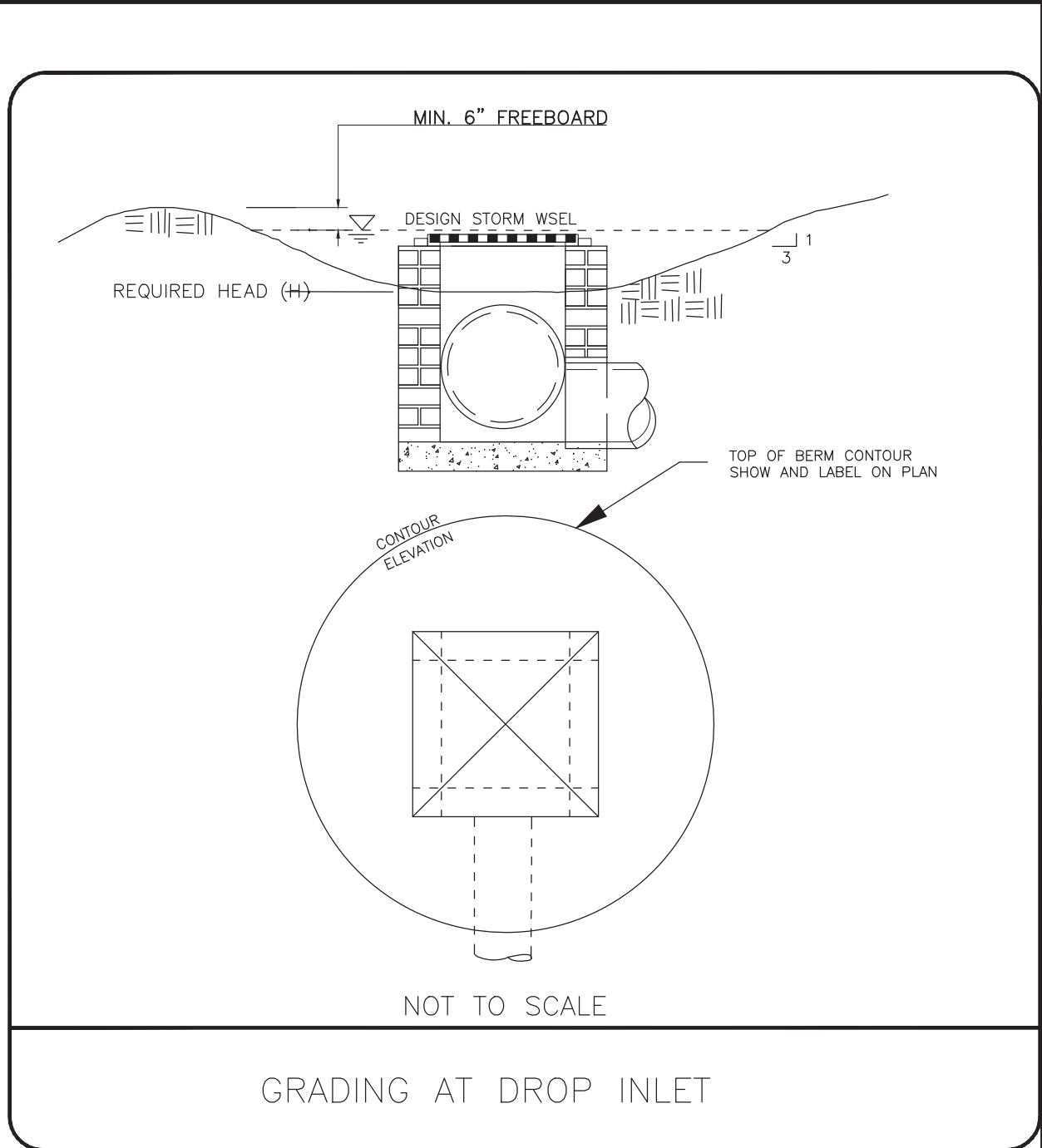
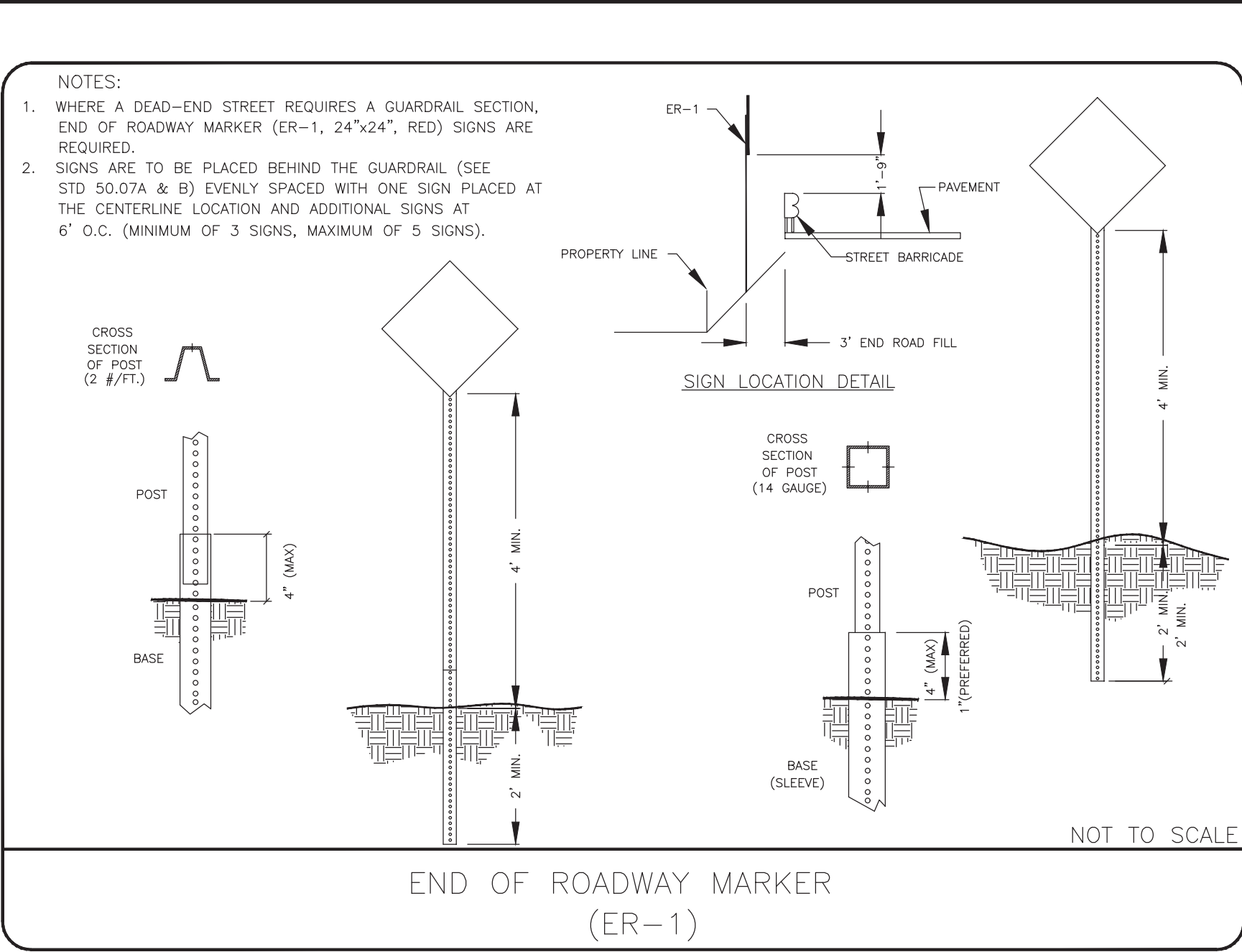
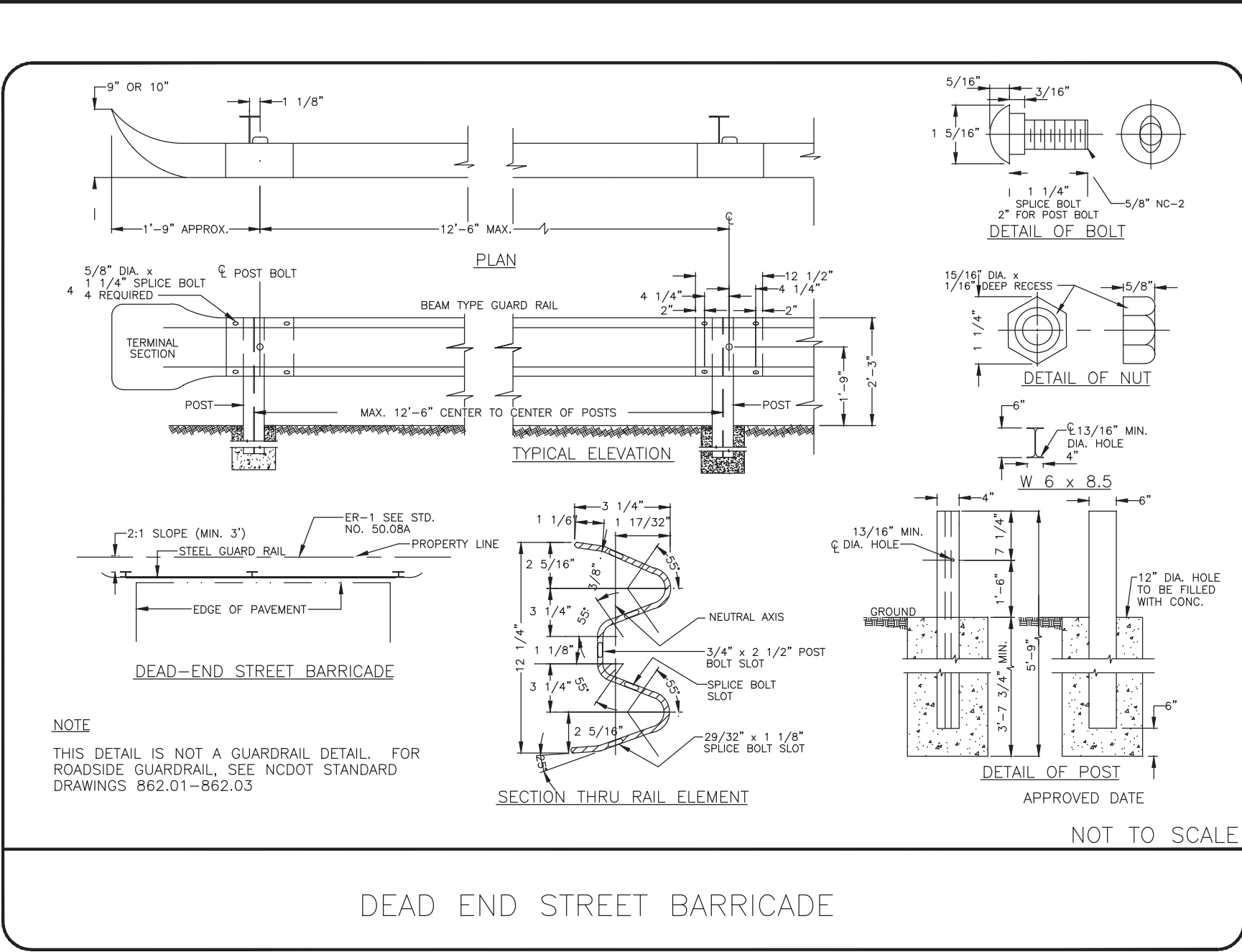
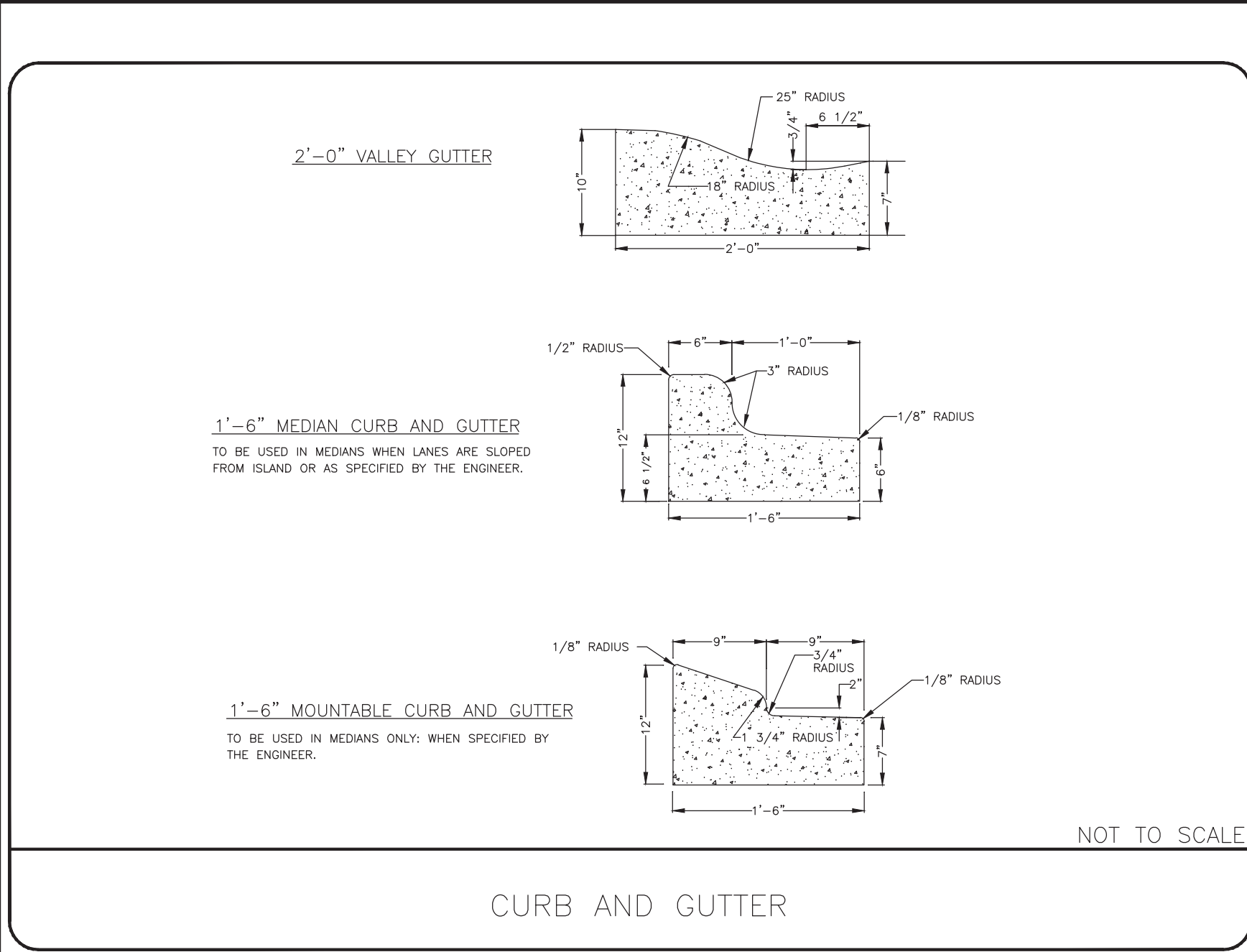
Project: DIXON VILLAGE BELMONT, NORTH CAROLINA	
Title: EROSION CONTROL PLAN	
POST-DEVELOPED CONDITIONS	
File #: 20162-PB.dwg	Date: 11/13/2020
Project Egr: ABC	Design By: ABC
Drawn By: RER	Scale: 1" = 40'
8720 RED OAK BOULEVARD, SUITE 420 CHARLOTTE, N.C. 28217 PHONE (704) 527-3440 FAX (704) 527-8335	
C5.2	

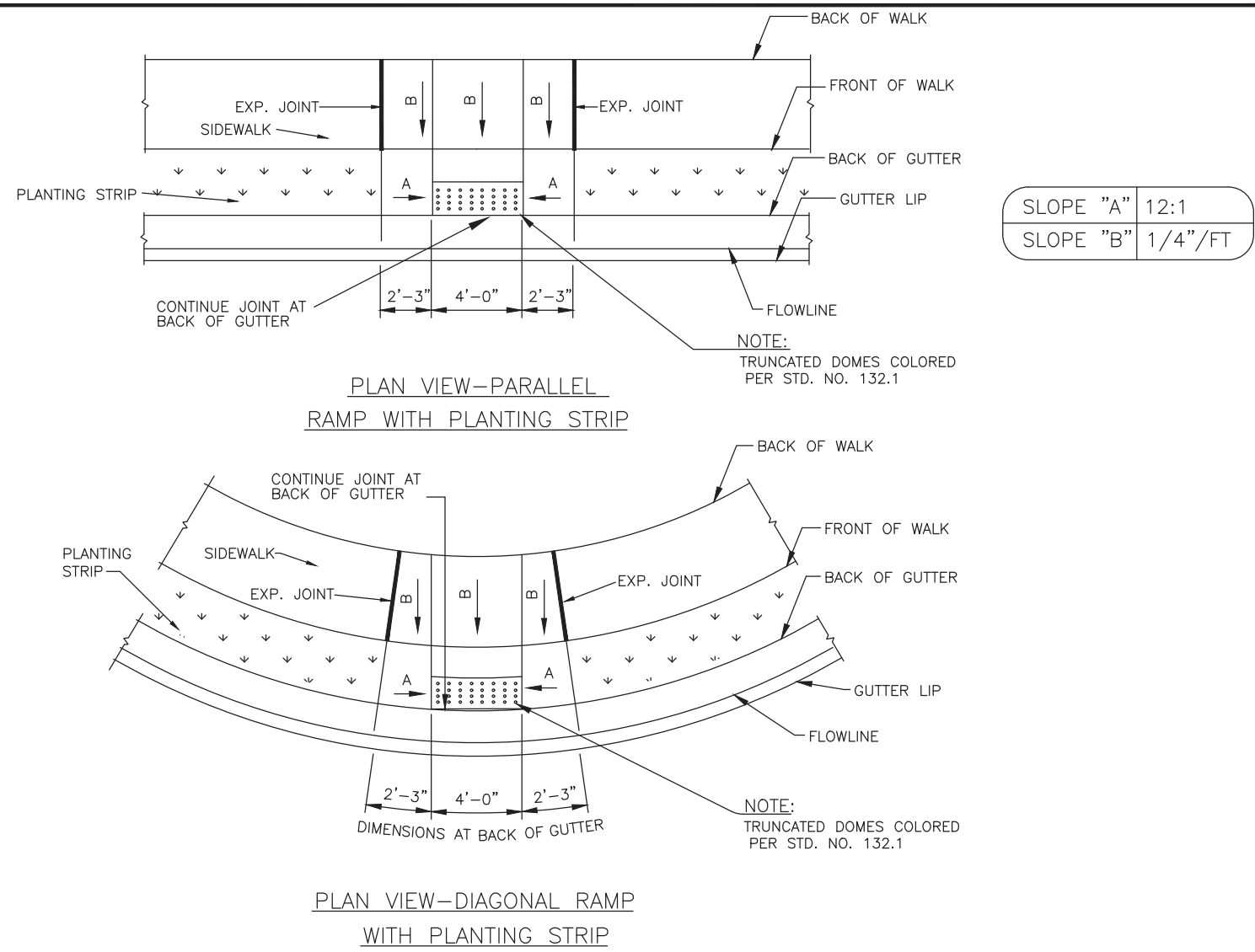
NO.	BY	DATE	REVISION
1	RER	3/15/10	PER GASTON COUNTY COMMENTS
2	MAO	9/23/10	SHIFT LOTS 16,21,22,28 PER TRANSFORMERS
3	RER	4/19/21	REVISED DUE TO ZONING
4	RER	5/17/21	PER CITY REVIEW
5	ABC	7/12/21	PER CITY 2ND REVIEW

GRAPHIC SCALE
1 INCH = 40 FEET

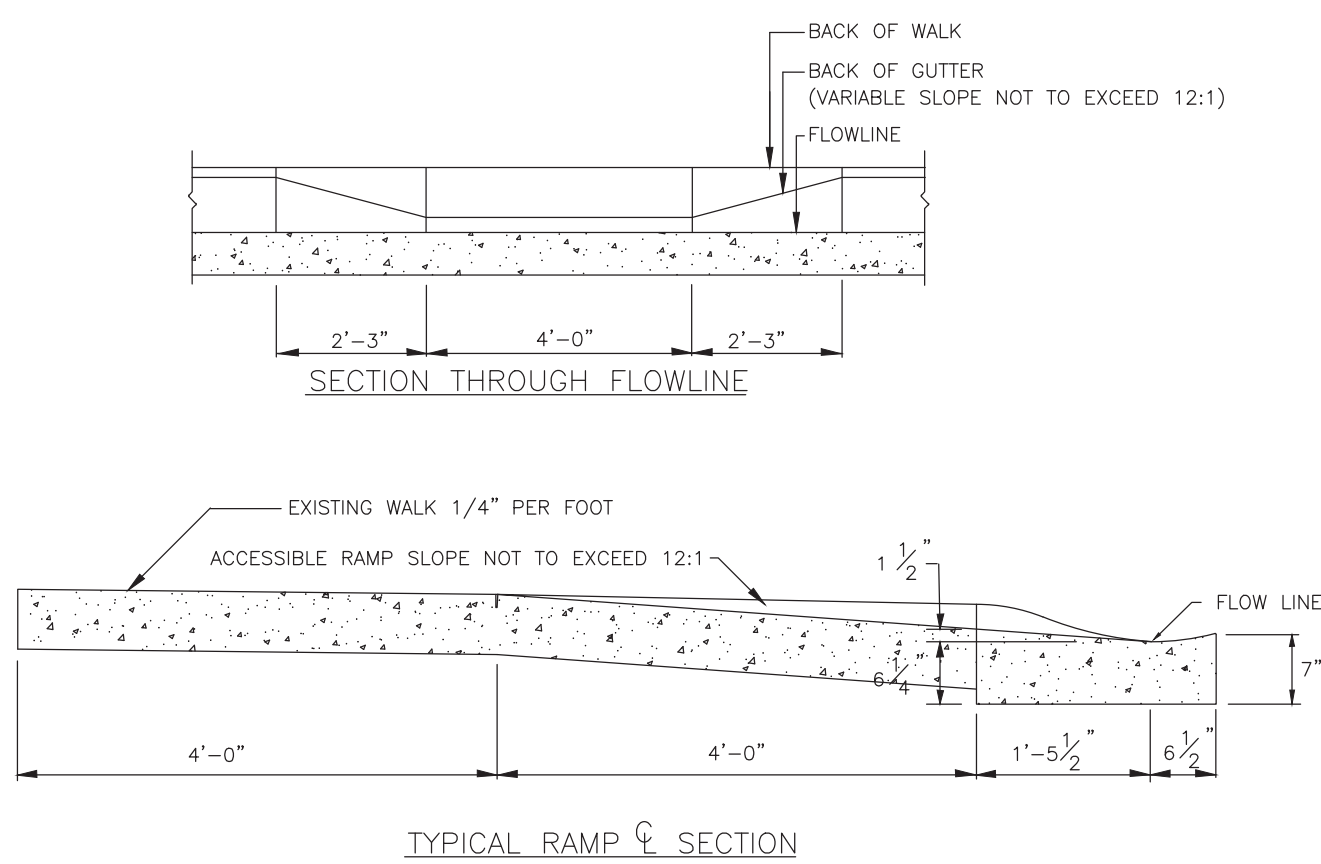
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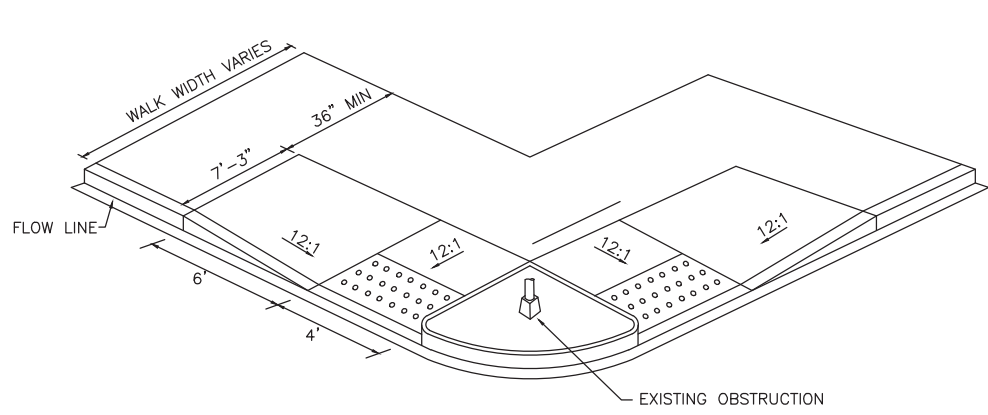
ACCESSIBLE RAMP STANDARD 2'-0" VALLEY GUTTER



