

S:\ec Projects\2021-13 110 St John St Apartments\DWGS\CIVIL\FINAL COMPARISON SET\21-13_001 GENERAL NOTES.dwg 2/2/2022 12:15:30 PM DWG To PDF.pc3

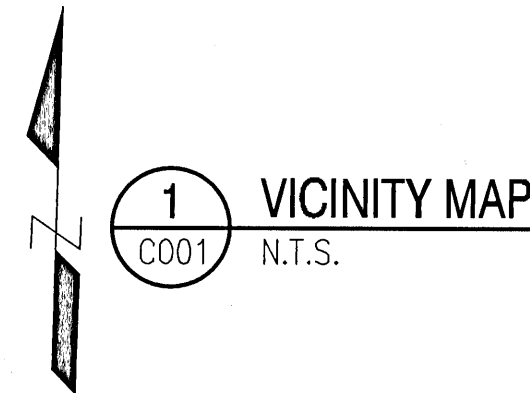
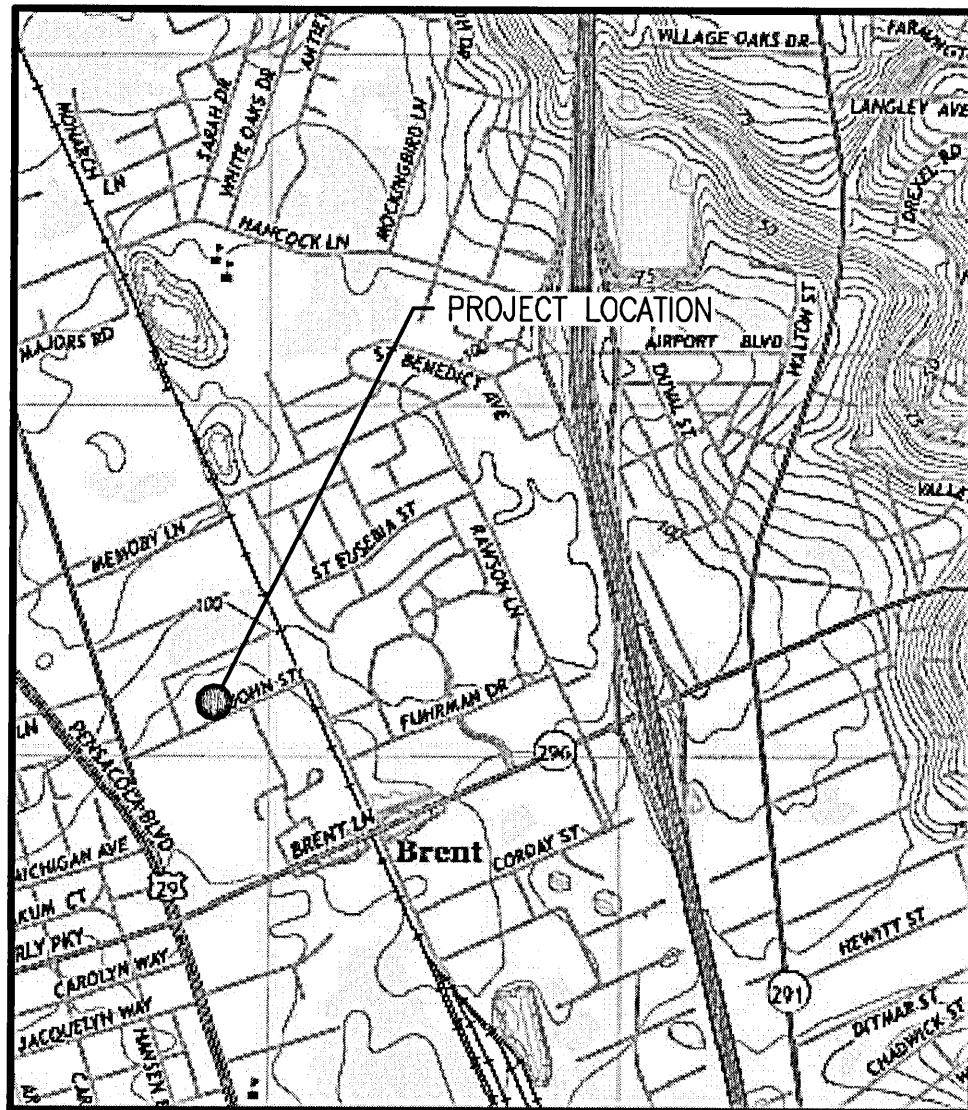
Approved ESCAMBIA COUNTY DRG PLAN REVIEW	
DRG Chairman Signature <i>J. Hampton</i>	2-9-22
Printed Name: <i>Jeffrey Hampton</i>	Date
Development Services Director or Designee	
This document has been reviewed in accordance with the requirements of applicable Escambia County Regulations and Ordinances, and does not in any way relieve the submitting Architect, Engineer, Surveyor or other signatory from responsibility of details as drawn. A Development Order (DO) must be obtained through the Development Review Process prior to the commencement of construction. This DO approval does not constitute approval by any other agency. All additional state/federal permits shall be provided to the county prior to approval of a final plat or the issuance of state/federal permits shall be provided to the county prior to approval of a final plat or the issuance of a building permit.	