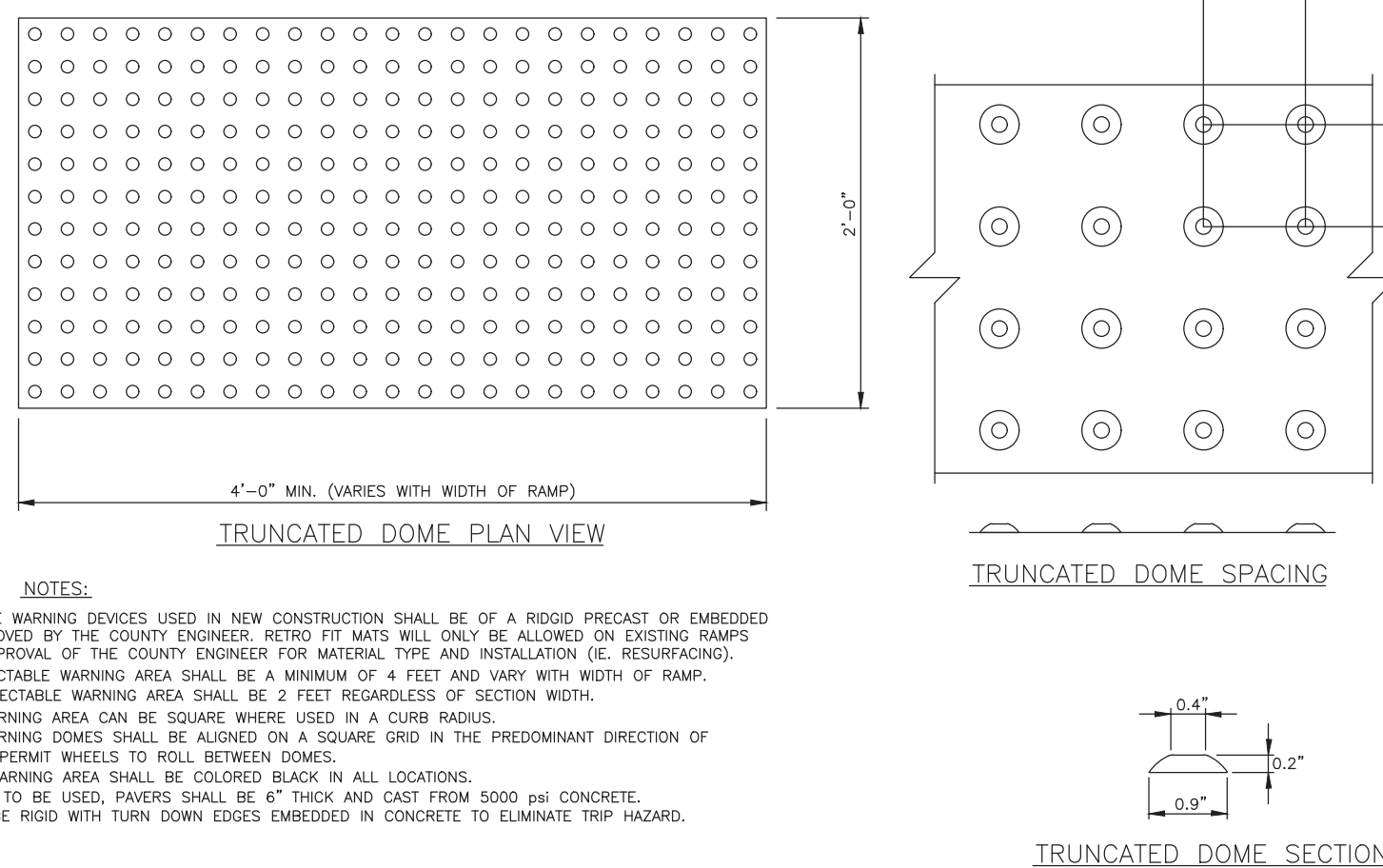
ACCESSIBLE RAMP SECTIONS 2'-0" VALLEY GUTTER

NOTES:

- RAMP AND WING SLOPES SHALL NOT BE STEEPER THAN 12:1.
- GUTTER FLOW LINE AND PLAN PROFILE SHALL BE MAINTAINED THROUGH THE RAMP AREA.
- THE SURFACE OF THE RAMP SHALL BE FLUSH WITH THE FLOWLINE OF THE CURB AND GUTTER.
- THE RAMP OPENING (AT THE FULLY DERESSED CURB) SHALL BE LOCATED WITHIN THE PARALLEL BOUNDARIES OF THE CROSOWALK MARKINGS. THE RAMP CENTERLINE SHALL BE LOCATED AT THE CORNER RADIUS CENTERLINE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. DIAGONAL CURB RAMP SHALL HAVE A SEGMENT OF STRAIGHT CURB AT LEAST 24 INCHES LONG LOCATED ON EACH SIDE OF THE WING SLOPE AND WITHIN THE CROSOWALK MARKINGS.
- THE WING AND RAMP SURFACES SHALL BE 3600 PSI CONCRETE WITH A SIDEWALK FINISH IN ACCORDANCE WITH CURRENT EDITION NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
- DRAINAGE STRUCTURES, MAST ARMS, LIGHT POLES AND OTHER OBSTRUCTIONS SHALL NOT BE PLACED IN LINE WITH RAMP. LOCATION OF THE RAMP SHALL TAKE PRECEDENCE OVER LOCATION OF OBSTRUCTIONS EXCEPT WHERE EXISTING OBSTRUCTIONS ARE BEING UTILIZED IN THE NEW CONSTRUCTION.
- AT ALL LOCATIONS, NOT LESS THAN 2 FEET OF FULL HEIGHT CURB SHALL BE PLACED BETWEEN THE RAMP.



STANDARD PLACEMENT OF ACCESSIBLE RAMPS AND GENERAL NOTES



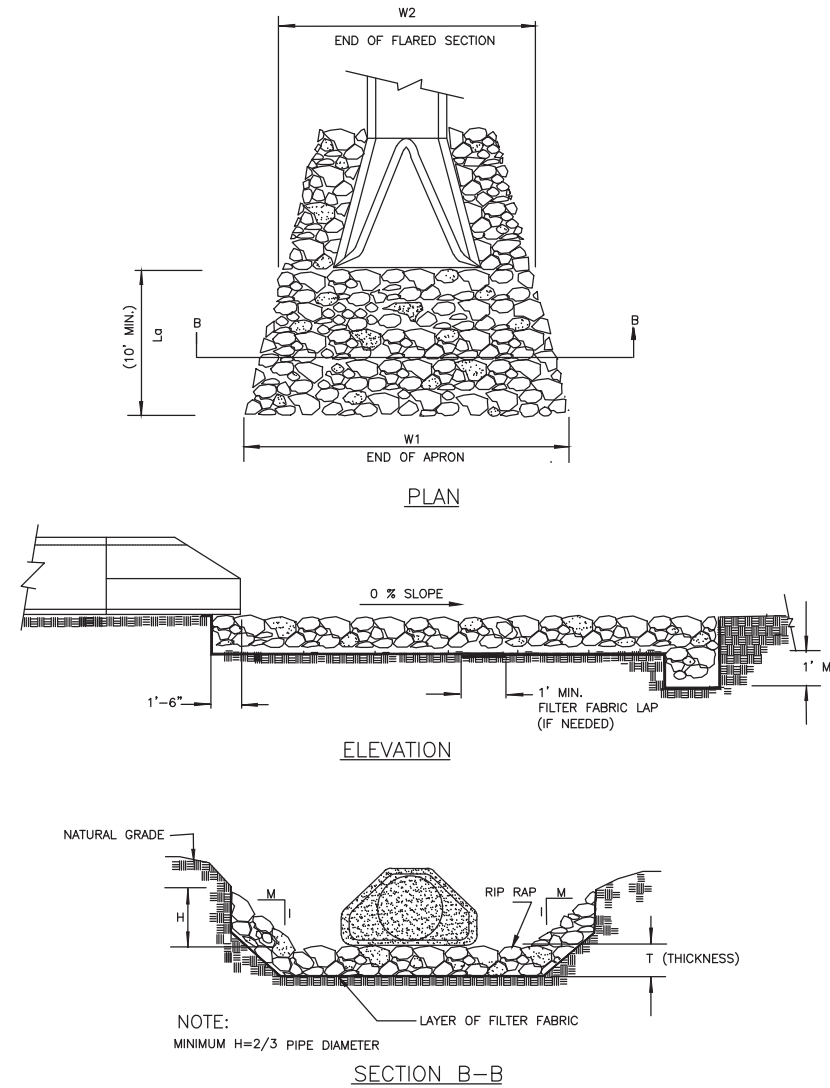
TRUNCATED DOMES PLAN AND CROSS-SECTION

NOTES:

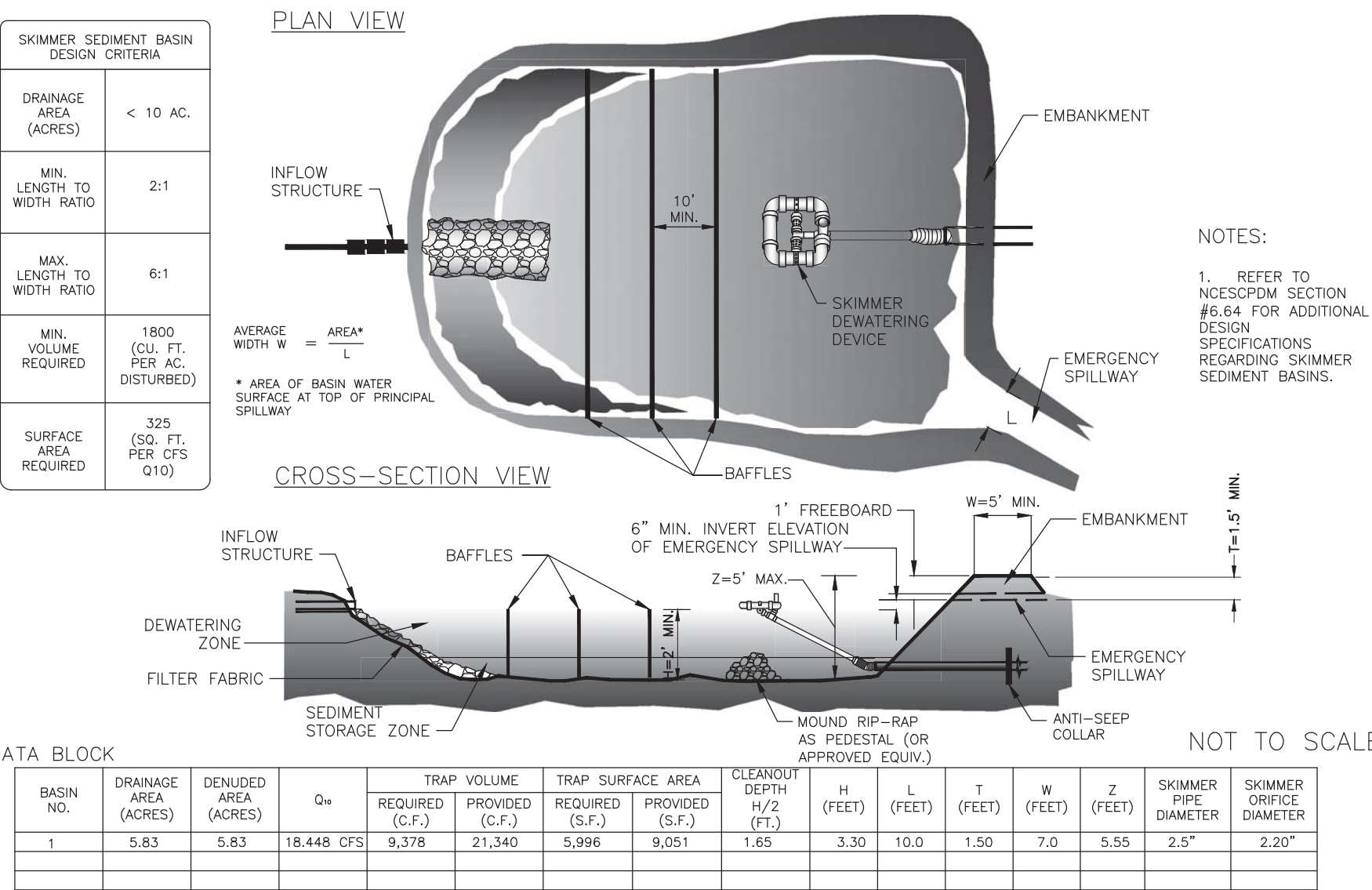
- CLASS OR MEDIAN SIZE OF RIPRAP AND LENGTH, WIDTH AND DEPTH OF APRON TO BE DESIGNED BY THE ENGINEER.
- REFER TO THE CHARLOTTE MECKLENBURG STORM WATER DESIGN MANUAL FOR RIPRAP APRON DESIGN STANDARDS.
- RIPRAP SHOULD EXTEND UP BOTH SIDES OF THE APRON AND AROUND THE END OF THE PIPE OR CULVERT AT THE DISCHARGE OUTLET AT A MAXIMUM SLOPE OF 2:1 AND A HEIGHT NOT LESS THAN TWO THIRDS THE PIPE DIAMETER OR CULVERT HEIGHT.
- THERE SHALL BE NO OVERFLOW FROM THE END OF THE APRON TO THE SURFACE OF THE RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIPRAPPED SHALL BE UNDERCUT SO THAT THE INVERT OF THE APRON SHALL BE AT THE SAME GRADE (FLUSH) WITH THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR TOE WALL AT THE DOWNSTREAM END.
- THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL. MAXIMUM TAPER TO RECEIVING CHANNEL, 5:1.
- ALL SUBGRADE FOR STRUCTURE TO BE COMPACTED TO 95% OR GREATER.
- THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.
- NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON WILL BE PERMITTED.
- FILTER FABRIC SHALL BE INSTALLED ON COMPACTED SUBGRADE PRIOR TO PLACEMENT OF RIP RAP.
- ANY DISTURBED AREA FROM END OF APRON TO RECEIVING CHANNEL, MUST BE STABILIZED. USE USDA NOMOGRAPH FROM NC SEDIMENT AND EROSION CONTROL MANUAL OR DESIGN DATA.

RIP RAP SUMMARY CHART					
OUTLET	L _a	W ₁	W ₂	T*	H

* 450 (max) lbs 8.06 (min) "NC SEDIMENT AND EROSION CONTROL MANUAL"
 d_{max} = 1.5 x d₅₀
 T = 1.5 x d_{max}



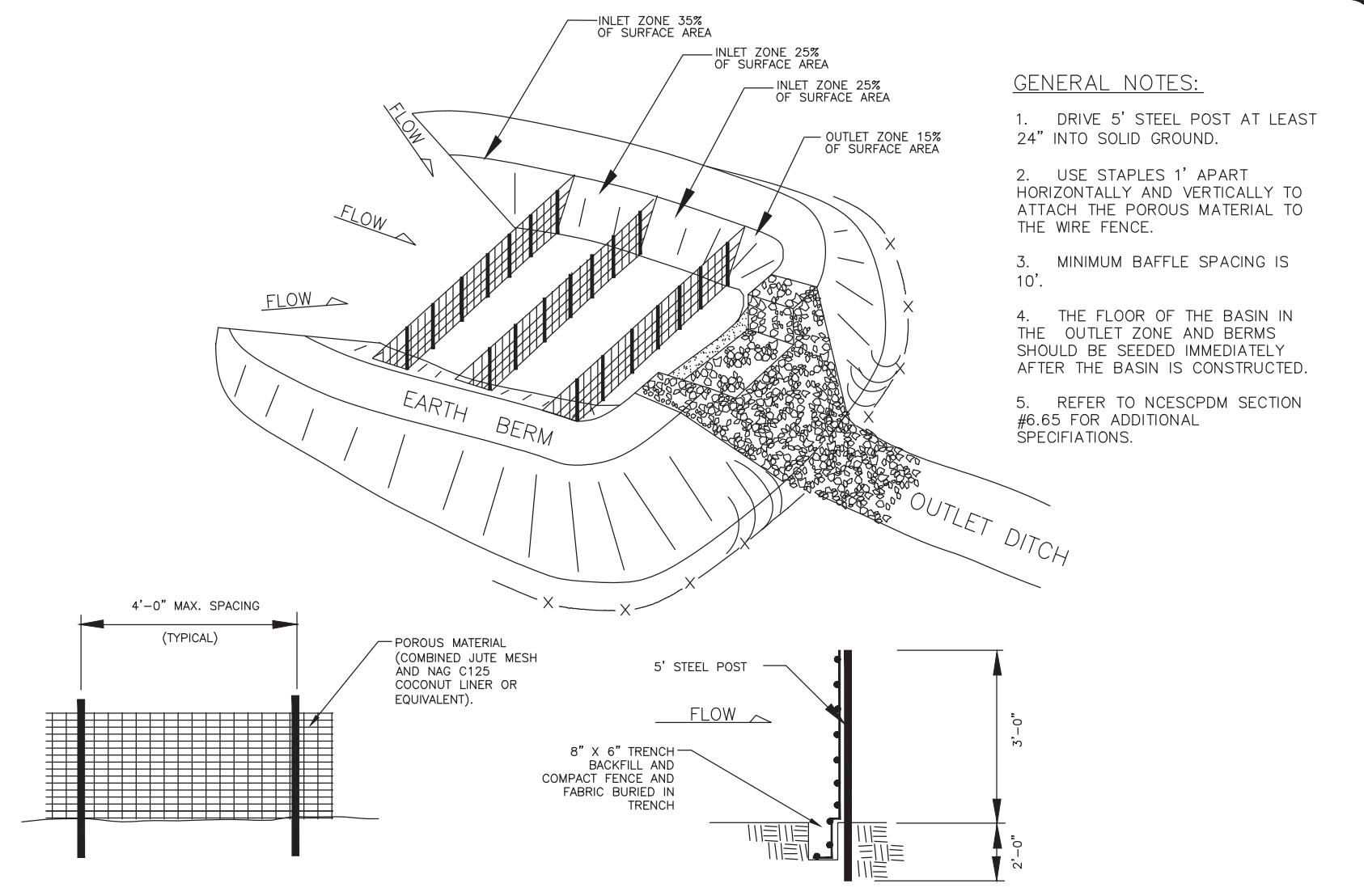
RIP RAP APRON AT PIPE OUTFALLS OTHER THAN AT SWIM



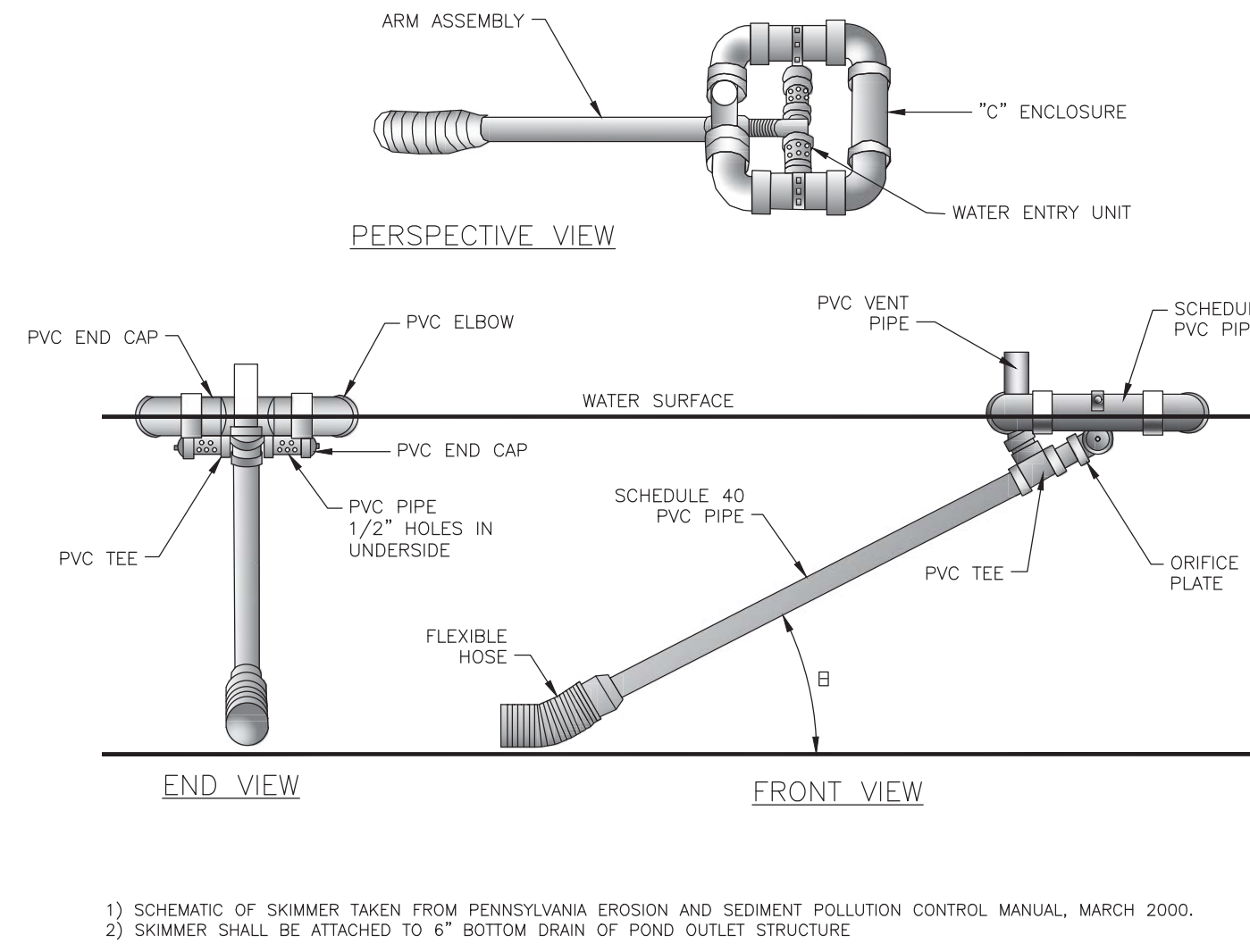
DATA BLOCK

BASIN NO.	DRAINAGE AREA (ACRES)	DEVELOPED AREA (ACRES)	Q _{av}	TRAP VOLUME REQUIRED (C.F.)	TRAP VOLUME PROVIDED (C.F.)	TRAP SURFACE AREA REQUIRED (S.F.)	TRAP SURFACE AREA PROVIDED (S.F.)	CLEAROUT DEPTH H/2 (FT.)	H (FEET)	L (FEET)	T (FEET)	W (FEET)	Z (FEET)	SKIMMER PIPE DIAMETER	SKIMMER ORIFICE DIAMETER
1	5.83	9.83	18,448 CFS	9,378	21,340	5,996	9,051	1.65	3.30	10.0	1.50	7.0	5.55	2.5"	2.20"

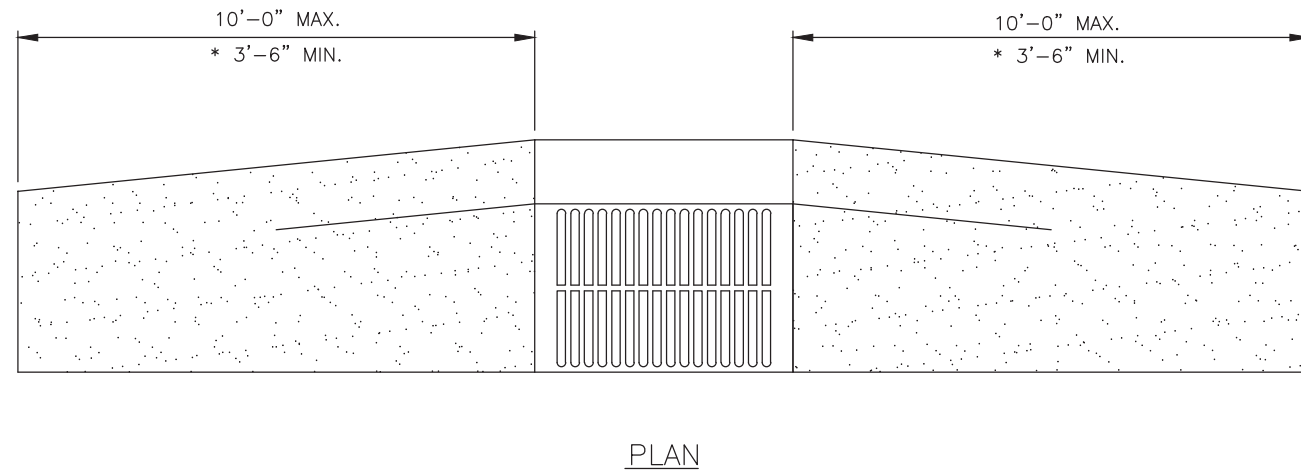
SKIMMER SEDIMENT BASIN



BAFFLE INSTALLATION



SKIMMER



CATCH BASIN FRAME IN VALLEY GUTTER

NO.	BY	DATE	REVISION
1	NER	4/19/21	REVISED DUE TO ZONING
2	NER	5/17/21	PER QTY REVIEW

811

Know what's below.
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THE EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY AND SHOULD NOT BE RELIED UPON AS THE EXACT LOCATION OR A COMPLETE INVENTORY WHEN PERFORMING SITE EXCAVATION. PRIOR TO COMMENCEMENT OF ANY EXCAVATION, CONTACT 811 OR A PRIVATE UTILITY LOCATOR AS NEEDED TO VERIFY THE LOCATIONS AND EXISTENCE OF EXISTING UTILITIES.