GENERAL NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES AND TO DETERMINE IF OTHER UTILITIES WILL BE ENCOUNTERED DURING THE COURSE OF THE WORK AND TAKE WHATEVER STEPS NECESSARY TO PROVIDE FOR THEIR PROTECTION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING DEPTH OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
3. IF EXISTING UTILITY LINES ARE DISTURBED DUE TO CONSTRUCTION ACTIVITY THEY WILL BE RELOCATED AS PER UTILITY COMPANY AND PENSACOLA CHRISTIAN COLLEGE REQUIREMENTS. NOTIFY SUNSHINE UTILITIES 48 HOURS PRIOR TO DIGGING WITHIN R/W (800-432-4770).
4. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH DAMAGING OR DISRUPTING EXISTING UTILITY LINES. THE CONTRACTOR SHALL PAY FOR ALL COSTS TO REPAIR OR REPLACE SAID LINE, AND ALL COST INCURRED BY OWNER FOR DISRUPTION OF SAID LINE, INCLUDING DOWNTIME.
5. THESE DRAWINGS REPRESENT KNOWN STRUCTURES AND UTILITIES LOCATED IN THE PROJECT AREA. THE CONTRACTOR IS CAUTIONED THAT OTHER STRUCTURES AND UTILITIES, ABOVE OR BELOW GROUND, MAY BE ENCOUNTERED DURING THE COURSE OF THE PROJECT. THE CONTRACTOR SHOULD NOTIFY THE PROJECT ENGINEER IMMEDIATELY UPON ENCOUNTERING ANY UNEXPECTED STRUCTURE, UTILITY LINE, OR OTHER UNUSUAL CONDITION. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WORK. EXISTING CONDITIONS SHOWN ARE BASED ON THE SURVEYS BY PITTMAN-GLAZE AND ASSOCIATES DATED 5-24-2021 AND REVISED 6-29-2021.
6. FAILURE OF THE PLANS TO SHOW THE EXISTENCE OF ANY UNDERGROUND UTILITY, STRUCTURES, ETC., SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF LOCATING, PRESERVING AND PROTECTING SAID UTILITY OR STRUCTURE.
7. CONTRACTOR TO COORDINATE WITH LOCAL UTILITY COMPANIES AND PENSACOLA CHRISTIAN COLLEGE FOR REMOVAL AND RELOCATION OF EXISTING UTILITY POLES, AERIAL LINES, WATER LINES, GAS LINES, AND OTHER UTILITIES AS NECESSARY.
8. PROPERTY OBSTRUCTIONS WHICH ARE TO REMAIN IN PLACE, SUCH AS SEWER DRAINS, WATER, CHILLED WATERLINES OR GAS PIPES, CONDUITS, POLES, WALLS POSTS ETC., ARE TO BE CAREFULLY PROTECTED AND ARE NOT TO BE DISPLACED, UNLESS NOTED.
9. ALL VALVE BOXES SHALL BE SET FLUSH WITH FINISHED GRADE.
10. EROSION AND SEDIMENTATION CONTROLS WILL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR AT ALL TIMES AS PER ESCAMBIA COUNTY REQUIREMENTS.
11. THE CONTRACTOR SHALL TAKE WHATEVER STEPS NECESSARY TO PREVENT AND CONTROL EROSION AND SEDIMENTATION. AREAS OF CONTROL AND TYPICAL SECTION OF BARRIERS ARE SUGGESTIONS ONLY AND DO NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITY TO PREVENT AND CONTROL EROSION AND SEDIMENTATION.
12. SEDIMENT SHALL BE RETAINED ON THE SITE OF DEVELOPMENT, AND REMOVED AT THE END OF CONSTRUCTION.
13. ALL SITE WORK MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, UNLESS NOTED OTHERWISE IN THE CONSTRUCTION DOCUMENTS.
14. ADEQUATE PROVISIONS SHALL BE MADE FOR FLOW OF SEWERS, DRAINS, AND WATER COURSES ENCOUNTERED DURING CONSTRUCTION.
15. THE CONTRACTOR SHALL PLACE AND MAINTAIN ADEQUATE BARRICADES, CONSTRUCTION SIGNS, FLASHING LIGHTS, RED LANTERNS AND GUARDS DURING PROGRESS OF CONSTRUCTION WORK AND UNTIL IT IS SAFE FOR BOTH PEDESTRIAN AND VEHICULAR TRAFFIC.