THE ISAACS GROUP, P.C.
ENGINEERING & LAND SURVEYING
NO. C-10669

Digitally signed by Anthony B. Cowan, P.E.
Date: 2021.05.25 15:16:28-04'00'

Project: **DIXON VILLAGE**
BELMONT, NORTH CAROLINA

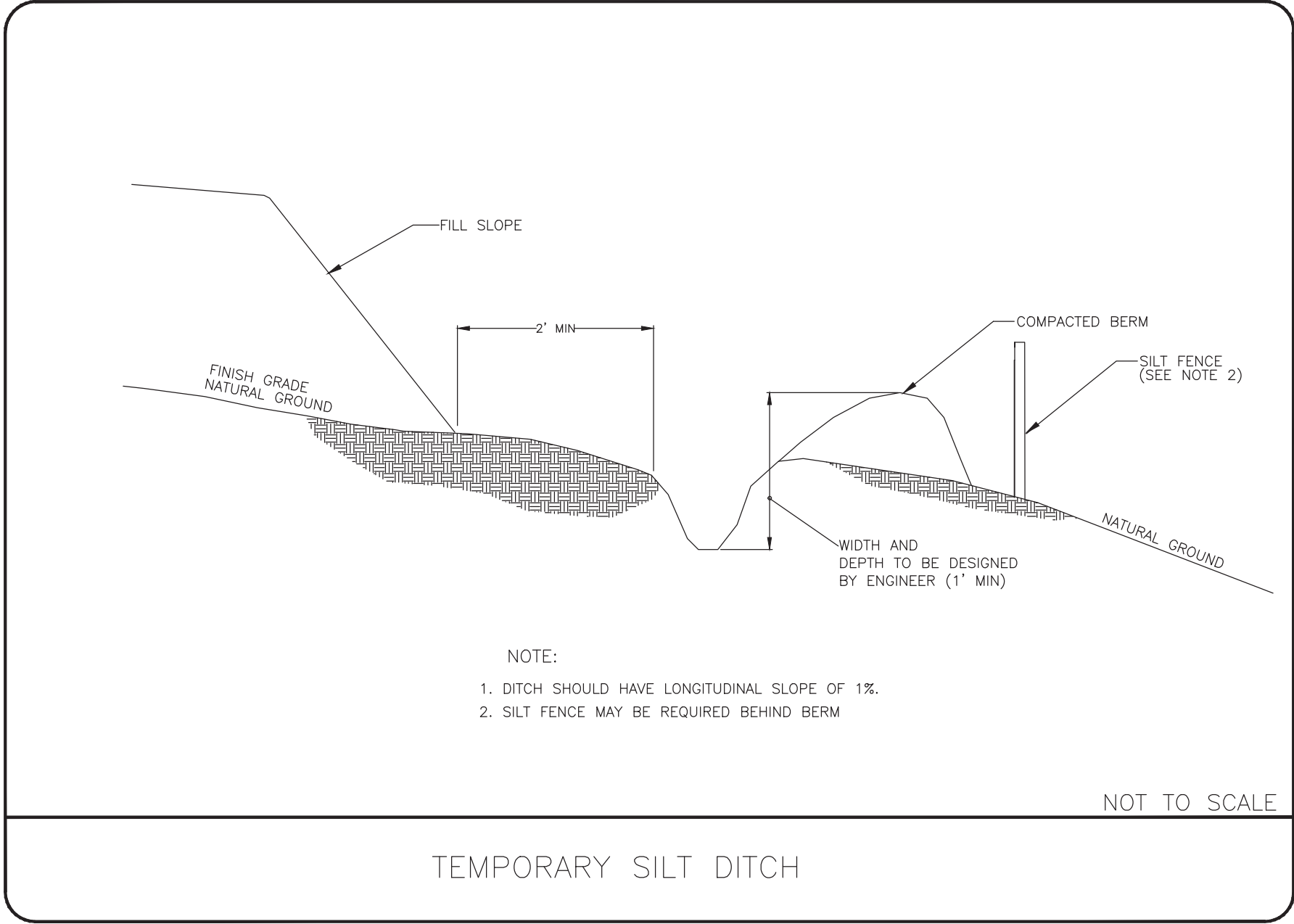
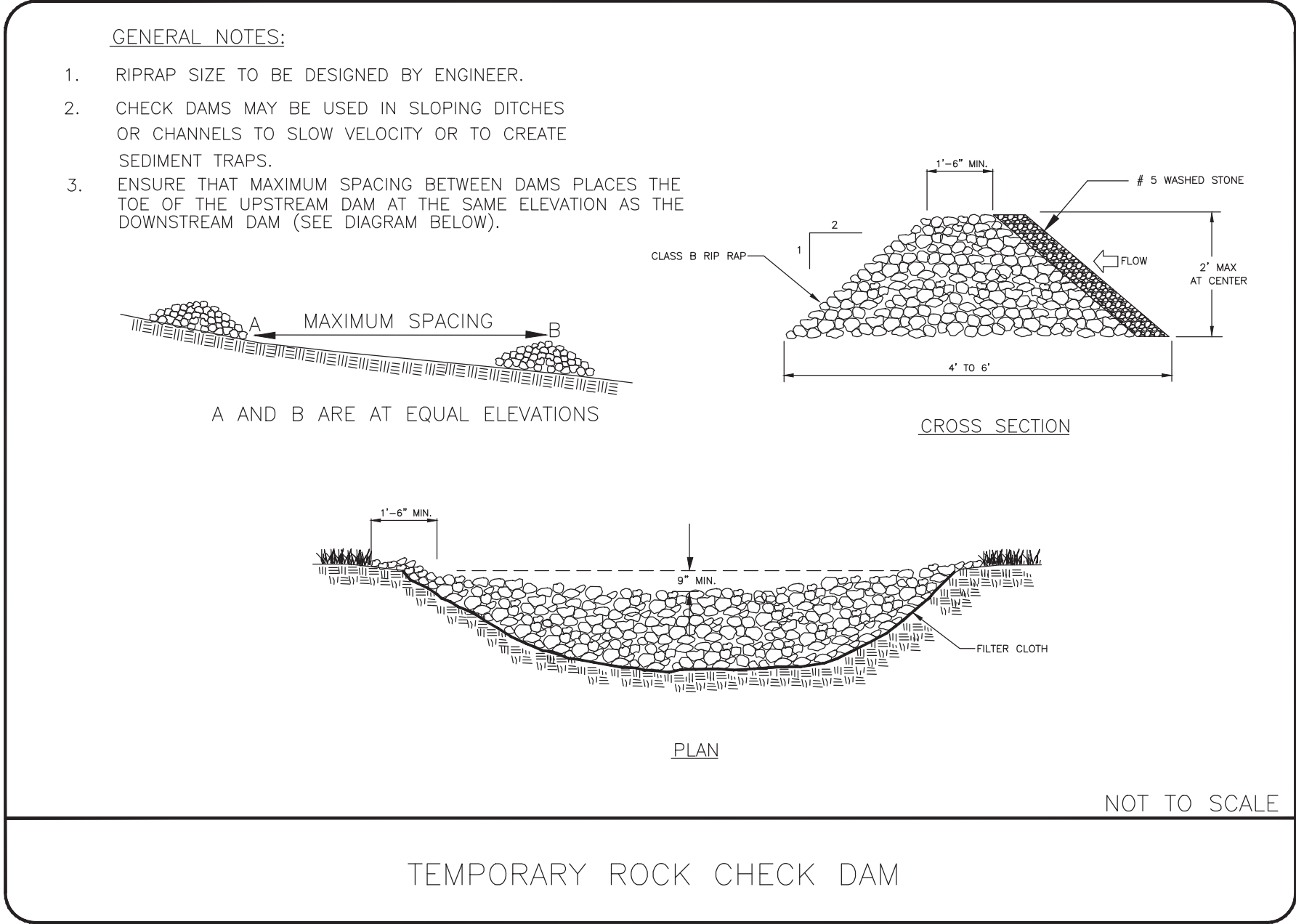
Title: **DETAILS & SPECIFICATIONS**

File #: 20162-DE.dwg Date: 11/13/2020 Project Egr: ABC

THE ISAACS GROUP
DESIGN BY: ABC
DRAWN BY: NER
Scale: 1" = 40'

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

C6.3



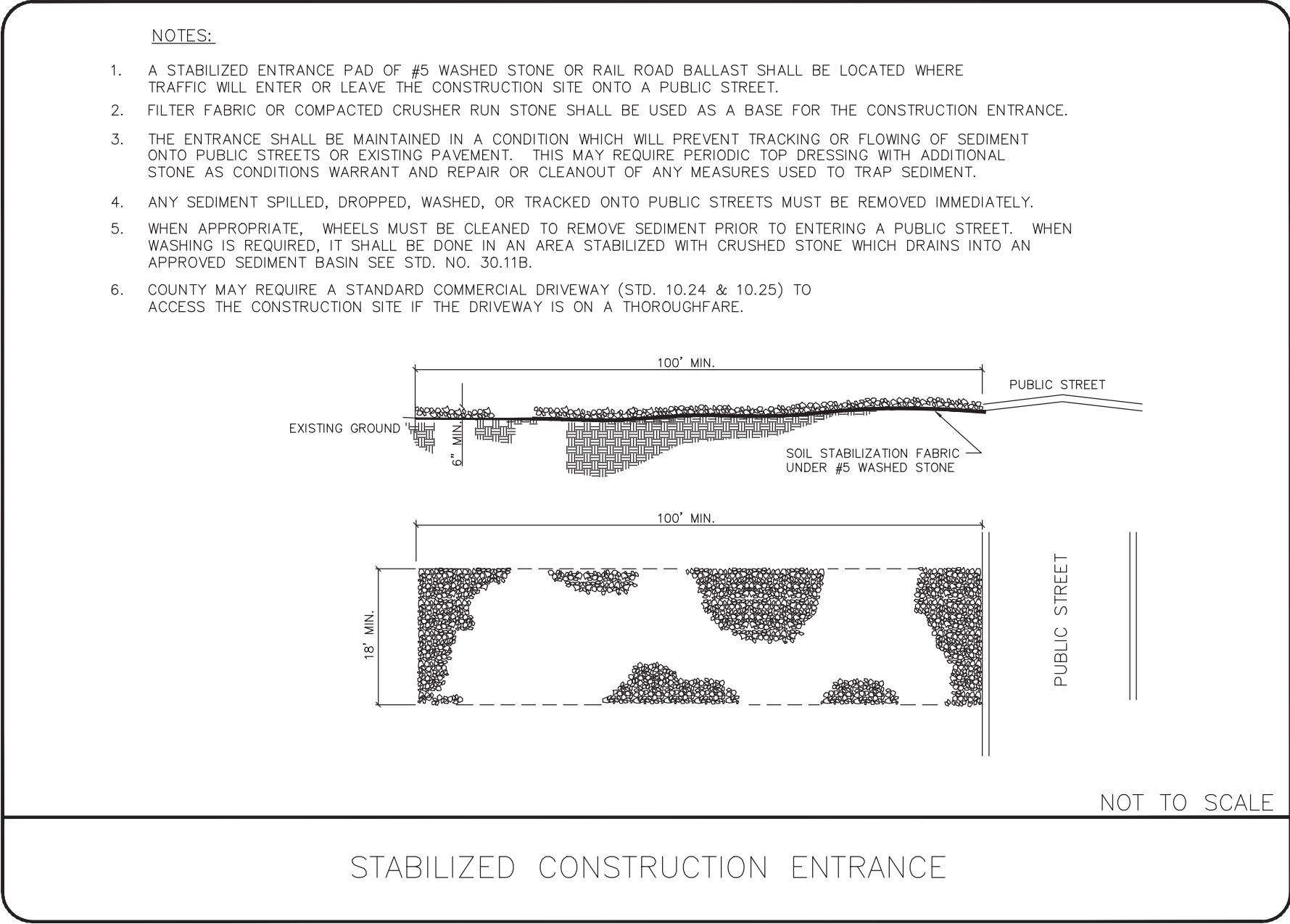
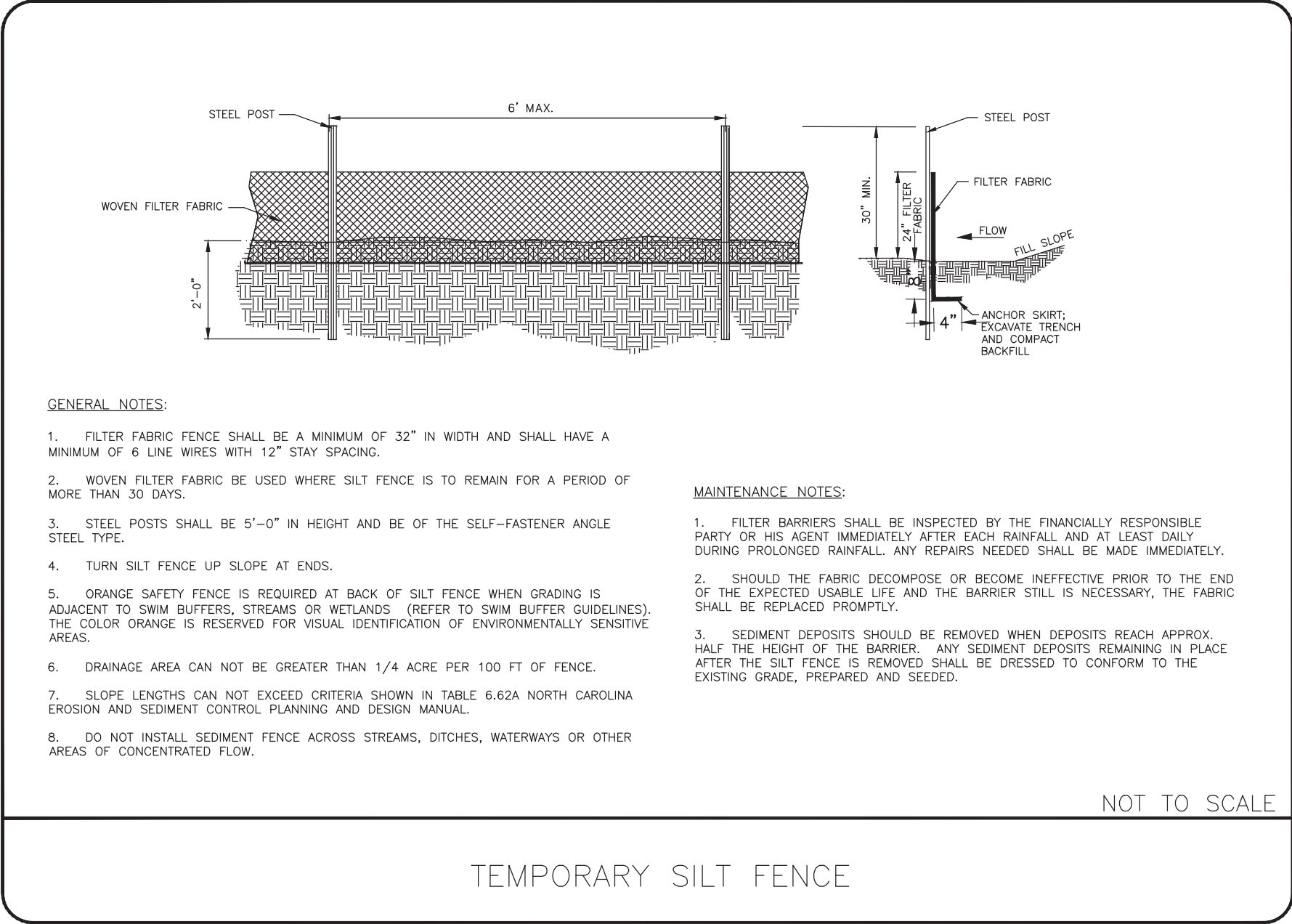
GENTLE SLOPES		STEEP SLOPES
SEEDING MIXTURE	80 lbs/acre of tall fescue	100 lbs/acre tall fescue 30 lbs/acre Sericea lespedeza (unscarified after August 15) 10 lbs/acre Kobe lespedeza
SEEDING DATES	FALL: August 25 – October Late winter: February 15 – April 15 To extend spring seeding into June, add 15 lbs/acre hulled Bermudagrass Overseeding of Kobe lespedeza over fall-seeded tall fescue is very effective.	FALL: August 25 – October 15 Late winter: February 15 – April 15 To extend spring seeding into June, add 15 lbs/acre hulled Bermudagrass Overseeding of Kobe lespedeza over fall-seeded tall fescue is very effective.
SEEDING AMENDMENTS	Apply lime and fertilizer per soil tests, or 4000 lbs/acre limestone and 1000 lbs/acre 10–10–10 fertilizer.	Apply lime and fertilizer per soil tests, or 4000 lbs/acre limestone and 1000 lbs/acre 10–10–10 fertilizer.

NOTE 1
Ground Cover—Protective cover must be established on all disturbed areas within 21 calendar days after land disturbing activity is completed or has temporarily ceased.

NOTE 2
Graded slopes and fills—Protective cover must be established on all graded slopes and fills within 21 calendar days after a phase of grading is completed or has temporarily ceased.

NOT TO SCALE

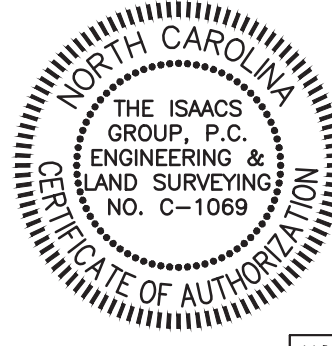
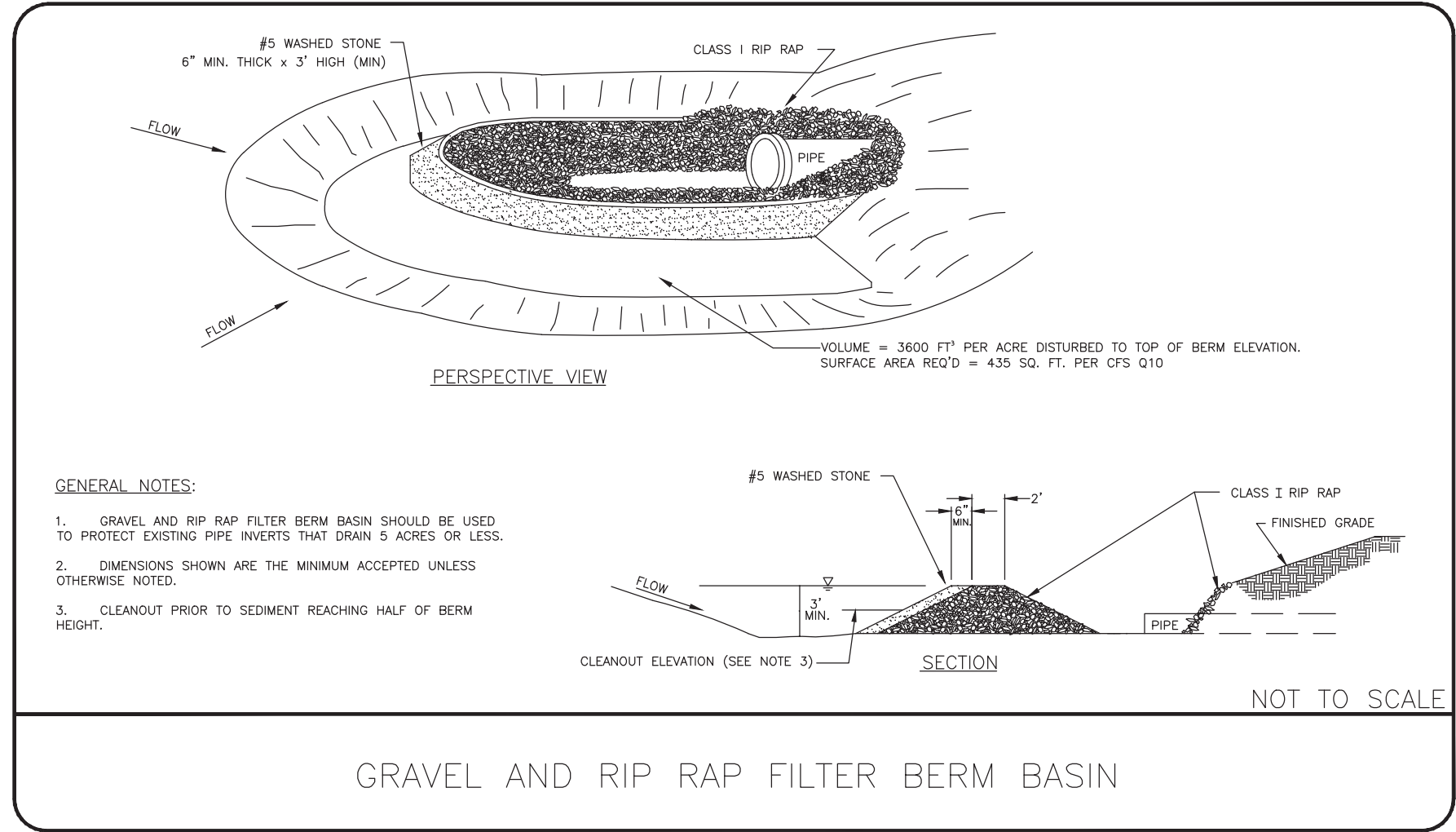
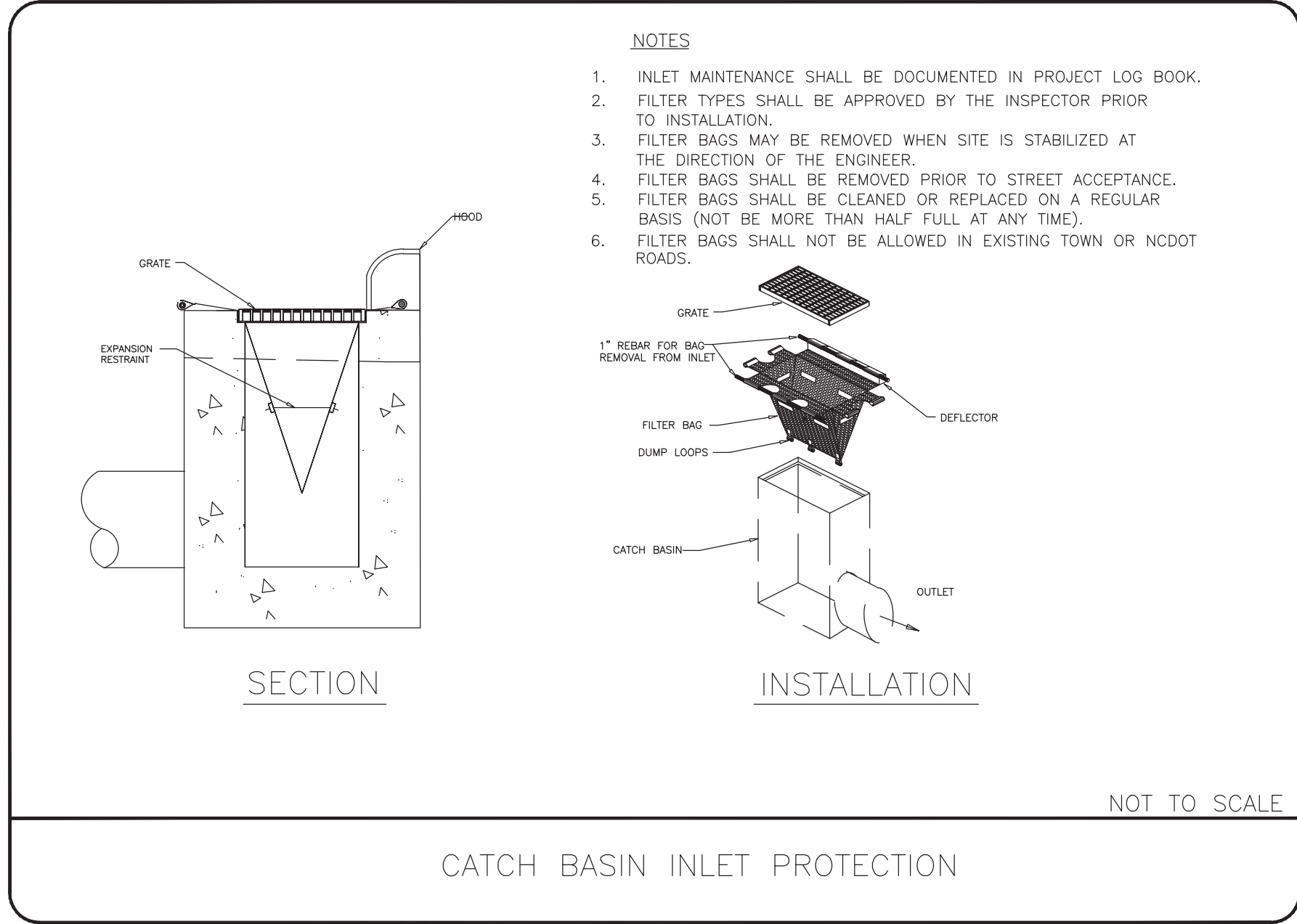
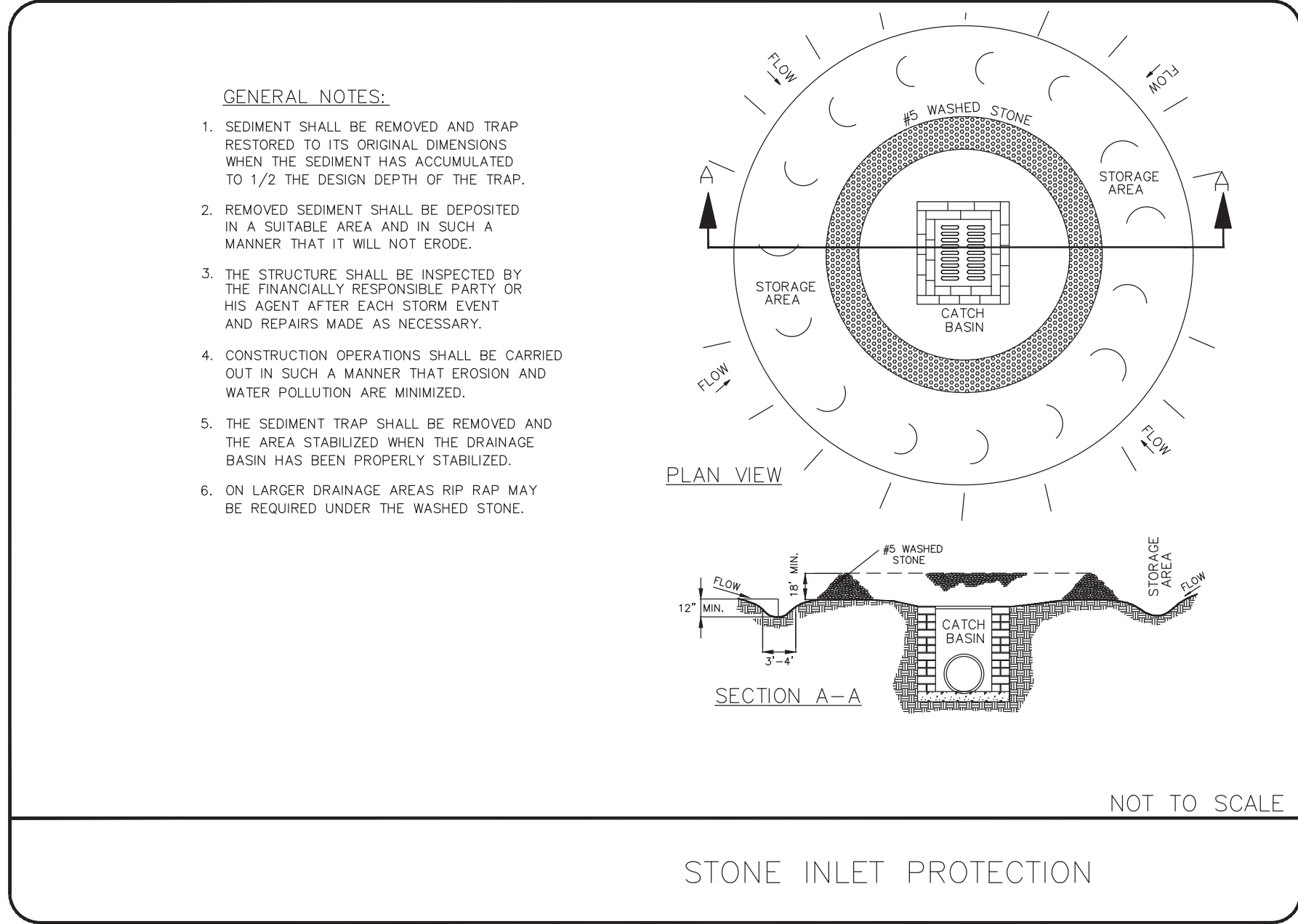
SEEDING SCHEDULE



TEMPORARY SEEDING FOR WARM AND COOL SEASON	
EARLY SUMMER SEASON	STEEP SLOPES
SEEDING MIXTURE	40 lbs/acre of German millet 80 lbs/acre of tall fescue
SEEDING DATES	May 1 – August 15
SEEDING AMENDMENTS	Refertilize if growth is not fully adequate. Apply 4000 lbs/acre straw or equivalent hydroseeding.
SEEDING MIXTURE	120 lbs/acre Rye (grain) 80 lbs/acre tall fescue
SEEDING DATES	October 25 – December 30
SEEDING AMENDMENTS	Between December 30 – February 15, add 50 lbs/acre of annual Kobe lespedeza. Apply 4000 lbs/acre straw or equivalent hydroseeding.
SEEDING AMENDMENTS	Apply lime and fertilizer per soil tests, or 2000 lbs/acre limestone and 750 lbs/acre 10–10–10 fertilizer.

NOT TO SCALE

SEEDING SCHEDULE
(SEASONAL)



Digitally signed by
Anthony B. Cowan,
P.E.
Date: 2021.04.21
09:40:42-04'00'

NO.	BY	DATE	REVISION
1	RER	4/19/21	REVISED DUE TO ZONING

Project: **DIXON VILLAGE**
BELMONT, NORTH CAROLINA

Title: **DETAILS & SPECIFICATIONS**

File #: 20162-DE.dwg Date: 11/13/2020 Project Egr: ABC

Design By: ABC

Drawn By: RER

Scale: 1" = 40'

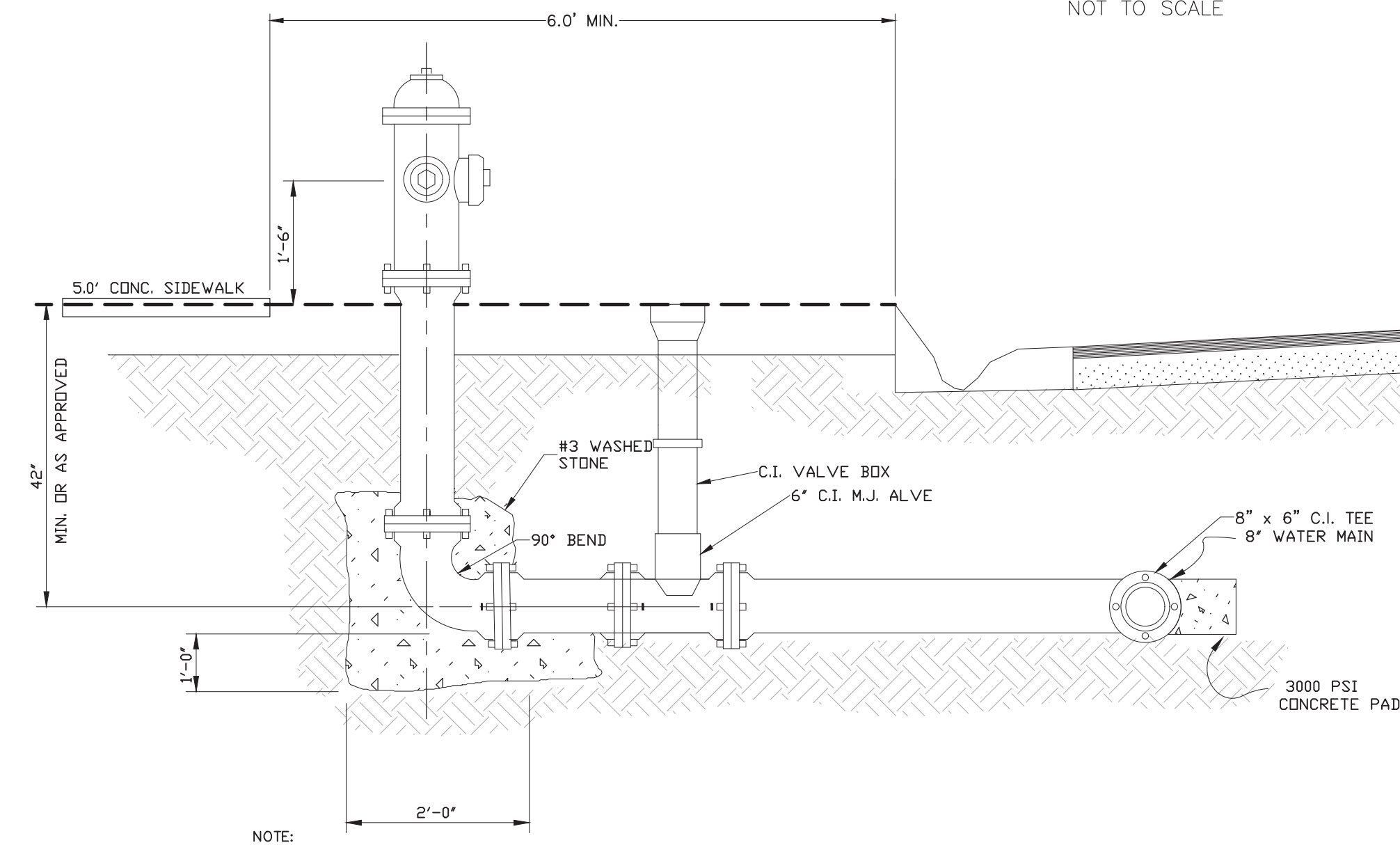
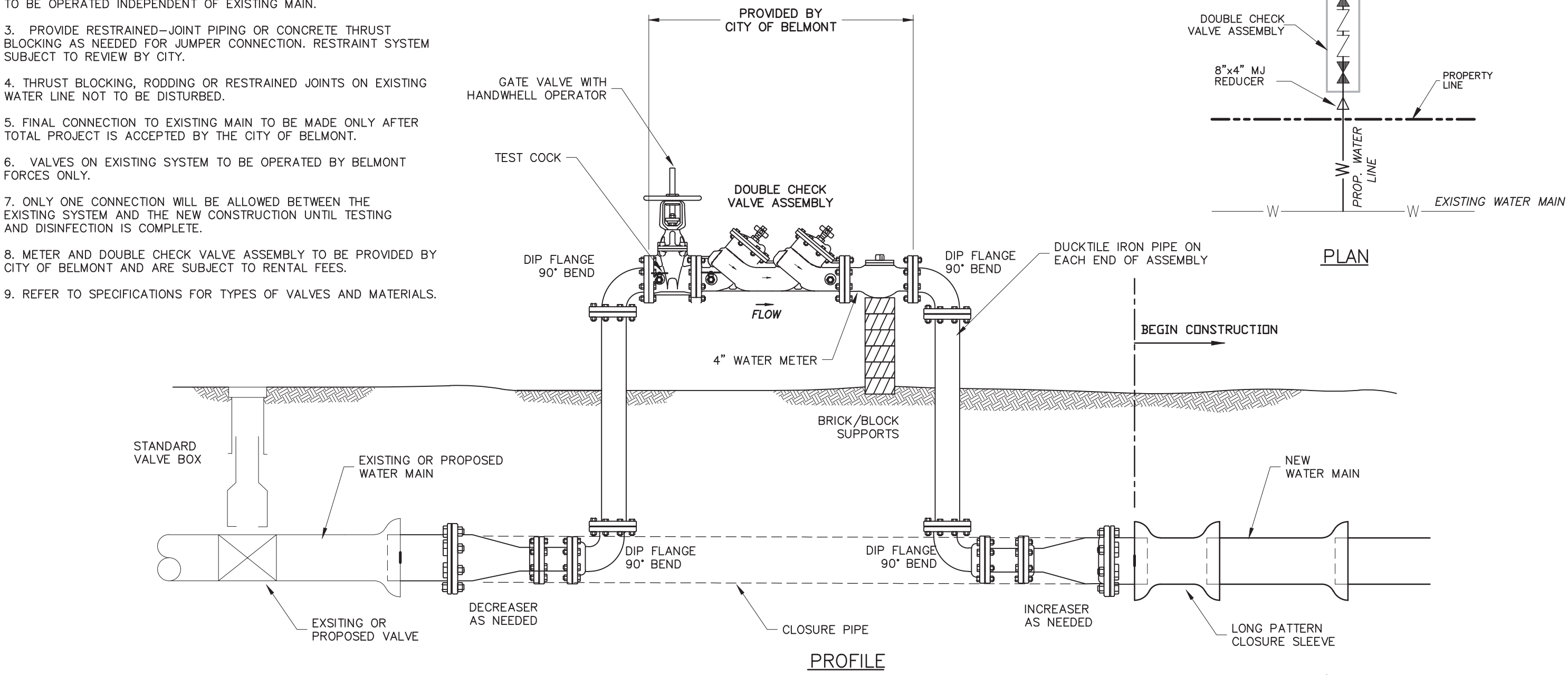
THE ISAACS GROUP
CIVIL ENGINEERING DESIGN AND SURVEYING

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

C6.4

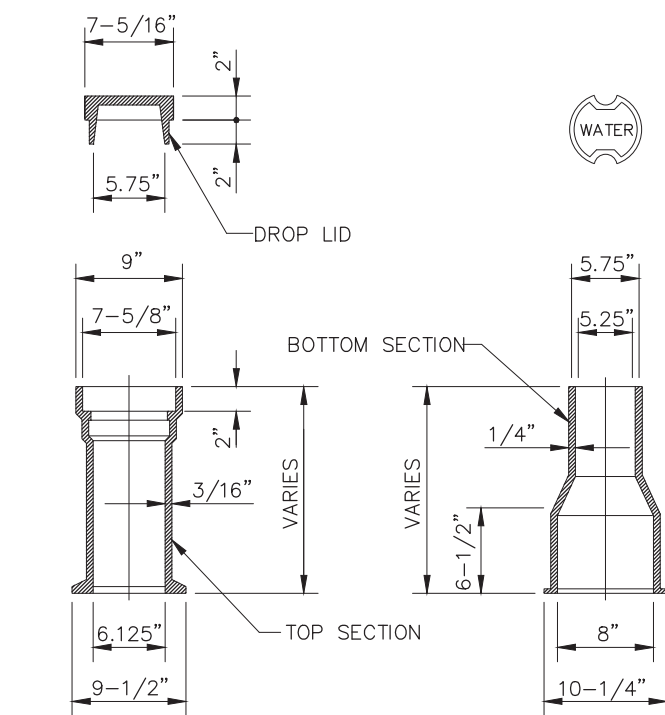
NOTES:

1. INSTALL CONNECTOR LINE FROM EXISTING BLOW OFF ASSEMBLY OR NEW TAPPING VALVE FOR FILLING, TESTING AND STERILIZING NEW MAIN.
2. CONNECTOR LINE TO BE ASSEMBLED WITH CHECK VALVE AND TO BE OPERATED INDEPENDENT OF EXISTING MAIN.
3. PROVIDE RESTRAINED-JOINT PIPING OR CONCRETE THRUST BLOCKING AS NEEDED FOR JUMPER CONNECTION. RESTRAINT SYSTEM SUBJECT TO REVIEW BY CITY.
4. THRUST BLOCKING, RODDING OR RESTRAINED JOINTS ON EXISTING WATER LINE NOT TO BE DISTURBED.
5. FINAL CONNECTION TO EXISTING MAIN TO BE MADE ONLY AFTER TOTAL PROJECT IS ACCEPTED BY THE CITY OF BELMONT.
6. VALVES ON EXISTING SYSTEM TO BE OPERATED BY BELMONT FORCES ONLY.
7. ONLY ONE CONNECTION WILL BE ALLOWED BETWEEN THE EXISTING SYSTEM AND THE NEW CONSTRUCTION UNTIL TESTING AND DISINFECTION IS COMPLETE.
8. METER AND DOUBLE CHECK VALVE ASSEMBLY TO BE PROVIDED BY CITY OF BELMONT AND ARE SUBJECT TO RENTAL FEES.
9. REFER TO SPECIFICATIONS FOR TYPES OF VALVES AND MATERIALS.



STANDARD FIRE HYDRANT INSTALLATION

NOT TO SCALE



NOTES:

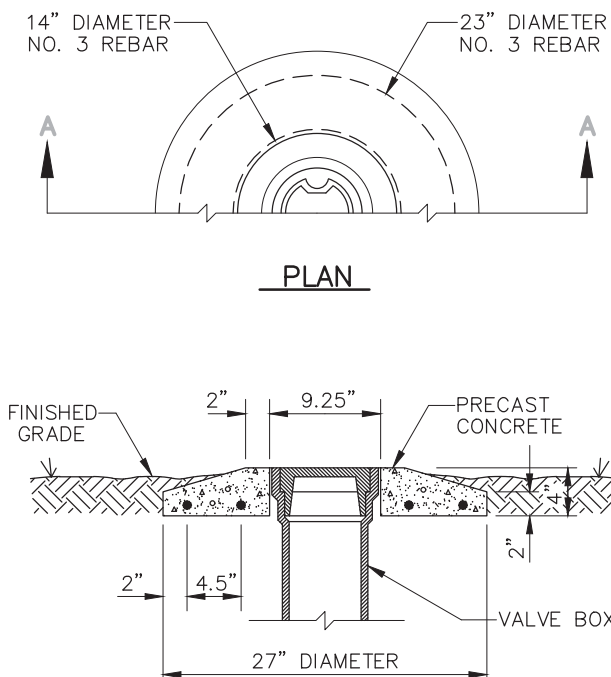
1. LID CASTING TO BE TYLER MANUFACTURE NO. 6850--SERIES, 5-1/4" DROP LID OR APPROVED EQUAL.
2. BODY CASTING TO BE TYLER MANUFACTURE NO. 6855--SERIES, 5-1/4" SHAFT, SLIP, OR APPROVED EQUAL.
3. THIS VALVE BOX ACCOMMODATES 4" THRU 12" VALVES.

STANDARD THREE PIECE VALVE BOX

NOT TO SCALE

STANDARD VALVE BOX /SEWER LATERAL CONCRETE PROTECTOR RING

NOT TO SCALE



NOTE:

THE MINIMUM DIMENSIONS TABLE IS BASED ON AN ASSUMED SOIL BEARING OF 2000 LBS. PER SQ. FT. IF OF 2000 LBS. PER SQ. FT. IF BEARING VALUE FOR SOIL IS LESS, THEN AREA SHOWN HEREIN SHOULD BE INCREASED ACCORDINGLY.