16. THE CONTRACTOR IS CAUTIONED TO VISIT THE SITE AND FAMILIARIZE HIMSELF WITH THE PROJECT PRIOR TO BIDDING. COORDINATE SITE VISIT WITH OWNER.
17. CONTRACTOR SHALL COMPLETE ALL WORK INDICATED IN CONSTRUCTION DOCUMENTS USING HAND LABOR IF NECESSARY OR APPROPRIATE.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND COMPLY WITH ANY TESTING REQUIRED BY THE LOCAL GOVERNING AGENCY IN ADDITION TO THE TESTING REQUIREMENTS OUTLINED IN THE CONSTRUCTION DOCUMENTS.
19. CONTRACTOR TO PROVIDE TEMPORARY PROTECTION TO TREES TO REMAIN. BARRICADE IN ACCORDANCE WITH DETAIL PROVIDED HEREIN, AND ESCAMBIA COUNTY REQUIREMENTS. CONTRACTOR SHALL ERECT BARRICADES PRIOR TO INITIATION OF ANY LAND DISTURBANCE AND MAINTAIN THROUGH COMPLETION OF CONSTRUCTION. FOR ANY TREE SHOWN TO REMAIN THAT IS DAMAGED BY THE CONTRACTOR'S FORCES, THE CONTRACTOR SHALL PAY PENSACOLA CHRISTIAN COLLEGE THE SUM OF \$300.00 DOLLARS PER INCH DIAMETER OF TREE THAT IS DAMAGED.
20. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND THE CONTRACT.
21. BURNING WILL NOT BE PERMITTED ONSITE OR ON CAMPUS.
22. ALL NEW PAVEMENT SHALL BE FDOT TYPE SP 9.5 ASPHALTIC CEMENT, TOTAL THICKNESS 2", INSTALLED IN (2) 1" COURSES. BOTH COURSES TO BE TESTED AS PER THE TECHNICAL SPECIFICATIONS.
23. BASE MATERIAL SHALL CONSIST OF 6-INCH COMPACTED FDOT GRADED AGGREGATE BASE, AS INDICATED ON CONSTRUCTION PLANS.
24. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.
25. STAGING AREA AND EQUIPMENT STORAGE SHALL BE AS DESIGNATED BY THE OWNER.
26. CONTRACTOR SHALL DELIVER THE STAGING AREA TO THE OWNER ON OR BEFORE THE DATE OF COMPLETION OF CONSTRUCTION AND SAME SHALL BE IN AS GOOD AS OR BETTER CONDITION AS EXISTED PRIOR TO CONSTRUCTION.
27. CONTRACTOR SHALL SECURE THE PROJECT SITE AT THE END OF EACH DAY AND ON WEEKENDS.
28. WHERE UNSUITABLE MATERIALS ARE ENCOUNTERED IN PAVED AREAS, THE UNSUITABLE MATERIAL SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 3 FEET BELOW FINISHED SUBGRADE ELEVATION AND BACKFILLED WITH CLEAN SAND CONTAINING LESS THAN 5% FINES. SUBMIT SAMPLE TO GEOTECHNICAL ENGINEER FOR TESTING PRIOR TO PLACEMENT. SEE TECHNICAL SPECIFICATIONS.
29. CONTRACTOR EMPLOYEE PARKING SHALL BE DESIGNATED BY THE OWNER.
30. THE CONTRACTOR SHALL COORDINATE HIS WORK AND COOPERATE WITH OTHER CONTRACTORS WORKING AROUND THE AREA.
31. THE CONTRACTOR SHALL NOT BLOCK OR OBSTRUCT ANY ROADS OR DRIVES WITHOUT FIRST RECEIVING PERMISSION FROM PENSACOLA CHRISTIAN COLLEGE, AND AUTHORITIES HAVING JURISDICTION, TO DO SO.
32. CONTRACTOR IS RESPONSIBLE FOR PREVENTING THE TRANSFER OF MUD/DIRT/DEBRIS FROM CONSTRUCTION VEHICLES ONTO COUNTY ROADS, CONTRACTOR IS RESPONSIBLE FOR CLEANUP OF SAME.
33. CONTRACTOR SHALL CLEANUP THE ENTIRE SITE INCLUDING STAGING AREAS AT LEAST TWICE PER WEEK. THIS SHALL INCLUDE PLACING TRASH/SCRAP RECEPTACLES AT APPROPRIATE LOCATIONS AROUND THE SITE. CONTRACTOR SHALL PICK UP ALL ROCKS, METAL, PIPE, NAILS, BUTS, BOLTS, BOARDS, PAPER, TRASH, ETC. AT LEAST TWICE PER WEEK. CONTRACTOR SHALL INCLUDE COST OF SAME IN HIS BID.