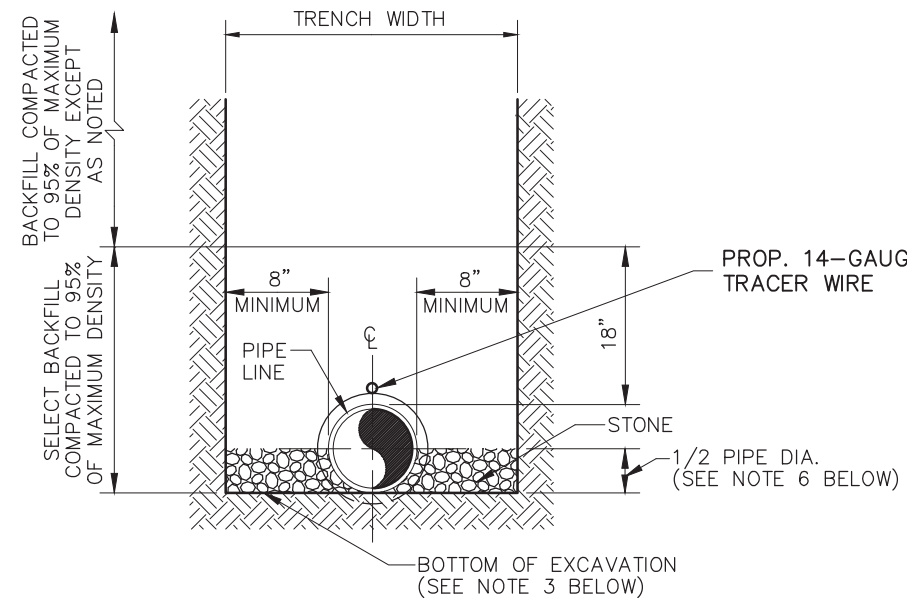
MINIMUM BLOCKING DIMENSIONS				
PIPE SIZE (inches)	BLOCKING BEARING AREA (ft ²)	BLOCKING WIDTH (inches)	# EYE BOLTS	
4	2	24	4	
6	4	24	4	
8	7	36	6	
10	11	36	6	
12	15	36	6	
OVER 12" BY THE DESIGN ENGINEER				

NOTE: THRUST BLOCKS SHALL BE CONSTRUCTED OF 2000 P.S.I. CONCRETE

BEND	PIPE SIZE (NOM. DIA. IN INCHES)							
	6"	8"	12"	16"	20"	24"	30"	36"
90°	1	1.5	2	5	8	10	16	20
45°	.5	1	3	3	6	8	12	16
22 1/2°	0.25	.5	1	2	4	5	8	10
11 1/4°	0.25	.5	0.5	1	2	3	6	8

THRUST BLOCK DETAIL FOR WATER MAIN BENDS

N.T.S.

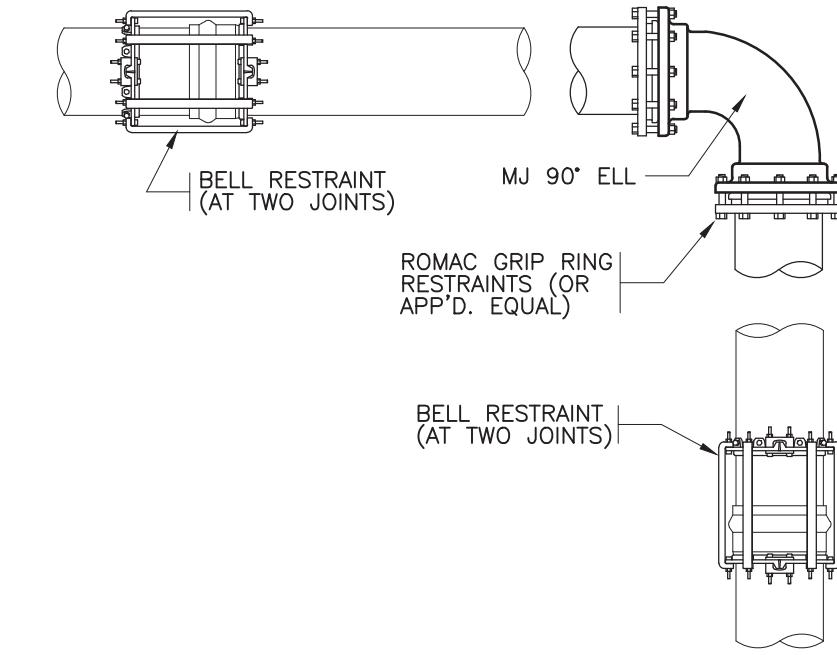


NOTES:

1. BACKFILL TO 95% OF MAXIMUM DENSITY WHERE EXCAVATIONS CUT THROUGH PAVEMENTS, CURBS, DRIVEWAYS AND SIDEWALKS, AND UNDER OR ADJACENT TO STRUCTURES.
2. STONE TO BE SIZE 1/2" TO 1-1/2", WELL TAMPED.
3. STONE IS REQUIRED TO 6" BELOW PIPE WHERE WET CONDITIONS OR ROCKS IS ENCOUNTERED, ONLY AS DIRECTED.
4. HAND SHAPE TRENCH BOTTOM FOR LOWER QUADRANT OF PIPE AND BELLS.
5. PROVIDE MINIMUM 3'-0" COVER OVER PIPE.
6. STONE TO 1/2 PIPE DIA. NOT REQUIRED FOR C-900 P.V.C. OR DUCTILE IRON PIPE.
7. A 14-GUAGE SOLID COPPER TRACER WIRE SHALL BE LAID ON TOP OF ALL PVC PIPE

STANDARD WATER LINE TRENCH

NOT TO SCALE



FITTING	**RESTRAINED JOINTS
22.5" ELL	1
45" ELL	1
90" ELL	2

**OR PER MANUFACTURER'S RECOMMENDATIONS

TYPICAL FITTING AND JOINT RESTRAINT

N.T.S.

AREAS REQUIRED FOR CONCRETE BLOCKING FOR TEES AND BENDS ETC. BASED ON TEST PRESSURE OF 200 P.S.I.

ALL AREAS GIVEN ARE IN SQUARE FEET (AGAINST UNDISTURBED EARTH)

SIZE AND DEGREE OF BEND	STATIC THRUST IN POUNDS	EARLY DRY CLAY 4000 LBS./FT ²	SOFT CLAY 2000 LBS./FT ²	GRAVEL COARSE SAND 1600 LBS./FT ²	TIE RODS REQUIRED
6"					
11-1/4°	1,108	1	1	1	
22-1/2°	2,207	1	2	2	
45°	4,328	2	3	3	
90°	7,996	2	4	5	
PLUG	5,665	2	3	4	2-5/8"
8"					
11-1/4°	1,970	1	1	2	
22-1/2°	3,922	1	2	3	
45°	7,694	2	4	5	
90°	14,215	4	8	9	
PLUG	10,053	3	5	6	2-5/8"

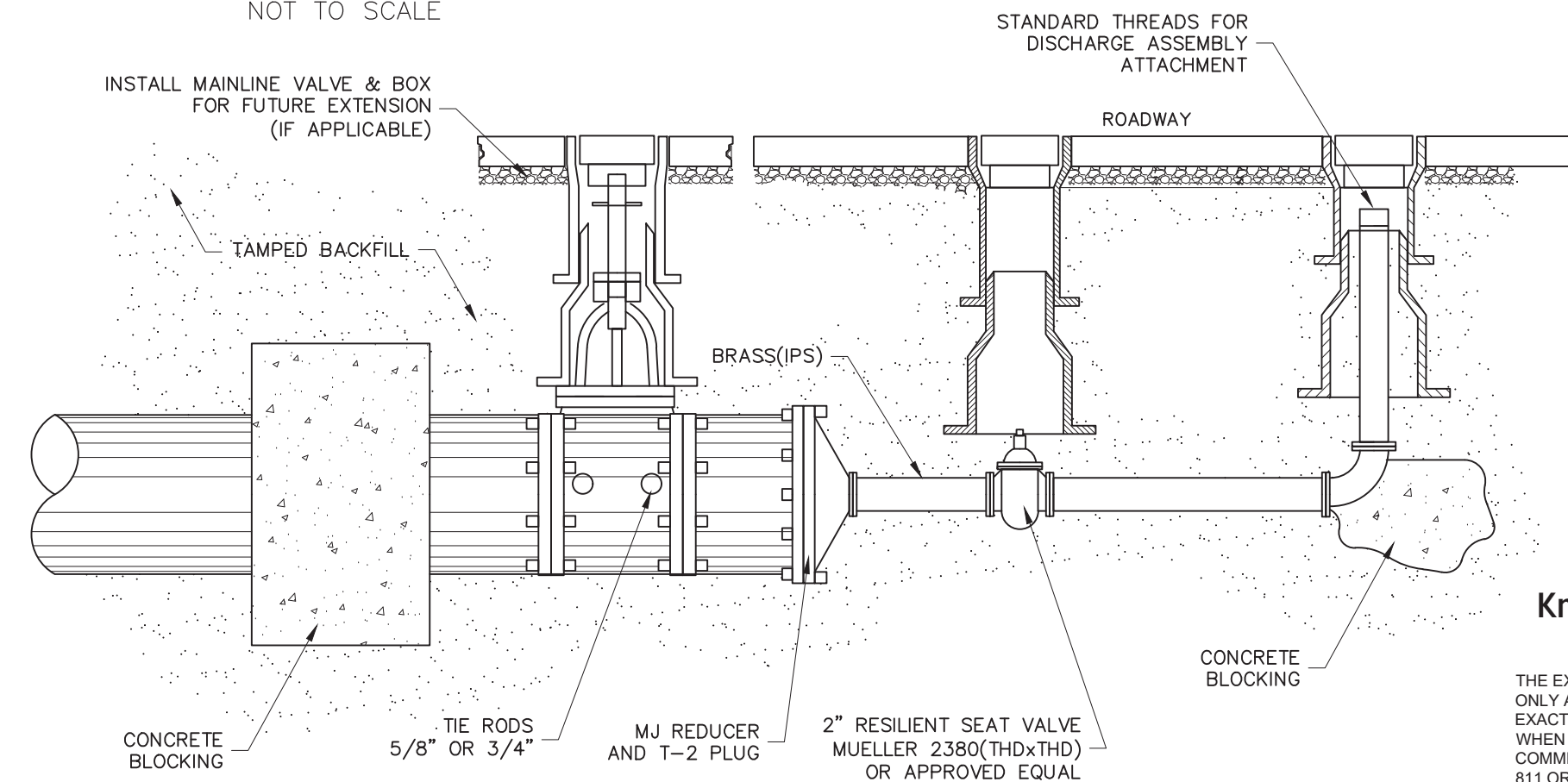
REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR.

USE 6" - 90° BEND VALVE FOR HYDRANTS FOR ADDITIONAL SAFETY FACTOR.

(2 - 5/8" Ø ROD IS ADEQUATE FOR 6" F.H. LEG)

AREAS REQUIRED FOR CONCRETE BLOCKING FOR TEES AND BENDS ETC. (BASED ON TEST PRESSURE OF 200 P.S.I.)

NOT TO SCALE



NOTES:

1. INSTALL 2" BLOW-OFF ON 6" THRU 20" MAINS
2. INSTALL 4" BLOW-OFF ON 24" OR LARGER MAINS.
3. VALVE BOX CONCRETE PAD SHALL BE 24" SQUARE 8" MINIMUM FROM EDGE OF VALVE BOX LID TO EDGE OF CONCRETE PAD
4. ADD CORPORATION STOP IF MAKING WET TAP.

BLOW-OFF DETAIL

A. LAYING CONDITIONS -PIPE MATERIAL AND STRENGTH CLASS SHALL BE DETERMINED BASED ON LAYING CONDITIONS AND TRENCH BEDDING PREPARATION.

B. MINIMUM PIPE MATERIALS AND STRENGTH CLASS ARE:

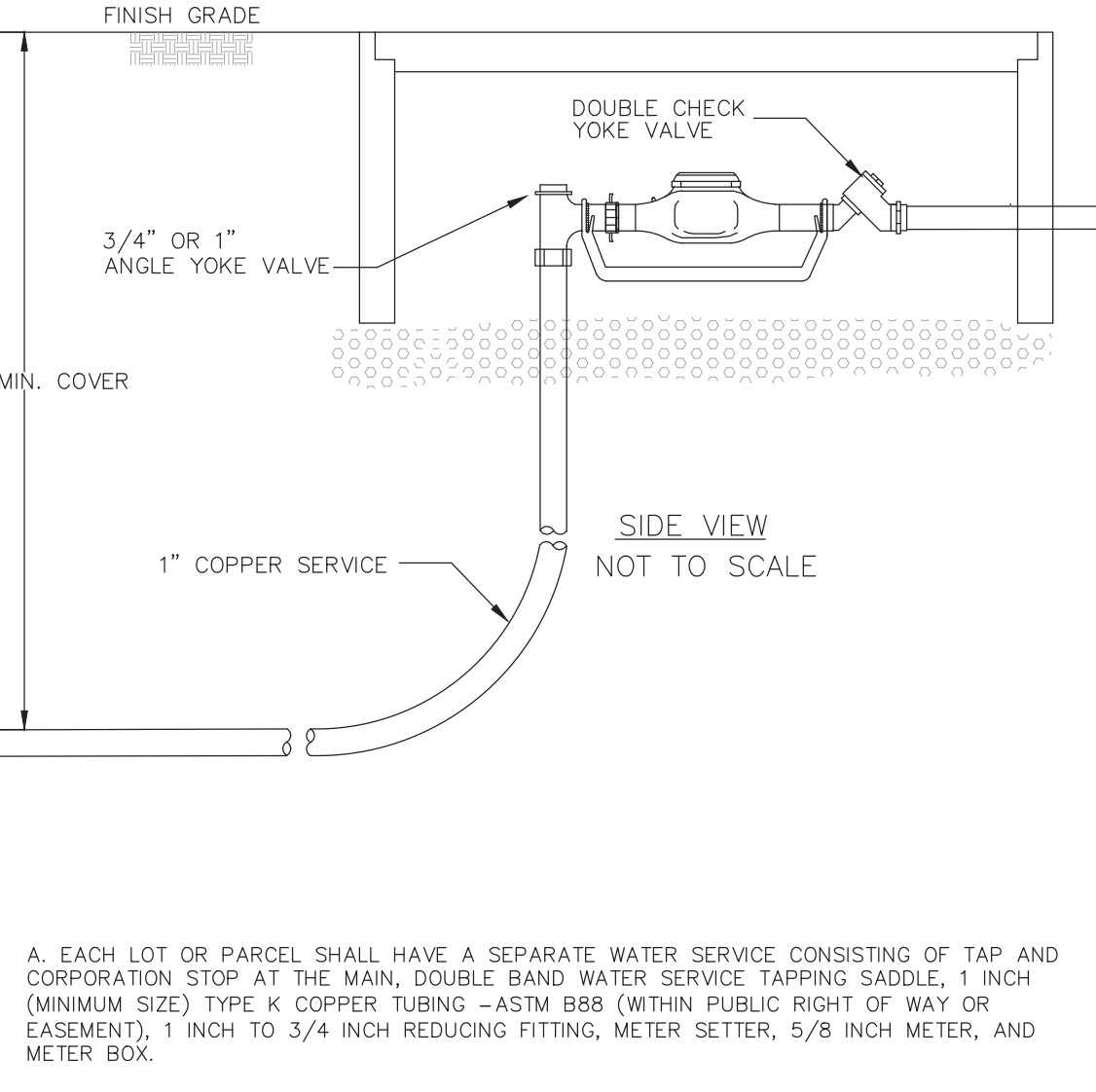
1. (1) 14 INCH AND LARGER -CEMENT LINED DUCTILE IRON PIPE (DIP), AWWA C151, MINIMUM
2. PRESSURE CLASS 250,
3. (2) 10 INCH AND 12 INCH -CEMENT LINED DIP, AWWA C151, PRESSURE CLASS 350,
4. (3) 8 INCH AND 6 INCH -CEMENT LINED DIP, AWWA C151, PRESSURE CLASS 350, OR
5. POLYVINYL CHLORIDE (PVC) PIPE, AWWA C900, DR 14.
6. (4) 2 INCH - PVC PIPE, ASTM D2241, CLASS 200, SDR13.5 - NSF CERTIFIED.

C. PIPE JOINTS FOR ALL SIZE PIPES SHALL BE "PUSH ON"OR MECHANICAL JOINT. AT PIPE BENDS, TEES AND OTHER LOCATIONS WHERE PIPE RESTRAINT IS NECESSARY, MECHANICALLY RESTRAINED JOINTS ARE REQUIRED IN LIEU OF CONCRETE THRUST BLOCKING. THE LENGTH OF RESTRAINED JOINT PIPE REQUIRED ATFITTINGS SHALL BE INDICATED ON THE PLANS. CONCRETE THRUSH BLOCKING MAY BE REQUIRED UNDER CERTAIN CONDITIONS AND SHALL BE SPECIFICALLY INDICATED ON THE PLANS.

D. A 14-GUAGE SOLID COPPER TRACER WIRE SHALL BE LAID ON TOP OF ALL PVC PIPE TO AID IN LOCATING THE PIPE FOR MAINTENANCE PURPOSES. THE WIRE SHALL BE SECURED TO THE PIPE WITH DUCT TAPE NEAR EVERY BELL AND AT THE CENTER OF EACH PIPE JOINT. THE WIRE SHALL BE FASTENED SECURELY TO A CAST IRON FITTING AT EACH SYSTEM VALVE AND FIRE HYDRANT, AND TO COPPER SERVICE LINES AS DIRECTED BY THE CITY.

E. MINIMUM DEPTH OF BURY FOR ALL WATER MAINS REGARDLESS OF PIPE MATERIAL IS 36 INCHES.

WATER PIPE MATERIAL SPECIFICATION



A. EACH LOT OR PARCEL SHALL HAVE A SEPARATE WATER SERVICE CONSISTING OF TAP AND CORPORATION STOP AT THE MAIN, DOUBLE BAND WATER SERVICE TAPPING SADDLE, 1 INCH (MINIMUM SIZE) TYPE K COPPER TUBING -ASTM B88 (WITHIN PUBLIC RIGHT OF WAY OR EASEMENT), 1 INCH TO 3/4 INCH REDUCING FITTING, METER SETTER, 5/8 INCH METER, AND METER BOX.

B. MULTI-METER SERVICE ASSEMBLIES MAY BE USED FOR BUILDINGS CONTAINING UP TO FOUR INDIVIDUAL DWELLING UNITS SUCH AS DUPLEXES AND "PINWHEELS". EACH DWELLING UNIT MUST HAVE A SEPARATE 5/8 INCH WATER METER. THE WATER SERVICE LINE BETWEEN THE WATER MAIN AND THE MULTI-METER MANIFOLD SHALL BE 1-1/2 INCH FOR TWO UNITS AND 2 INCH FOR THREE OR FOUR UNITS. THE WATER SERVICE LINE SHALL BE TYPE K COPPER TUBING -ASTM B88. ALL FITTINGS MUST BE BRASS OF THE APPROPRIATE SIZE. DOUBLE BAND WATER SERVICE TAPPING SADDLES SHALL BE USED AT THE MAIN.

C. METERS SHALL BE NEPTUNE DISPLACEMENT TYPE MAGNETIC DRIVE (5/8 INCH TO 2 INCH) WITH MANUAL READ REGISTERS READING IN US GALLONS. LARGER METERS SHALL BE NEPTUNE HIGH PERFORMANCE TURBINE METERS. AFTER INITIATION OF AN AUTOMATIC METER READING PROGRAM BY THE CITY, METERS MUST BE PROVIDED WITH R900I INTEGRATED SOLID STATE ENCODER AND RF METER INTERFACE UNIT.

D. SEPARATE WATER METERS ARE REQUIRED FOR ALL LANDSCAPE IRRIGATION SYSTEMS. AFTER JULY 1, 2009, IRRIGATION SYSTEMS COSTING MORE THAN \$2,500 MUST BE INSTALLED BY A STATE LICENSED IRRIGATION CONTRACTOR.

E. SERVICES FOR BUILDING FIRE SUPPRESSION SYSTEMS (SPRINKLERS) SHALL BE METERED. THE METER MUST BE CAPABLE OF MEASURING THE FULL FLOW OF THE FIRE LINE.

F. METER SETTERS (RISER) SHALL INCLUDE ANGLE BALL VALVE WITH PADLOCK WINGS AND DUAL CHECK VALVE.

G. ALL FITTINGS AND MATERIALS ARE SUBJECT TO CITY APPROVAL.

H. WATER SERVICE LINES SHALL BE LOCATED NEAR THE CENTER OF THE SUBDIVISION LOT FRONTAGE WITH METER BOXES LOCATED ON THE BUILDING SIDE OF THE SIDEWALK.

I. METERS SHALL NOT BE LOCATED IN SIDEWALKS, DRIVEWAYS OR OTHER PAVEMENTS. THE LOCATION OF THE WATER METER SHALL BE INDICATED BY A "W"STAMPED OR CHISELED INTO THE CURB AT A POINT CLOSEST TO THE METER. THE "W"SHALL BE PAINTED BLUE.

J. WATER SERVICE METER BOXES SHALL BE PROTECTED WITH ORANGE FENCING AFTER INSTALLED. THE FENCING SHALL BE MAINTAINED BY THE DEVELOPER UNTIL THE BUILDING IS PERMANENTLY OCCUPIED.

K. STANDARD 5/8 INCH WATER METERS WILL BE SUPPLIED BY THE CITY FOR RESIDENTIAL POTABLE AND IRRIGATION SERVICES AS PART OF THE WATER METER SET FEE. DEVELOPER IS TO PROVIDE AND INSTALL THE WATER SERVICE LINE, WATER MAIN TAP, FITTINGS, METER SETTER, AND METER BOX.

L. ALL NON-RESIDENTIAL METERS, AND ALL METERS 1-1/2 INCH OR LARGER, SHALL BE PROVIDED BY THE DEVELOPER.

RESIDENTIAL TYPE METER INSTALLATION FOR 3/4" SERVICES

A. 16 INCH AND LARGER - BUTTERFLY VALVES, DIRECT BURY, FOR HORIZONTAL INSTALLATION AND OPERATOR SHAFT VERTICAL, OPEN LEFT, MECHANICAL JOINT ENDS, AWWA C504.

B. 12 INCH TO 6 INCH - GATE VALVES, DIRECT BURY, NON-RISING STEM, RESILIENT WEDGE, OPEN LEFT, MECHANICAL JOINT ENDS, AWWA C509.

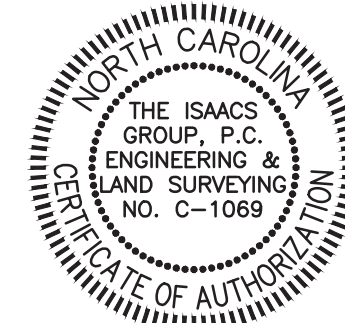
C. 2 INCH - GATE VALVES, DOUBLE DISK, OPEN LEFT, AWWA C509 WITH MECHANICAL JOINT ENDS.

D. VALVES SHALL BE RESTRAINED TO NEAREST FITTING.

E. AN ADJUSTABLE HEIGHT CAST IRON VALVE BOX AND LID SHALL BE PROVIDED. THE WORD "WATER"SHALL BE CAST INTO THE LID. A CONCRETE RING (COLLAR) SHALL BE PROVIDED AROUND VALVE BOX IF THE VALVE IS LOCATED OUTSIDE OF PAVED AREAS. ALL VALVE BOX LIDS SHALL BE PAINTED BLUE.

F. THE LOCATION OF ALL VALVES, INCLUDING HYDRANT CUT OFF VALVES SHALL BE INDICATED BY A "V"STAMPED OR CHISELED INTO THE CURB AT A POINT CLOSEST TO THE VALVE. THE "V"SHALL BE PAINTED BLUE.