ST. JOHN ST. APARTMENTS PHASE 1 FOR PENSACOLA CHRISTIAN COLLEGE, INC.

34. DAMAGE TO EXISTING ROADS DURING CONSTRUCTION WILL BE REPAIRED BY CONTRACTOR PRIOR TO OBTAINING C.O.
 35. CONTRACTOR SHALL BE RESPONSIBLE FOR CALCULATING HIS OWN QUANTITIES AND SHALL PROVIDE SAME ON APPROPRIATE FORM IN THE PROJECT MANUAL AND SUBMIT WITH HIS BID. CONTRACTOR SHALL PROVIDE UNIT PRICES WITH HIS QUANTITIES. FOR ANY ADDITIONAL WORK FOR WHICH THERE IS NO UNIT PRICE, CONTRACTOR SHALL SUBMIT ITEMIZED COST IN A FORM SATISFACTORY TO THE ENGINEER/ARCHITECT.
 36. CONTRACTOR SHALL ADHERE TO PENSACOLA CHRISTIAN COLLEGE'S AND OTHER AUTHORITIES HAVING JURISDICTION, RULES CONCERNING SAFETY.
 37. JOBSITE SAFETY IS THE EXCLUSIVE RESPONSIBILITY OF THE GENERAL CONTRACTOR. ALL OSHA AND OTHER APPLICABLE SAFETY REQUIREMENTS SHALL BE STRICTLY ADHERED TO.
 38. CONTRACTOR WILL ADHERE TO PENSACOLA CHRISTIAN COLLEGE'S CONTRACTOR'S CODE OF CONDUCT AT ALL TIMES WHILE ON CAMPUS.
 39. CONTRACTOR SHALL COORDINATE WITH OWNER PRIOR TO REMOVING ANY TREE.
 40. CONTRACTOR IS CAUTIONED THAT ALL MATERIAL SUBMITTALS, DESIGN MIXES AND OTHER SUBMITTALS MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION OR CONSTRUCTION. SHOULD INSTALLATION OR CONSTRUCTION OCCUR PRIOR TO APPROVAL, CONTRACTOR MAY BE REQUIRED TO REMOVE AND REPLACE SAME AT HIS OWN EXPENSE.
 41. CONTRACTOR IS RESPONSIBLE FOR CONTACTING, COORDINATING AND ASSISTING GEOTECHNICAL ENGINEER WITH ALL TESTING. SHOULD TESTING NOT BE DONE OR NOT OCCUR AT THE APPROPRIATE TIME, THE CONTRACTOR MAY BE REQUIRED TO REMOVE OR UNCOVER WORK AND REPLACE AT HIS OWN EXPENSE.
 42. CONTRACTOR TO PROVIDE GEOTECHNICAL ENGINEER WITH 24 HOURS ADVANCE NOTICE FOR TESTING.
 43. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND COMPLY WITH ANY TESTING REQUIRED BY THE LOCAL GOVERNING AGENCY IN ADDITION TO THE TESTING REQUIREMENTS SET FORTH IN THE CONSTRUCTION DOCUMENTS.
 44. WHERE NEW CURB JOINS EXISTING CURB, STYLE SHALL MATCH UNLESS OTHERWISE NOTED.
 45. AT THE COMPLETION OF THE PROJECT AND PRIOR TO FINAL INSPECTION, THE CONTRACTOR SHALL PROVIDE TO OWNER AND ENGINEER, A "REDLINE MARK-UP" SET OF AS-BUILT DRAWINGS SHOWING ALL UTILITIES (INCLUDING ELECTRICAL, TELEPHONE, GAS AND STORM) INSTALLED, AND EXISTING UTILITIES UNCOVERED DURING THE COURSE OF THE WORK. AS-BUILT DRAWINGS SHALL BE CLEAN, NEAT AND LEGIBLE. CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS DURING CONSTRUCTION, WHICH SHOW AS-BUILT CONDITIONS OF ALL WORK INCLUDING PIPING, DRAINAGE STRUCTURES, DIMENSIONS, ETC.
 46. CONTRACTOR IS TO PERFORM ALL EXCAVATION THAT IS IN CLOSE PROXIMITY TO GAS LINES, FIBER OPTICS AND ELECTRICAL LINES BY HAND. WHILE EXCAVATING AROUND GAS LINES, THE CONTRACTOR SHALL HAVE AN EMPLOYEE AT THE SHUT-OFF VALVE, AT THE READY TO CLOSE THE VALVE IF NECESSARY.
 47. SOD ALL AREAS DISTURBED DUE TO CONSTRUCTION ACTIVITIES.
 48. SOD TO BE PALISADES ZOYSIA GRASS FROM WOERNER LANDSCAPE, PENSACOLA, FL.
 49. NOTIFY SUNSHINE UTILITIES 48 HOURS IN ADVANCE PRIOR TO DIGGING WITHIN R/W; 1-800-432-4770.
- ESCAMBIA COUNTY REQUIRED NOTES:**