WATER VALVE SPECIFICATION



Digitally signed by Anthony B. Cowan, P.E.
Date: 2021.04.21 09:41:10-04'00'



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Call before you dig.

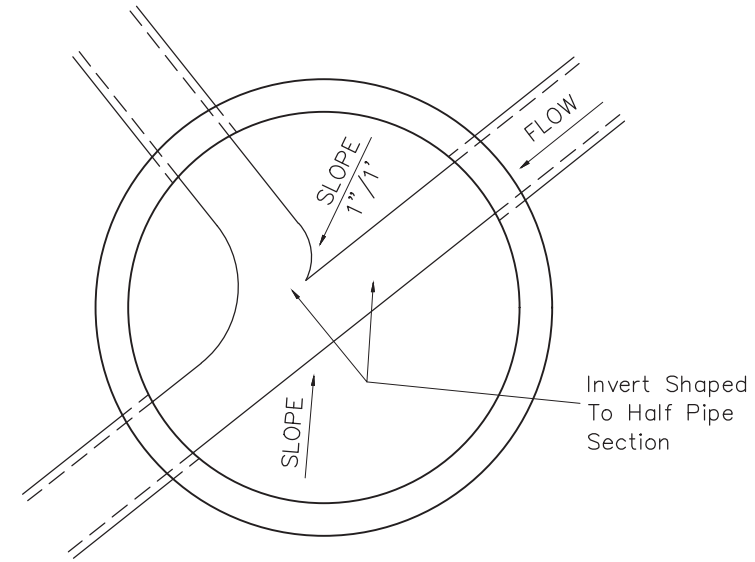
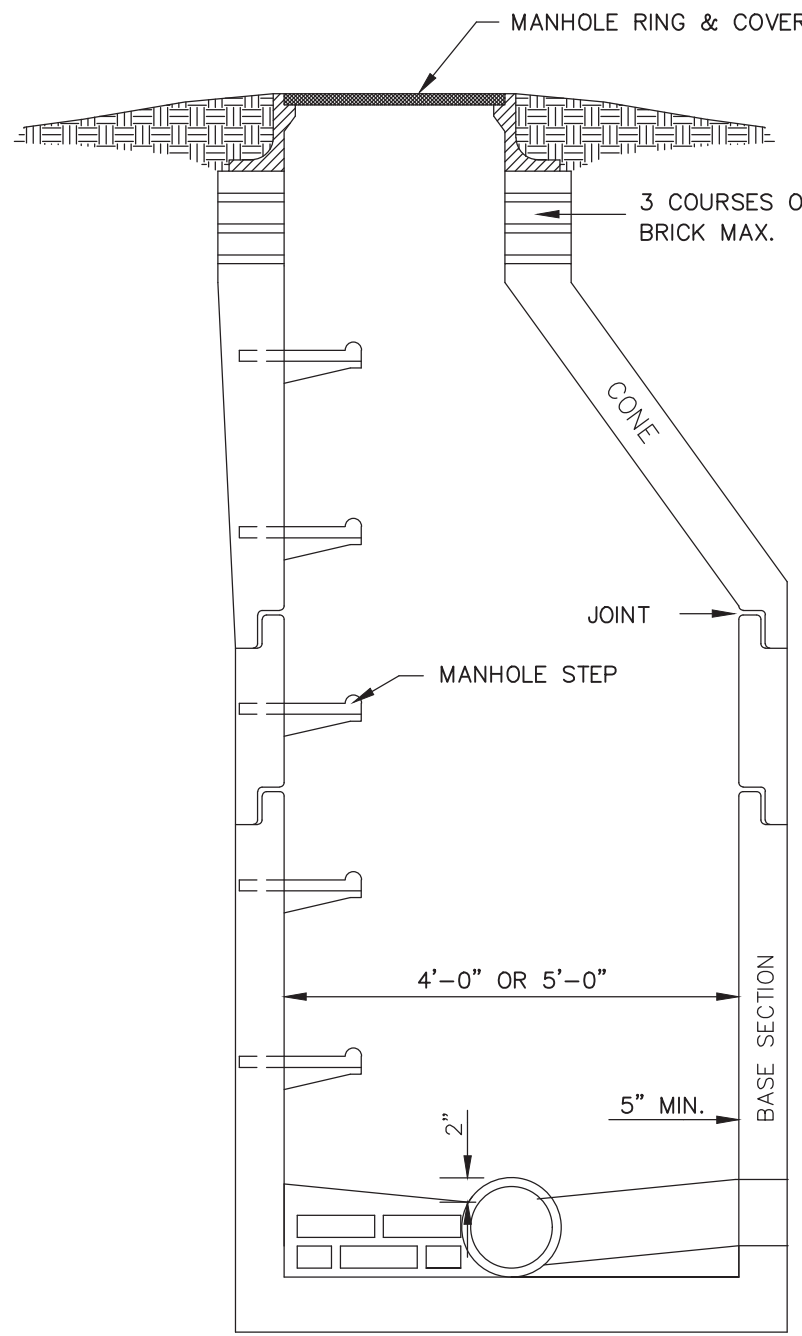
THE EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY AND SHOULD NOT BE RELIED UPON AS THE EXACT LOCATION OR A COMPLETE INVENTORY WHEN PERFORMING SITE EXCAVATION. PRIOR TO COMMENCEMENT OF ANY EXCAVATION, CONTACT 811 OR A PRIVATE UTILITY LOCATOR AS NEEDED TO VERIFY THE LOCATIONS AND EXISTENCE OF EXISTING UTILITIES.

NO.	BY	DATE	REVISION
1	RER	3/15/10	PER CITY OF BELMONT COMMENTS
2	RER	4/19/21	REVISED DUE TO ZONING

Project: DIXON VILLAGE BELMONT, NORTH CAROLINA	
Title: DETAILS & SPECIFICATIONS	
File #: 20162-DE.dwg	Date: 11/13/2020
Project Egr: ABC	Design By: ABC
Drawn By: RER	Scale: 1" = 40'
8720 RED OAK BOULEVARD, SUITE 420 CHARLOTTE, N.C. 28217 PHONE (704) 527-3440 FAX (704) 527-8335	
C6.5	

NOTES: (STANDARD MANHOLE)

1. MANHOLE TO CONFORM WITH ASTM C478-72 EXCEPT AS MODIFIED BELOW.
2. MANHOLE BASE TO BE REINFORCED WITH A MINIMUM AREA OF 0.20 SQ. IN. PER LINEAR FOOT EACH WAY AND BENT UP AT WALLS 10" AND SPLICED TO WALL REINFORCING. WALL REINFORCING TO BA A MINIMUM OF 0.12 SQ. IN. PER LINEAR FOOT. BOTH TONGUE AND GROOVE OF JOINTS SHALL HAVE REINFORCING EQUAL IN AREA TO MINIMUM OF WALL SECTION.
3. ALL JOINTS SHALL CONFORM WITH ASTM C443-63
4. STEPS TO BE PLASTIC
5. ALL PIPE OPENINGS TO BE NO GREATER THAN 3" LARGER THAN O.D. OF PIPE AND ADDITIONALLY REINFORCED WITH A MINIMUM OF 0.20 SQ. IN. OF STEEL AT 90 DEGREES. PIPE TO BE CENTERED IN OPENINGS AND SUPPORTED WITH A CONCRETE COLLAR 12" GREATER THAN O.D. OF PIPE FOR ONE FOOT FROM THE WALL. CONCRETE SHALL BE FORCED FROM THE OUTSIDE TO BECOME AN INTEGRAL PART OF THE MANHOLE INVERT OR TO A POINT FLUSH WITH INSIDE WALL.
6. ALL SURFACES SHALL BE SMOOTH EVEN TEXTURED WITH A MINIMUM OF HONEYCOMB, FINS AND OTHER IMPERFECTIONS
7. LIFTING HOLES SHALL BE PLUGGED FROM OUTSIDE PRIOR TO BACKFILLING
8. INVERTS IN 5' DIAMETER MANHOLES TO BE 3600 PSI READY MIX CONCRETE IN LIEU OF BRICK
9. STEPS IN 5' DIAMETER MANHOLES TO BE OVER WIDEST SHELF
10. ALL MASONRY MORTAR SHALL BE PORTLAND CEMENT 1 : 3 MIX.
11. CARE MUST BE TAKEN TO FORM A SMOOTH FINISHED TROUGH FROM ENTRANCE PIPES TO EXIT PIPE, AND IN CURVED MANHOLES THE TROUGH MUST BE A SMOOTH CIRCULAR ARC TANGENT TO THE INSIDE WALLS OF THE PIPES AT THEIR ENDS.
12. RAMSET MASONRY TIES EVERY 12 INCHES.

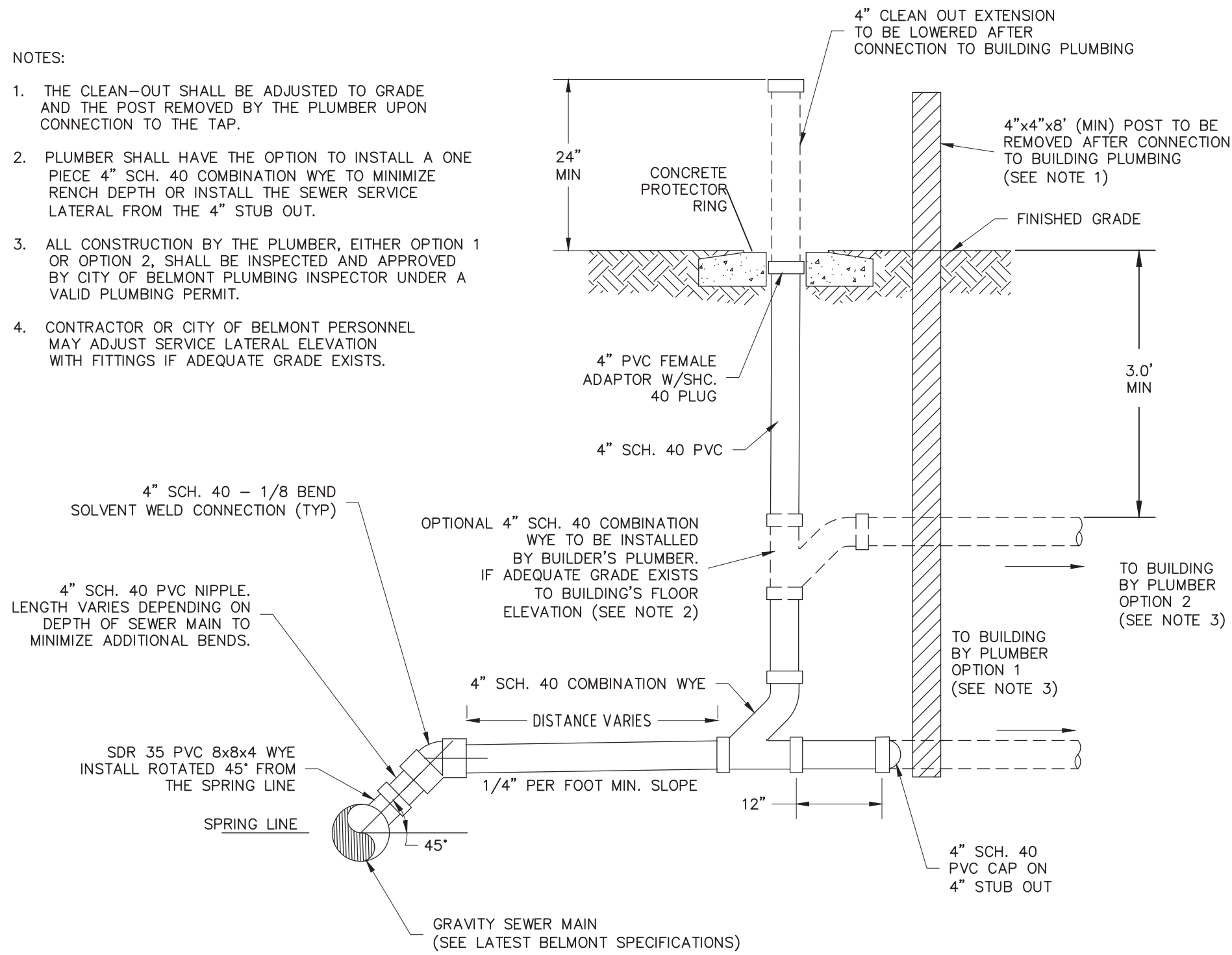


MANHOLE INVERT
NOT TO SCALE

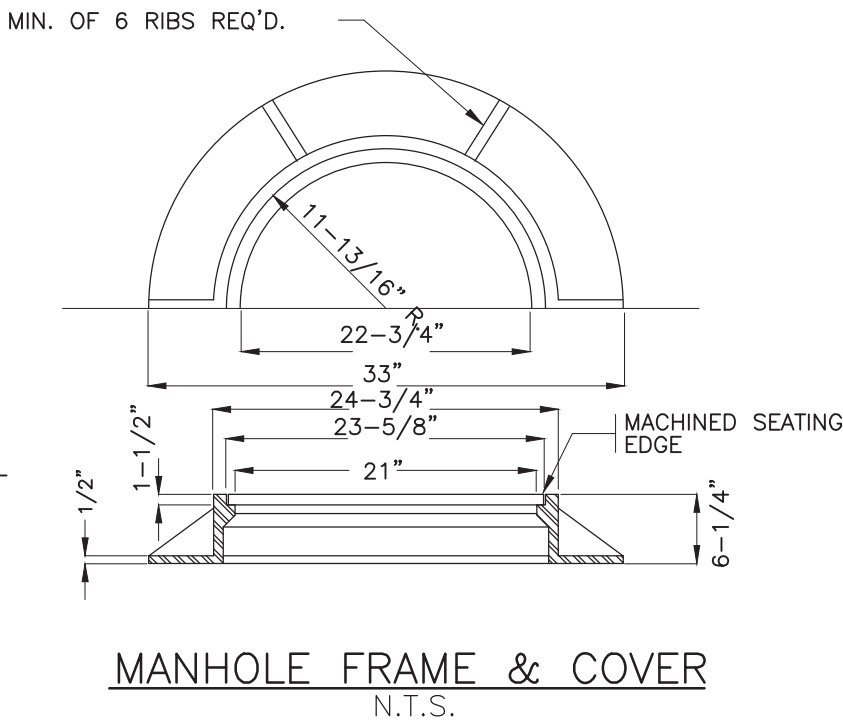
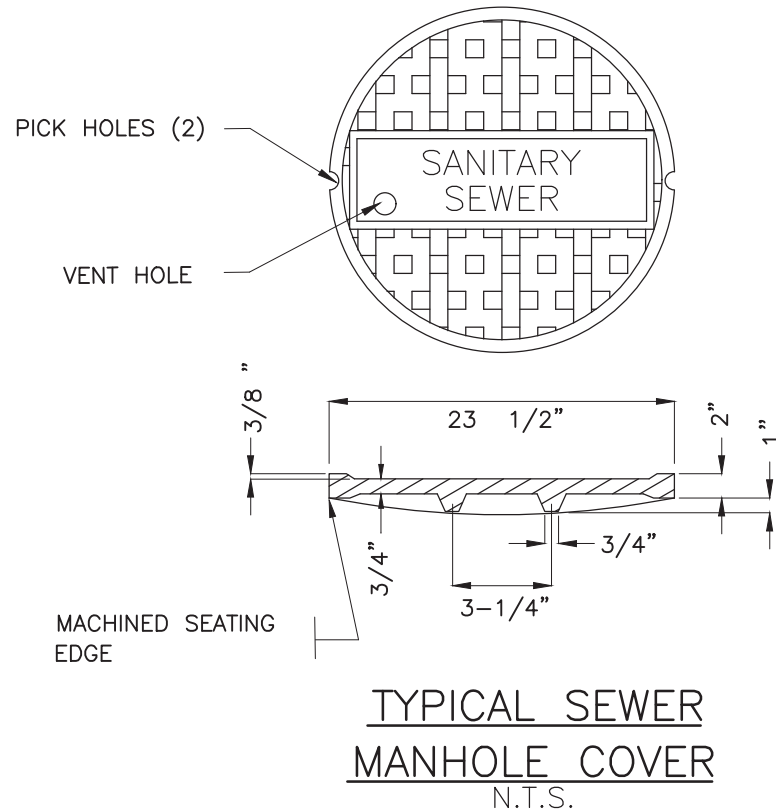
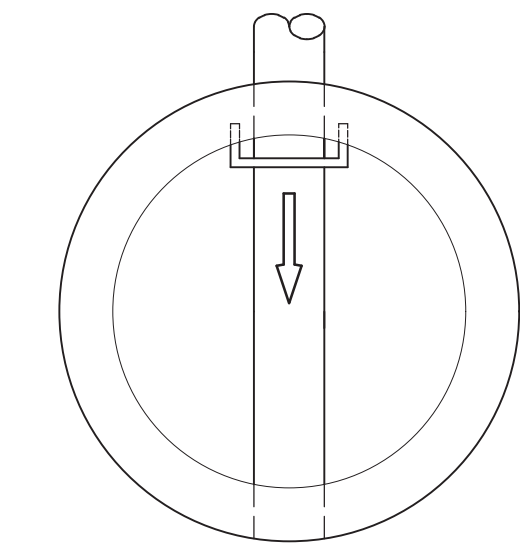
- A. LAYING CONDITIONS -PIPE MATERIAL AND STRENGTH CLASS SHALL BE DETERMINED BASED ON LAYING CONDITIONS AND TRENCH BEDDING PREPARATION.
- B. MINIMUM PIPE MATERIALS AND STRENGTH CLASS GRAVITY SEWERS ARE:
1. 18 INCH AND LARGER -CEMENT LINED DUCTILE IRON PIPE (DIP), AWWA C151, MINIMUM PRESSURE CLASS 250 WITH 401 PROTECTO OR AS APPROVED CERAMIC EPOXY INTERIOR COATING, OR POLYVINYL CHLORIDE (PVC) PIPE ASTM F1803 CLOSED PROFILE, MINIMUM PIPE STIFFNESS OF 46 PSI AT 5 PERCENT DEFLECTION WHEN TESTED IN ACCORDANCE WITH ASTM D2412.
 2. 8 INCH TO 15 INCH -CEMENT LINED DIP, AWWA C151, PRESSURE CLASS 350 WITH 401 PROTECTO OR AS APPROVED CERAMIC EPOXY INTERIOR COATING OR POLYVINYL CHLORIDE (PVC) PIPE ASTM D3034, TYPE PSM, SDR35.

NOTES:

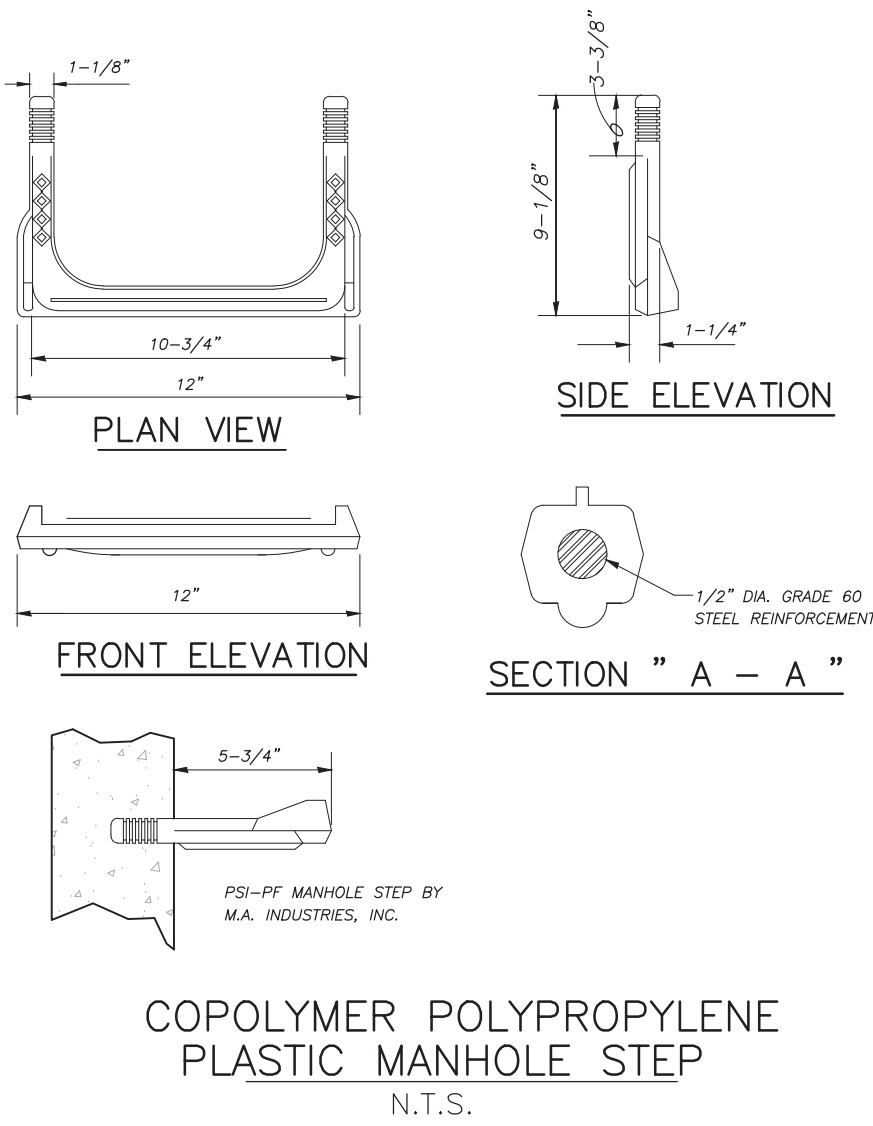
1. THE CLEAN-OUT SHALL BE ADJUSTED TO GRADE AND THE POST REMOVED BY THE PLUMBER UPON CONNECTION TO THE TAP.
2. PLUMBER SHALL HAVE THE OPTION TO INSTALL A ONE PIECE 4" SCH. 40 COMBINATION WYE TO MINIMIZE RENCH DEPTH OR INSTALL THE SEWER SERVICE LATERAL FROM THE 4" STUB OUT.
3. ALL CONSTRUCTION BY THE PLUMBER, EITHER OPTION 1 OR OPTION 2, SHALL BE INSPECTED AND APPROVED BY CITY OF BELMONT PLUMBING INSPECTOR UNDER A VALID PLUMBING PERMIT.
4. CONTRACTOR OR CITY OF BELMONT PERSONNEL MAY ADJUST SERVICE LATERAL ELEVATION WITH FITTINGS IF ADEQUATE GRADE EXISTS.



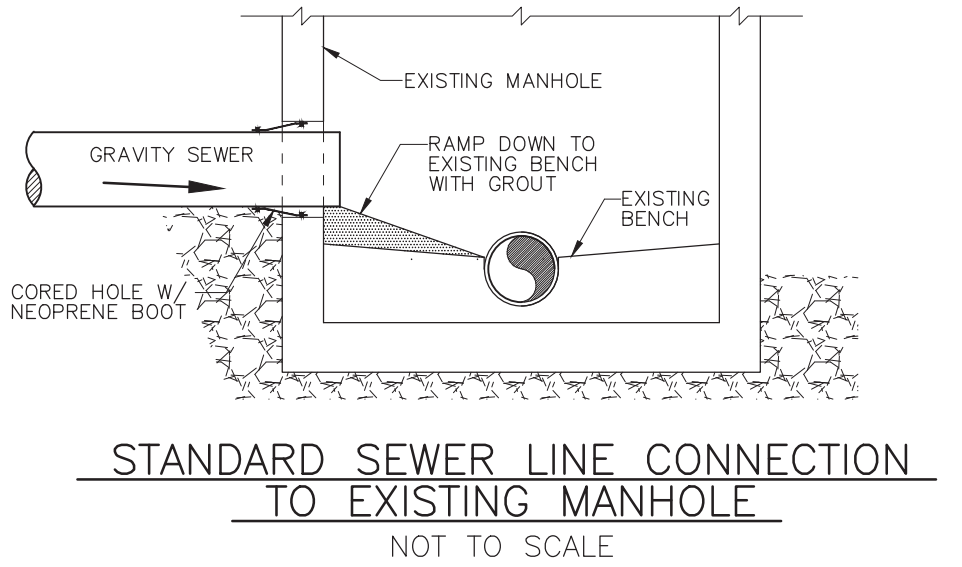
4' DIA. PRECAST MANHOLE
NOT TO SCALE



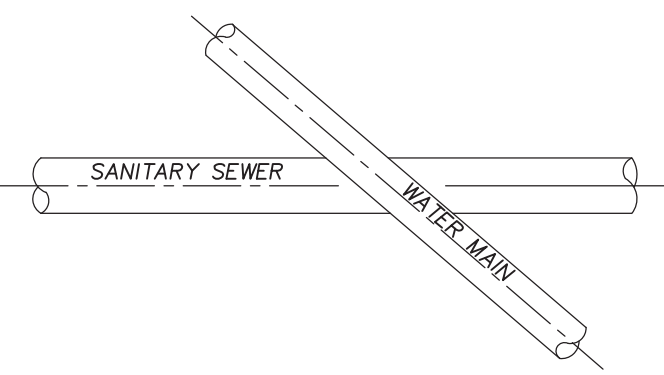
SEWER PIPE MATERIAL SPECIFICATION



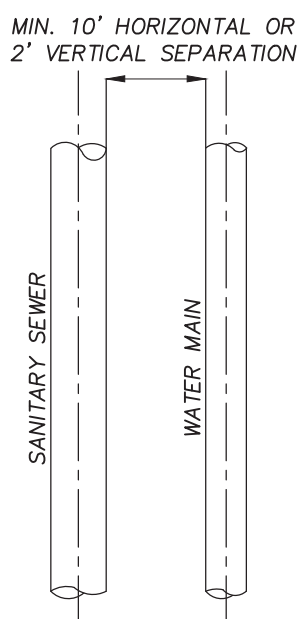
COPOLYMER POLYPROPYLENE
PLASTIC MANHOLE STEP
N.T.S.



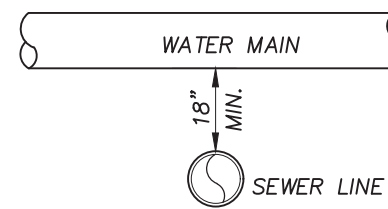
STANDARD SEWER LINE CONNECTION
TO EXISTING MANHOLE
NOT TO SCALE



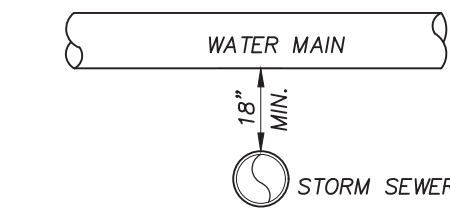
WHEN VERTICAL SEPARATION IS LESS THAN 18" WATER LINE SHOW BE FERROUS METAL PIPE (DIP), FOR 10' EACH SIDE OF CROSSING



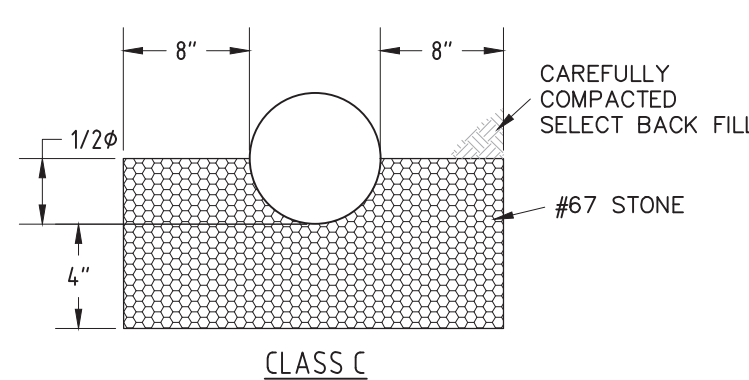
NOTE: WHEN LATERAL SEPARATION IS 10' OR GREATER NO VERTICAL CLEARANCE IS NEEDED.



WHEN VERTICAL SEPARATION IS LESS THAN 18" WATER LINE SHOW BE FERROUS METAL PIPE (DIP), FOR 10' EACH SIDE OF CROSSING



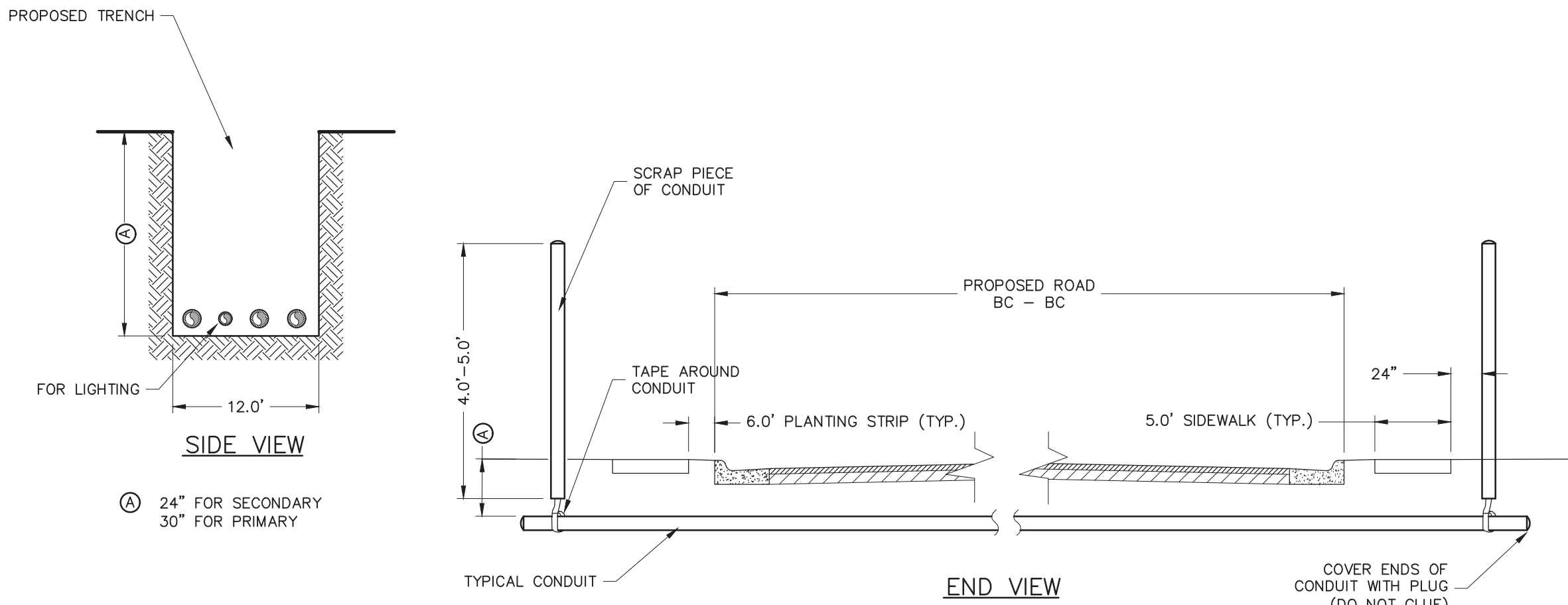
WHEN VERTICAL SEPARATION IS LESS THAN 18" WATER LINE SHOW BE FERROUS METAL PIPE (DIP), FOR 10' EACH SIDE OF CROSSING



GRAVITY SEWER - BEDDING DETAIL FOR PVC PIPE

STANDARD SEWER LINE TRENCH
NOT TO SCALE

SANITARY SEWER LATERAL
NOT TO SCALE



NOTES:

1. A BACKHOE SHOULD BE USED TO PREVENT CABLE DAMAGE BY THE CONDUIT VERSUS A TRENCHER.
2. TAMP FOR APPROPRIATE COMPACTION UNDER FUTURE ROAD.
3. CABLE MARKERS TO BE REMOVED WHEN CABLE IS INSTALLED
4. CONDUIT FOR SERVICES SHOULD BE 3". LIGHTING CONDUIT TO BE 2"
5. WHEN INSTALLING CALBE UNDER EXISTING MAJOR STREETS OR HIGHWAYS, BORING OR TUNNELING SHOULD BE USED. LOCAL OR STATE HIGHWAY AUTHORITIES SHOULD BE CONTACT FOR APPROVAL

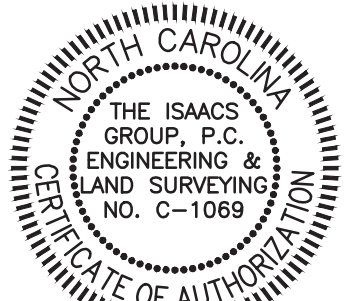
UNDER GROUND CONDUIT DETAIL
FOR ROAD CROSSING

DUKE POWER# UC10-7
N.T.S.



THE EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY AND SHOULD NOT BE RELIED UPON AS THE EXACT LOCATION OR A COMPLETE INVENTORY WHEN PERFORMING SITE EXCAVATION. PRIOR TO COMMENCEMENT OF ANY EXCAVATION, CONTACT 811 OR A PRIVATE UTILITY LOCATOR AS NEEDED TO VERIFY THE LOCATIONS AND EXISTENCE OF EXISTING UTILITIES.

NO.	BY	DATE	REVISION
1	RER	3/15/10	PER CITY OF BELMONT COMMENTS
2	RER	4/19/21	REVISED DUE TO ZONING



Digitally signed by Anthony B. Cowan, P.E.
Date: 2021.04.21 09:41:43-04'00'

Project: DIXON VILLAGE
BELMONT, NORTH CAROLINA

Title: DETAILS & SPECIFICATIONS

File #: 20162-DE.dwg Date: 11/13/2020 Project Egr: ABC

Design By: ABC
Drawn By: RER
Scale: 1" = 40'

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

C6.6

CLUSTER BOX UNIT (CBU)
-ANCHORING METHODS-

CBU's must be level and mounted firmly in concrete, using one of the following methods.

- The J-bolt method is the preferred method of installation of CBU's on concrete pads; however, the J-bolt pattern must be accurate with the CBU pedestal plate. When using J-bolts, in order to prevent any damage or accidents that could result from the exposed bolts, consideration should be given as to the time lapse between pouring the concrete and the actual installation. Expansion anchors must be installed in accordance with the manufacturer's instructions.
- The use of anchor bolts for the installation of CBU's on concrete pads is also acceptable as long as the methods described below are followed.
 - Hilti Kwik bolt II, 1/2" diameter X 5-1/2" overall length
Catalog Number: 000-453-696, KB II 12-512
Stainless Steel Catalog Number: 000-454-744
Minimum embedment in concrete must be no less than 3-1/2"
 - ITW Ramset Redhead Trubolt, galvanized, 1/2" diameter X 7" overall length
 - Rawl Stud, 1/2" diameter X 5 1/2" overall length, galvanized.
Catalog Number: 7324
Minimum embedment in concrete must be no less than 4"

CLUSTER BOX UNIT (CBU)
-CONCRETE PAD REQUIREMENTS-

- ALL FREE STANDING PADS MUST BE 8" THICK -

1 UNIT	SINGLE PAD	4' X 4'
2 UNITS	DOUBLE PAD	4' X 7'
3 UNITS	TRIPLE PAD	4' X 10'
4 UNITS	QUAD PAD	4' X 13'

*** WHEN PLACING A PARCEL LOCKER AT ANY CBU LOCATION,
INCREASE THE PAD SIZE BY AN ADDITIONAL 4' X 4'***

CLUSTER BOX UNIT (CBU)
- CONCRETE PAD SPECIFICATIONS -
-ANCHORING METHODS-

The following documents are the only USPS approved specifications for pouring concrete pads for the anchoring of CBU's.

CONCRETE SPECIFICATIONS FOR SINGLE UNIT CONCRETE PAD

CONCRETE SPECIFICATIONS FOR MULTIPLE UNIT CONCRETE PAD

ANCHORING METHODS FOR CENTRALIZED Box UNITS (CBU)

CBU's must be installed approximately one week prior to customer occupancy.

CBU's must not be installed until the local USPS representative has conducted an on-site visit to ensure compliance with the official specifications. **Contact the local USPS representative to have the pads inspected prior to pouring the concrete.**

CBU's must be installed facing the correct direction. CBU's installed on concrete pads poured behind the sidewalk should face the sidewalk. CBU's installed on concrete pads located in landscape strips between the curb and the sidewalk should face the sidewalk. Do not install CBU facing the curb or street—causing the carrier and the customer to stand in the street to deliver or retrieve mail.

CBU's should not be installed so close to an intersection or traffic lane that they block visibility for approaching traffic or could be struck by a passing motor vehicle.

CBU's should not be located on dead-end streets where there is no safe turnaround for Postal delivery vehicles.

Notify your local USPS representative immediately upon completion of the CBU installation so that we can install the arrow lock and secure the unit.

All CBU compartment keys will be distributed by the builder/developer at the time of move in. The local USPS representative needs to be contacted by the builder/developer for the box address assignments. Each homeowner should receive a copy of the Mode of Delivery Agreement at the time of move in.

Any deviations from the USPS designated location of the CBU must not occur without first receiving authorization from the local USPS representative.

USPS APPROVED MANUFACTURERS OF
CLUSTER BOX UNITS (CBUs) & WALL-MOUNTED CENTRALIZED MAIL RECEPTACLES
(USPS-B-1118F, USPS-STD-4B+ AND USPS-STD-4C)

USPS-STD-B-118F

COMPANY	ADDRESS	CITY	STATE	ZIP	PHONE	WEB SITE	DESIGN TYPES
Auth-Florence Manufacturing	5835 Corporate Dr.	Manhattan	KS	66503-9675	800-275-5081	www.auth-florence.com	Types I, II, III & IV

USPS-STD-4B+

COMPANY	ADDRESS	CITY	STATE	ZIP	PHONE	WEB SITE	DESIGN TYPES
American Device Manufacturing	5235 Corporate Dr.	Manhattan	KS	66503-9675	800-275-5081	www.auth-florence.com	Horizontal units only
American Eagle	3017 Wheel Lock St	Dallas	TX	75220-2844	214-368-5444	www.americaneaglemailbox.com	Horizontal units only
Auth-Florence Manufacturing	5835 Corporate Dr.	Manhattan	KS	66503-9675	800-275-5081	www.auth-florence.com	Horizontal & Vertical Units
Bommer Industries	PO Box 187	Landrum	SC	29366-0187	800-334-1854	www.bommer.com	Horizontal & Vertical Units
Jensen Industries	1846 E 46th St	Los Angeles	CA	90058-2096	800-255-8351	www.jensen-ind.com	Horizontal & Vertical Units
Salesbury Industries	1010 East 62nd St	Los Angeles	CA	90001-1590	800-323-3003	www.mailboxes.com	Horizontal & Vertical Units
Security Manufacturing	815 S Main St	Grapevine	TX	76051-5535	800-783-8937	www.securitymanufacturing.com	Horizontal & Vertical Units

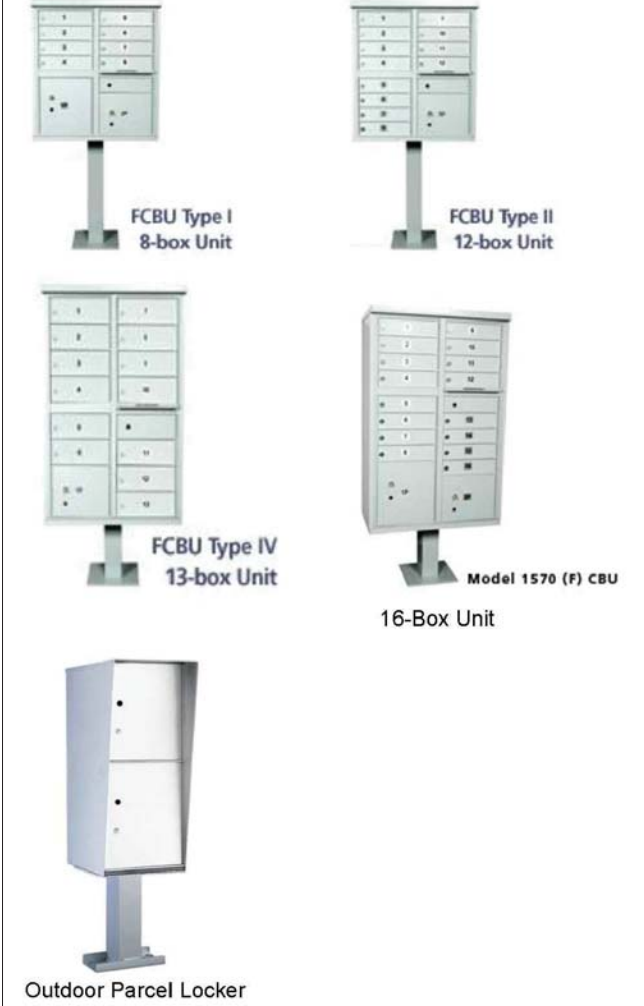
USPS-STD-4C

COMPANY	ADDRESS	CITY	STATE	ZIP	PHONE	WEB SITE	DESIGN TYPES
Postal Products Unlimited	500 W Oklahoma Ave	Milwaukee	WI	53207-2849	800-229-4360	www.mailproducts.com	Horizontal

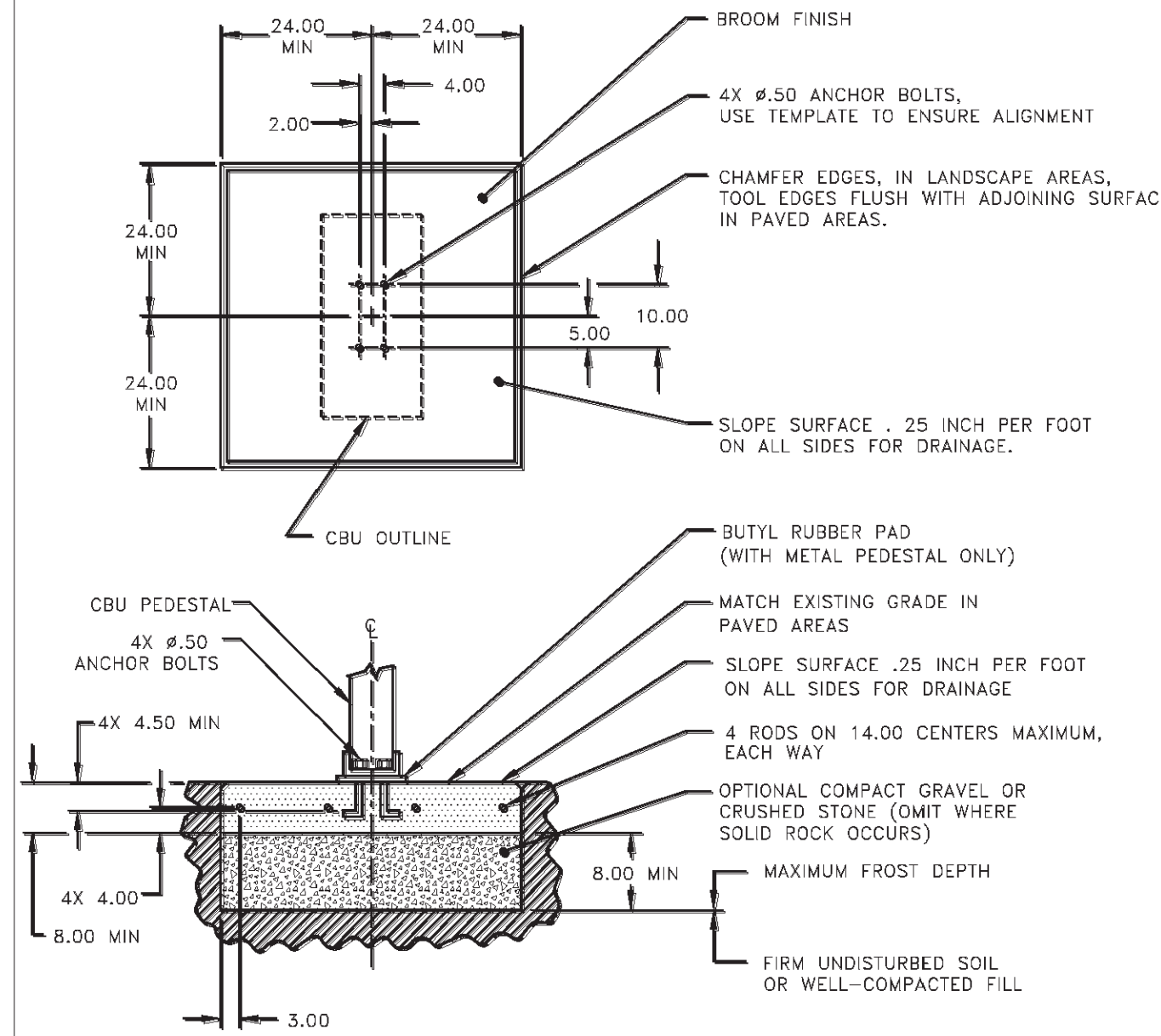
Notes: Buildings with permits dated on or after October 5th, 2006 must have USPS-STD-4C receptacles.

ADDITIONAL INFORMATION ON
CLUSTER BOX UNITS (CBU)

- STANDARD UNITS AVAILABLE -



USPS APPROVED SPECIFICATIONS – CONCRETE PAD (SINGLE UNIT)
(All measurements are in inches)



NOTES:

- CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS, CONTAIN 4% MIN – 6% MAX AIR ENTRAINMENT AND BE PLACED WITH A 3.50 – 4.50 SLUMP IN ACCORDANCE WITH ACI 301.
- REINFORCING STEEL RODS SHALL CONFORM TO ASTM A615, GRADE 60.
- ANCHOR BOLTS SHALL CONFORM TO ASTM A193, GRADE 88M, TYPE 316 STAINLESS STEEL.