- (CONTRACTOR TO ADHERE TO THESE NOTES IN ADDITION TO OTHER NOTES, PLANS AND PROJECT MANUAL)
1. ALL DISTURBED AREAS WHICH ARE NOT PAVED ARE TO BE STABILIZED WITH SEEDING, FERTILIZER AND MULCH, HYDROSEED AND/OR SOD. PONDS AND AND SWALES TOPS AND SIDES SHALL BE SODDED.
 2. SEDIMENT SHALL BE RETAINED ON THE SITE OF DEVELOPMENT.
 3. DEVELOPER/CONTRACTOR SHALL RESHAPE PER PLAN SPECIFICATIONS, CLEAN OUT ACCUMULATED SILT, AND STABILIZE RETENTION/DETENTION POND(S) AT END OF CONSTRUCTION WHEN ALL DISTURBED AREAS HAVE BEEN STABILIZED.
 4. CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS DURING CONSTRUCTION WHICH SHOW AS-BUILT CONDITIONS OF ALL WORK INCLUDING PIPING, DRAINAGE STRUCTURES, RETENTION AREA, OUTLET STRUCTURES, DIMENSIONS, ETC. THESE RECORD DRAWINGS ARE TO BE PROVIDED TO THE PROJECT ENGINEER PRIOR TO REQUESTING FINAL INSPECTION.
 5. THE OWNER OR HIS AGENT SHALL ARRANGE/SCHEDULE WITH THE COUNTY ENGINEER AN INSPECTION OF THE EROSION AND SEDIMENT CONTROL DEVICES PRIOR TO CONSTRUCTION, UNDERGROUND DRAINAGE STRUCTURES PRIOR TO BURIAL, AND THE FINAL INSPECTION OF THE DEVELOPMENT UPON COMPLETION.
 6. EROSION SHALL BE CONTROLLED BY THE USE OF A HAY BALE BARRIER/SILT FENCE AS SHOWN ON PLANS AND SHALL BE SETUP PRIOR TO COMMENCING CONSTRUCTION. THE EROSION CONTROL BARRIER SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION BY THE CONTRACTOR. AFTER PLACEMENT OF THE EROSION CONTROL BARRIER, THE RETENTION AREA IS TO BE CONSTRUCTED. UPON COMPLETION OF THE PROJECT, THE RETENTION AREA SHALL BE CLEANED OF SILT, STABILIZATION OF ALL DISTURBED AREAS SHALL BE ACCOMPLISHED, AND THE RETENTION AREA IS TO BE RECONFIGURED TO DESIGN CROSS-SECTION, AND GRASSED.
 7. ALL NEW ROOF DRAINS, DOWNSPOUTS, OR GUTTERS FOR FUTURE RESIDENTIAL STRUCTURES ARE TO BE ROUTED TO CARRY ALL STORMWATER TO RETENTION/DETENTION AREAS.
 8. THE PROJECT ENGINEER (ENGINEER OF RECORD) SHALL PROVIDE TO ESCAMBIA COUNTY "AS-BUILT" RECORD DRAWINGS FOR VERIFICATION AND APPROVAL BY ESCAMBIA COUNTY ONE WEEK PRIOR TO REQUESTING A FINAL INSPECTION, OR PROVIDE "AS-BUILT CERTIFICATION OR THE CONSTRUCTION ADHERES TO THE PERMITTED PERMITTED PLANS AND SPECIFICATION. THE "AS-BUILT" CERTIFICATION OR "AS-BUILT" RECORD DRAWINGS MUST BE SIGNED, SEALED, AND DATED BY A REGISTERED FLORIDA PROFESSIONAL ENGINEER.
 9. ALL ASPECTS OF THE STORMWATER/DRAINAGE COMPONENTS AND/OR TRANSPORTATION COMPONENTS SHALL BE COMPLETED PRIOR TO REQUESTING A FINAL INSPECTION.
 10. NO DEVIATIONS OR REVISIONS FROM THESE PLANS BY THE CONTRACTOR SHALL BE ALLOWED WITHOUT PRIOR APPROVAL FROM BOTH THE DESIGN ENGINEER AND THE ESCAMBIA COUNTY. ANY DEVIATIONS MAY RESULT IN DELAYS IN OBTAINING A CERTIFICATE OF OCCUPANCY.
 11. RETENTION/DETENTION AREAS SHALL BE SUBSTANTIALLY COMPLETE PRIOR TO ANY CONSTRUCTION ACTIVITIES THAT MAY INCREASE STORMWATER RUNOFF RATES. THE CONTRACTOR SHALL CONTROL RUNOFF DURING ALL PHASES OF CONSTRUCTION.
 12. IMPROPER SEDIMENT CONTROL MEASURES MAY RESULT IN CODE ENFORCEMENT VIOLATION.
 13. ALL DISTURBED AREAS WITHIN COUNTY RIGHT-OF-WAY TO BE STABILIZED WITH SOD.



UTILITY COMPANIES:
UTILITY INFORMATION SHOWN AS PER FIELD INFORMATION
TELEPHONE - PENSACOLA CHRISTIAN COLLEGE/AT&T
ELECTRIC - PENSACOLA CHRISTIAN COLLEGE/GULF POWER
SANITARY SEWER/WATER - PENSACOLA CHRISTIAN COLLEGE/ECUA
POTABLE WATER - PENSACOLA CHRISTIAN COLLEGE/ECUA
NATURAL GAS - CITY OF PENSACOLA

PROPERTY OWNER:
PENSACOLA CHRISTIAN COLLEGE INC.
250 BRENT LANE, PENSACOLA, FLORIDA 32504
850-969-1610

DEVELOPER:
PENSACOLA CHRISTIAN COLLEGE INC.

PROJECT ADDRESS:
110 ST. JOHN STREET

PROPERTY ID:
35-15-30-9002-005-003

ZONED:
COM

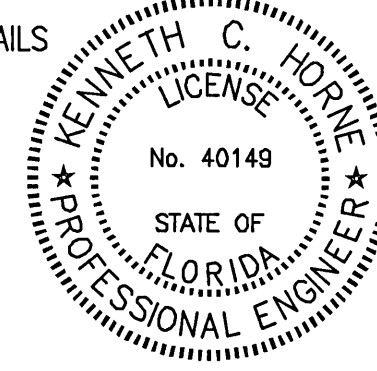
FUTURE LAND USE:
MU-U

PLANS PREPARED BY:
KENNETH HORNE & ASSOCIATES
SEPTEMBER 2021

FLOOD ZONE "X" PER FIRM MAP 12033C0380G
DATED SEP 29, 2006

SHEET INDEX:

- C001 GENERAL NOTES
- C101 DEMOLITION PLAN
- C201 STAKING PLAN
- C202 OFFSITE POND
- C301 GRADING PLAN
- C302 DRAINAGE PLAN
- C401 UTILITY PLAN
- C402 LIFT STATION DETAILS
- C501 LANDSCAPE PLAN
- C502 IRRIGATION PLAN
- C601 DETAILS
- C602 DETAILS
- C603 DETAILS



Kenneth C. Horne
2/4/22

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CIVIL ENGINEERS
PO BOX 10669, PENSACOLA, FLORIDA 32524
7201 NORTH 9th, SUITE 6, PENSACOLA, FLORIDA 32504
(850) 471-9005 INFO@KH-A.COM FAX (850) 471-0093

REVISIONS

110 ST. JOHN APARTMENTS
PHASE 1
PENSACOLA CHRISTIAN COLLEGE, INC.
PENSACOLA, FLORIDA



KH&A PROJ. NO.: 2021-13
DATE: DECEMBER 15, 2021
DRAWN BY: WPM
CHECKED BY: GMS

BID SET

KHA PROJECT NO: 2021-13

GENERAL NOTES

C001

- LEGEND:
- BM Benchmark
 - ELEV Elevation
 - FFE Finished floor elevation
 - CP Concrete pipe
 - CPP Corrugated plastic pipe
 - MET Metal pipe
 - PVC Poly vinyl chloride
 - 1/2" Capped iron rod set #7073
 - 1/2" Capped iron rod found #noted
 - Hub and tack set
 - Iron pipe found
 - Iron rod found
 - Nail and disk set #7073
 - Air conditioning unit
 - Backflow preventor
 - Cable equipment
 - Electric equipment
 - Electric outlet
 - Fire hydrant
 - Ground light
 - Guard post
 - Guy wire
 - Light pole with base
 - Mailbox
 - Power pole
 - PVC stubout
 - Road sign
 - Sanitary manhole
 - Sewer cleanout
 - Benchmark