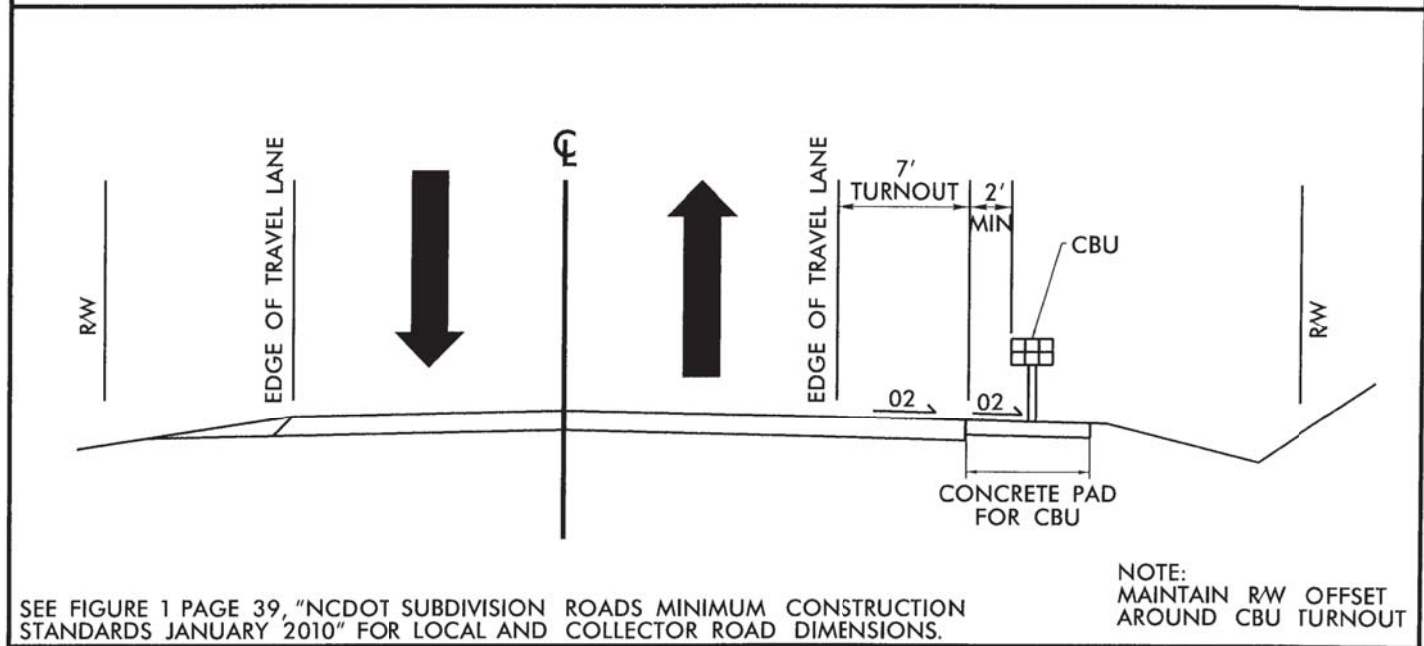
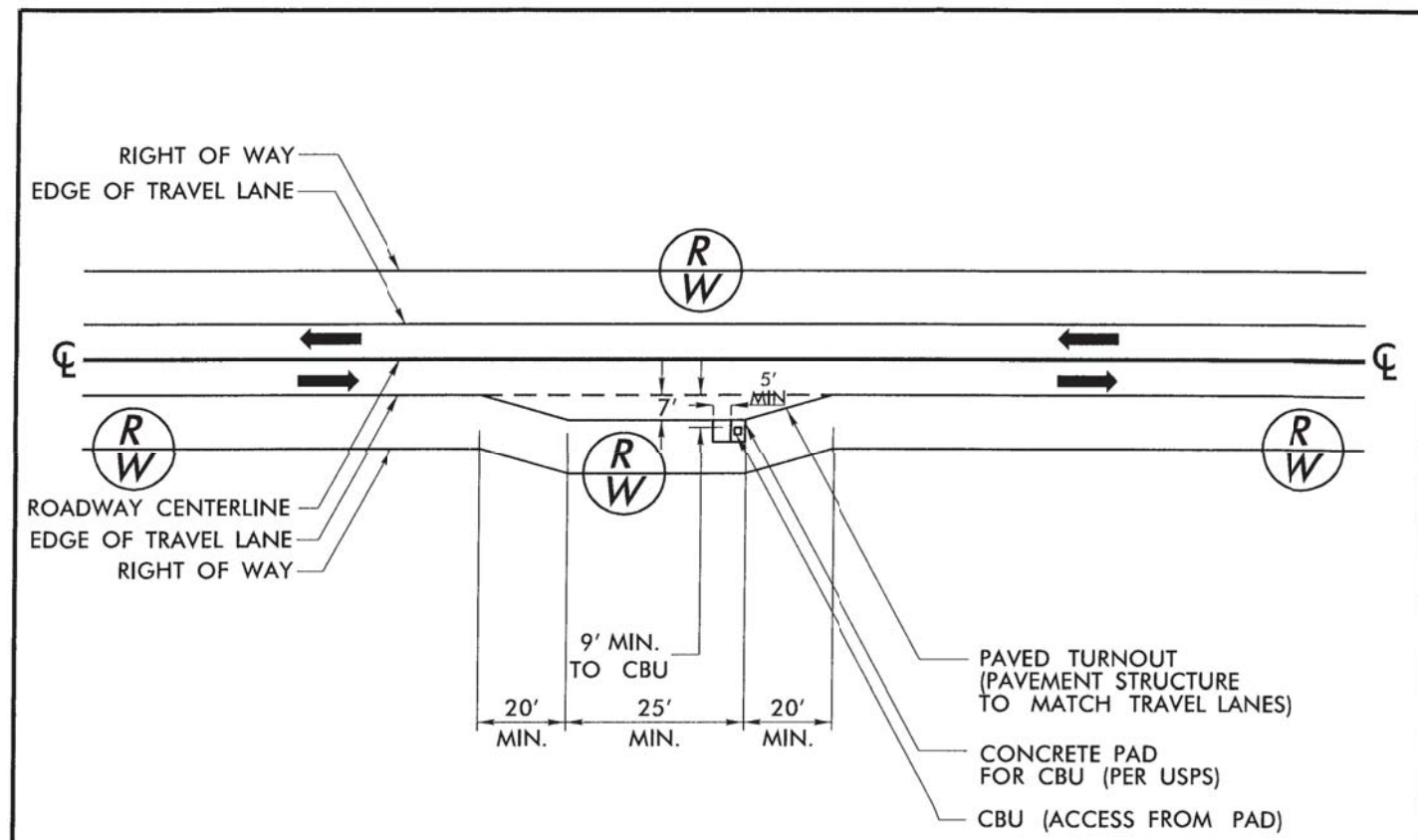
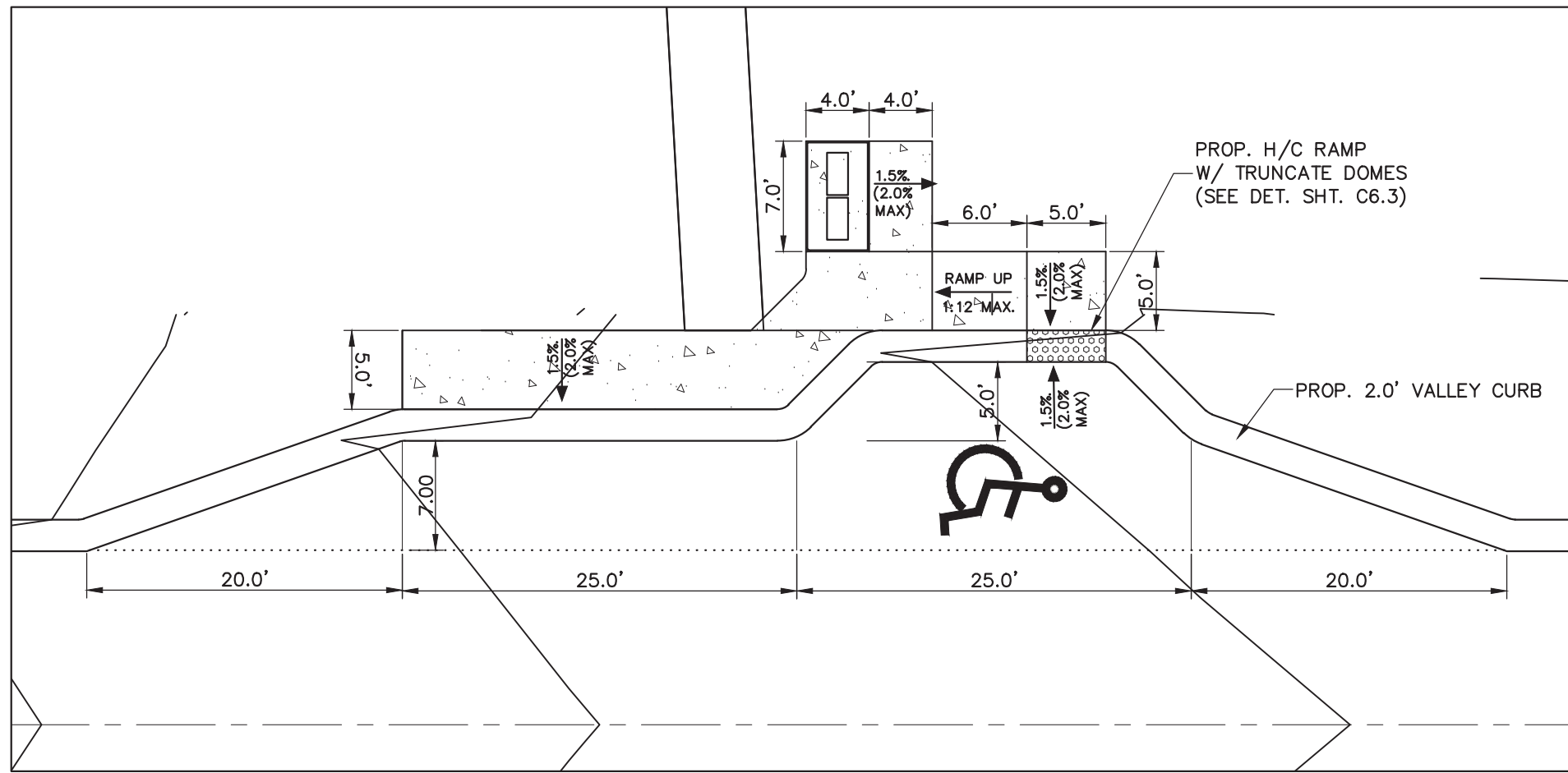


FIGURE 1

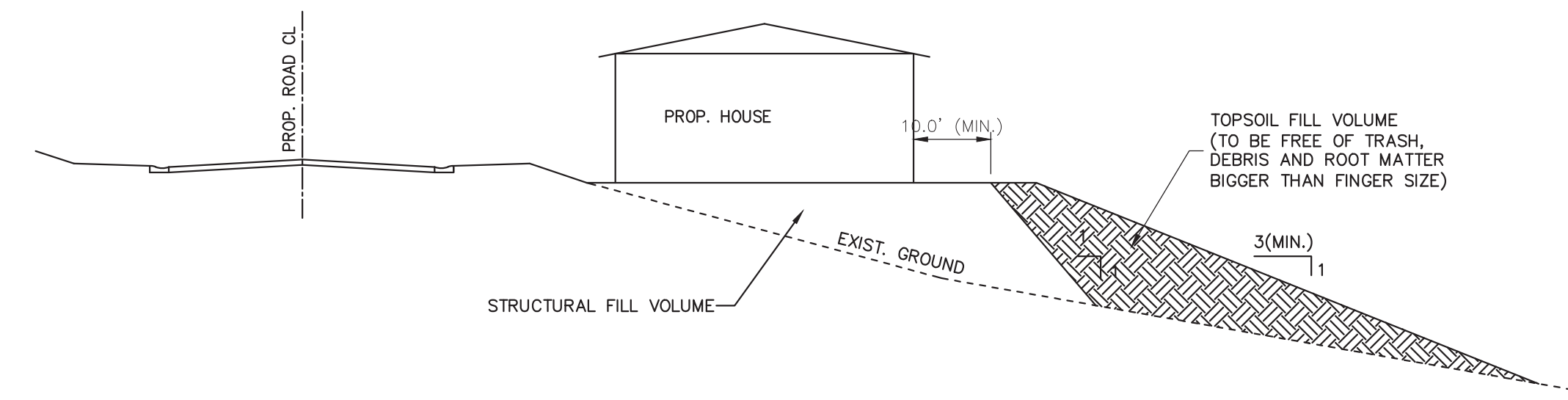
CBU PLACEMENT FOR SHOULDER SECTION RESIDENTIAL LOCAL AND
COLLECTOR SUBDIVISION STREETS



MAIL BOX KIOSK INSET DETAIL

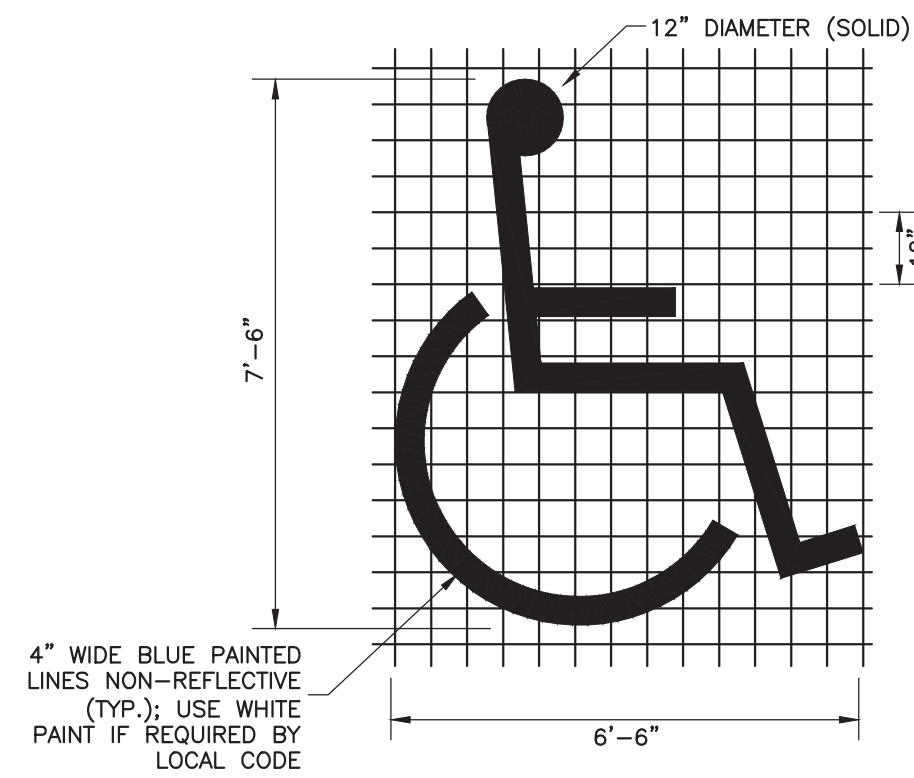
SCALE : 1" = 10'

NOTE:
BEFORE CONSTRUCTION OF MAILBOX KIOSK AND ADA SPACE, CONTRACTOR SHALL
SUBMIT TO GASTON COUNTY BUILDING DEPARTMENT FOR A COMMERCIAL BUILDING
PERMIT APPROVAL.

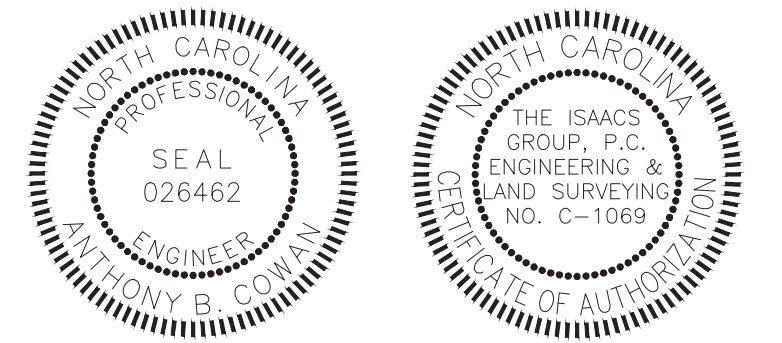


NOTE:
IN GENERAL, CORRECTION OF UNSTABLE AREAS WILL REQUIRE
UNDERCUTTING TO FIRM SOILS AS DIRECTED BY THE
GEOTECHNICAL ENGINEER. ALL FILL USED FOR FOR
REPLACEMENT OF MATERIAL THAT IS UNDERCUT SHOULD BE
UNIFORMLY COMPACTED IN THIN LIFTS, 8 INCHES OR LESS, TO
AT LEAST 98 PERCENT OF THE STANDARD PROCTOR MAXIMUM
DRY DENSITY (ASTM D 698). THE CONTROLLED TOPSOIL FILL
SHALL BE COMPACTED TO AT LEAST 95% OF THE MATERIAL
DRY DENSITY, AS DETERMINED BY THE STANDARD PROCTOR
COMPACTION TEST ASTM D698. THE ABOVE COMPACTION
SPECIFICATION IS A RECOMMENDATION ONLY. SPECIFIC FLOOR
SLAB DESIGNS MAY REQUIRE A DIFFERENT COMPACTION
STANDARD.

TOPSOIL DISPOSAL DETAIL
NTS



HANDICAP PARKING SYMBOL DETAIL
N.T.S.



Digitally signed by
Anthony B. Cowan, P.E.
Date: 2021.07.13
10:21:45-04'00'

Project: DIXON VILLAGE
BELMONT, NORTH CAROLINA

Title: DETAILS & SPECIFICATIONS

File #: 20162-PB.dwg Date: 11/13/2020 Project Egr: ABC

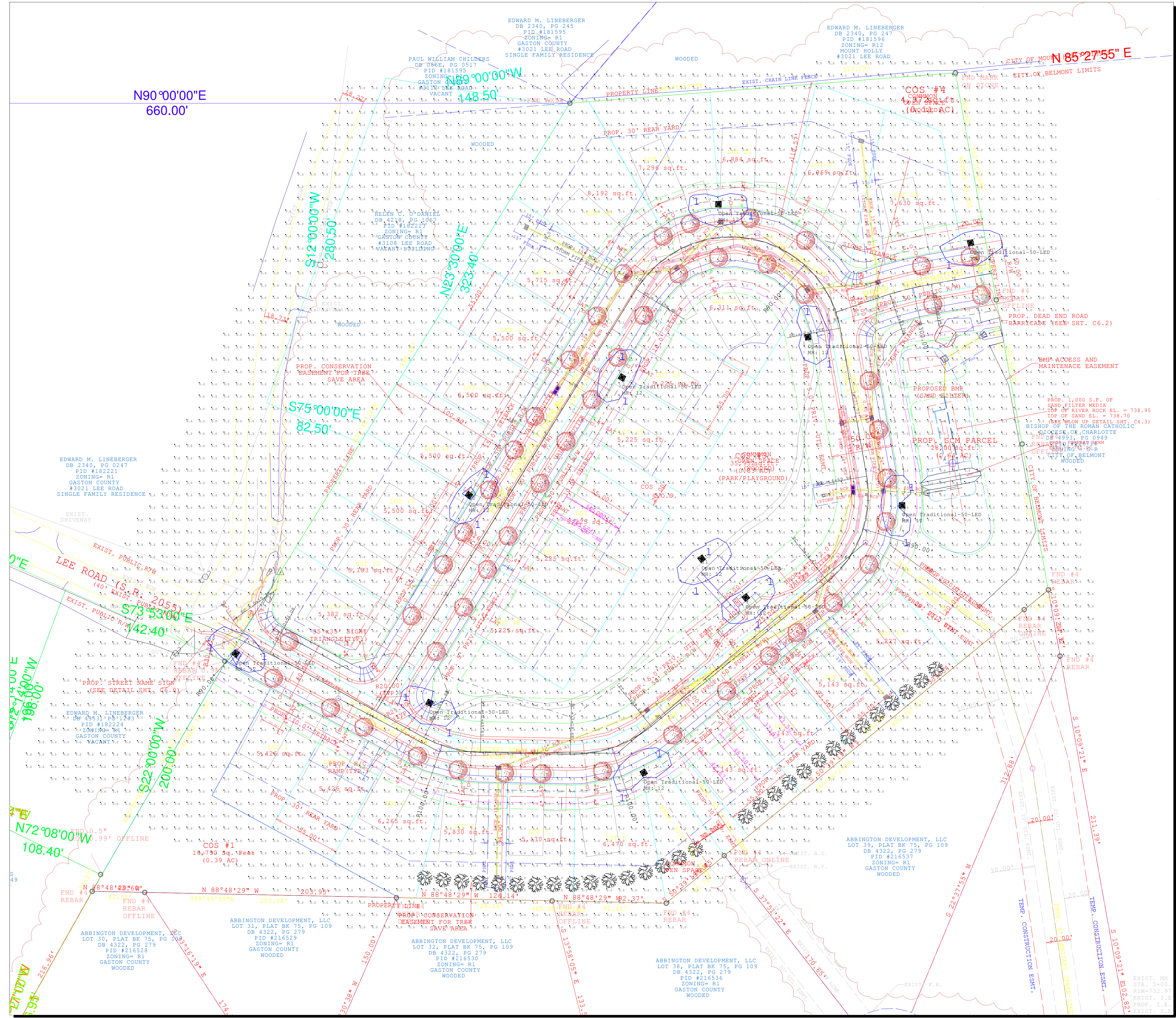
Design By: ABC


Drawn By: RER

Scale: 1" = 40'

8720 RED OAK BOULEVARD, SUITE 420
CHARLOTTE, N.C. 28217
PHONE (704) 527-3440 FAX (704) 527-8335

C6.7



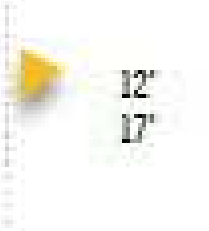
Luminaire Schedule					
Symbol	Qty	Label	Arrangement	Total Lamp Lumens LLF	
	11	Open Traditional-50-LED	SINGLE	N.A.	0.850

Calculation Summary					
Label	CalcType	Units	Avg	Max	Min
site	Illuminanc	Fc	0.06	1.8	0.0
			Avg/Min	Max/Min	
			N.A.	N.A.	

Luminaire Location Summary				
LumNo	Label	Mounting Height	Orient	
1	Open Traditional-50-LED	12	56.31	
2	Open Traditional-50-LED	12	244.901	
3	Open Traditional-50-LED	12	120.502	
4	Open Traditional-50-LED	12	307.128	
5	Open Traditional-50-LED	12	180.971	
6	Open Traditional-50-LED	12	10.572	
7	Open Traditional-50-LED	12	283.322	
8	Open Traditional-50-LED	12	270	
9	Open Traditional-50-LED	12	148.904	
10	Open Traditional-50-LED	12	321.845	
11	Open Traditional-50-LED	12	307.146	



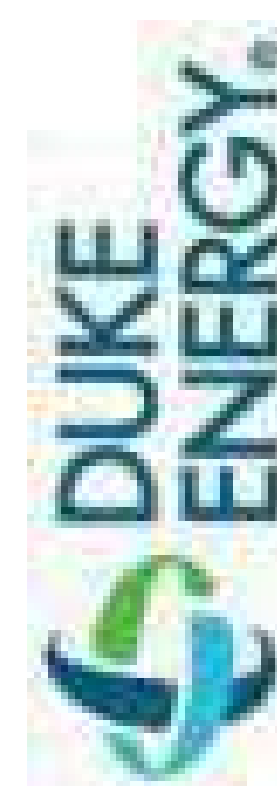
Open
Traditional



50W

POLE STYLE A

Description:
Pole Style A is a round, smooth tapered shaft available in varying heights, anchor based or direct buried.
Colors: Bronze, Black, Gray, Green (not available in all mounting heights)
Material: Fiberglass
Mounting heights:
Anchor Based Flush Mount: 12ft
Anchor Based with Concrete reveal: 25ft, 30ft, 35ft
Direct Buried: 12ft, 15ft, 20ft, 25ft, 30ft, 35ft



Comments
Date
#
Revisions

Drawn By: Tom Grantham, LC, CEM
Checked By:
Date: 7/6/2021
Scale: 1" = 40'

Dixon Village
Belmont