- Spot elevation
- Sprinkler control valve
- Storm inlet
- Storm manhole
- Telephone equipment
- Water meter
- Water valve
- Cable line
- Contour line
- Overhead Electric line
- Buried Electric Line
- Fence - chain link
- Fence - wood
- Sanitary sewer line
- Storm sewer line
- Telephone line
- Water line
- Unknown Buried Utility
- Buried Communication Line
- Prop. Silt Fence
- Crepe myrtle
- Oak tree
- Palm tree
- Asphalt
- Brick
- Concrete
- Gravel

BENCHMARKS:

1709/13A - A railroad spike in the south side of a power pole located in the north right of way of St. John Street and 140+/- west of Rhett Road.
Elevation = 93.64'

1709/13B - An "X" in the south bonnet bolt of a fire hydrant located in the north right of way of St. John Street and 585+/- west of Rhett Road.
Elevation = 94.25'

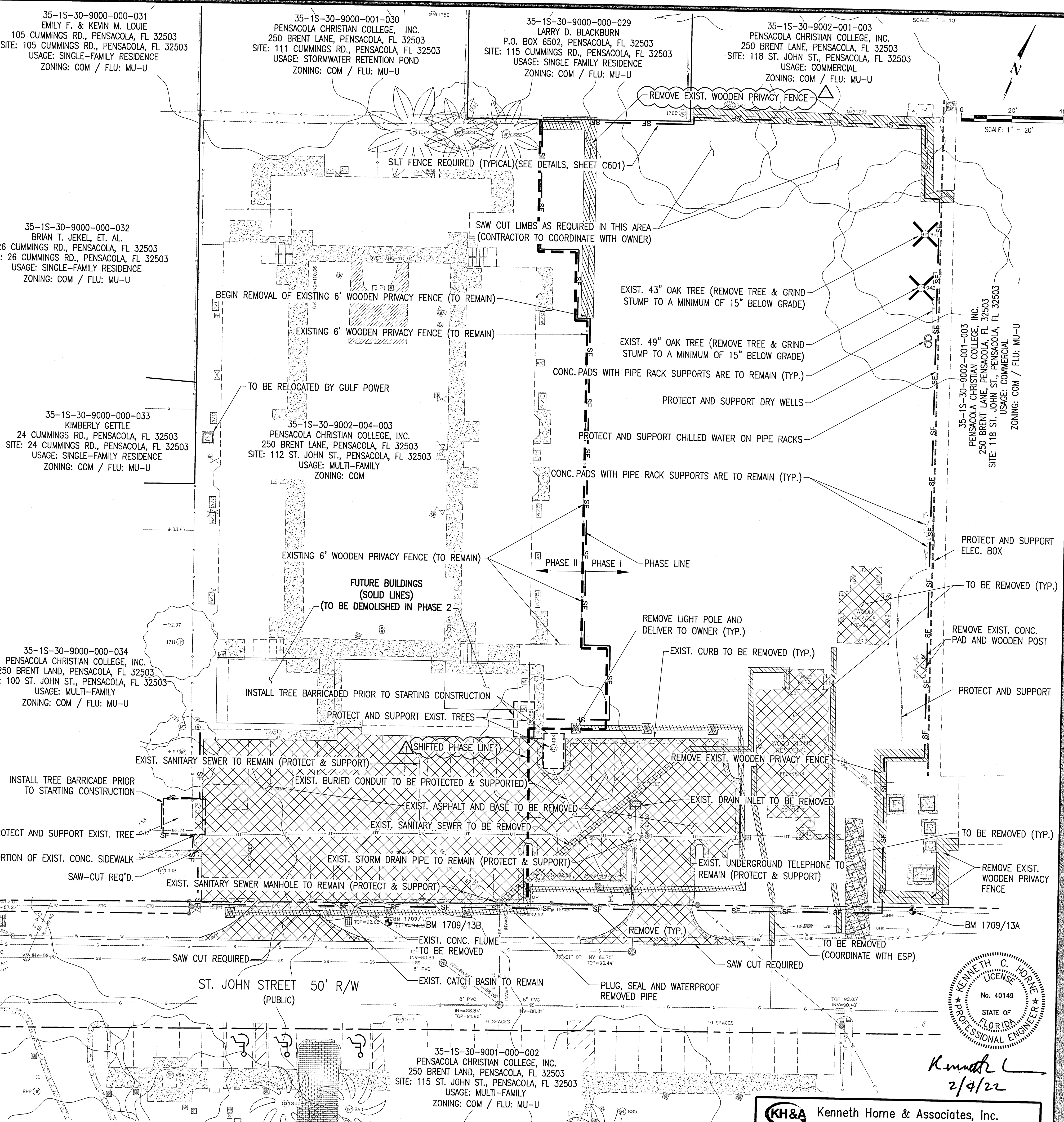
1709/13C - An "X" in the south bonnet bolt of a fire hydrant located in the northeast corner of the intersection of St. John Street and Cummings Road.
Elevation = 92.92'

1709/13D - A railroad spike in the south side of a power pole located in the north right of way of St. John Street and 270+/- west of Cummings Road.
Elevation = 92.46'

SURVEYOR'S NOTES:

- The underground utilities shown have been located from field survey information and existing drawings. The surveyor has not physically located the underground utilities. The surveyor does not certify that the underground utilities shown comprise all such utilities or that they are the exact size, material, or location as indicated.
- This survey does not reflect or determine ownership.
- This survey is subject to any facts that may be disclosed by a full and accurate title search.
- This survey is subject to setbacks, easements, and restrictions of record.
- To assure the contractor is on the same vertical and horizontal datum as this survey, it is strongly recommended that vertical checks be made between two benchmarks and that horizontal checks be made between three control points or property corners.
- Sub-surface improvements, if any, not located.
- Due to current safety regulations, we are unable to access any sewer manholes and/or structures in order to verify pipe size or material. Pipe size and material has been shown as per plans or by approximate measurements. It is strongly recommended that size and material be verified before any design work begins.
- Coordinates shown are State Plane Coordinates referenced to N.A.D. 83 datum, 2011 adjustment, Florida North Zone and expressed in U.S. survey feet.
- Coordinates are derived by using the Trimble and Florida Department of Transportation continuously operating reference station (CORS) network.

- GENERAL NOTES:
- CONTRACTOR SHALL VERIFY BENCHMARK ELEVATIONS PRIOR TO BEGINNING WORK.
 - REMOVE STUMPS. EXTRA CARE SHALL BE TAKEN WHEN REMOVING STUMPS AND ROOTS SO AS NOT TO DAMAGE EXISTING UTILITIES. SAWCUT ROOTS PRIOR TO REMOVING STUMPS.
 - CONTRACTOR IS RESPONSIBLE FOR LOCATING, PROTECTING AND SUPPORTING EXISTING UTILITIES. INCLUDE COST OF SAME IN BID PRICE.
 - REMOVE STUMPS. DO NOT PULL ON ROOTS. ROOTS SHALL BE VERTICALLY SAW-CUT.
 - BACKFILL AND COMPACT STUMP HOLES. SEE TECHNICAL SPECIFICATIONS FOR BACKFILL MATERIAL.
 - UTILITIES SHOWN ARE APPROXIMATE. COORDINATE WITH OWNER PRIOR TO REMOVING TREES.
 - HORIZONTAL AND VERTICAL LOCATION VERIFICATION OF ALL AFFECTED EXISTING UTILITIES, PIPES, STRUCTURES, ETC. SHALL BE ACCOMPLISHED BY EXPLORATORY EXCAVATION AND EXPOSING THE EXISTING BURIED UTILITY, PIPE, STRUCTURE, ETC. PRIOR TO BEGINNING THE WORK.
 - AFTER TREE LIMBS AND DEBRIS REMOVAL IS COMPLETE THE CONTRACTOR SHALL CLEAN AND DRESS THE WORK AREA USING HAND RAKES AND SHALL LEAVE THE WORK AREA READY TO BE SODDED.
 - PER ESCAMBIA COUNTY'S LAND DEVELOPMENT CODE, ALL TREE REMOVAL, LAND CLEARING, FILLING OR PLACEMENT OF FILL MATERIALS ON SITE, GRADING, EXCAVATION, BERMING, CUTTING, OR ANY OTHER LAND DISTURBING ACTIVITIES THAT MAY ALTER LAND TOPOGRAPHY OR VEGETATIVE COVER SHALL BE PERMITTED OR OTHERWISE APPROVED IN WRITING BY THE COUNTY PRIOR TO INITIATING SITE WORK.



REVISIONS

110 ST. JOHN APARTMENTS
PHASE 1
PENSACOLA CHRISTIAN COLLEGE, INC.
PENSACOLA, FLORIDA

STROBEL & HUNTER
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An Architectural Firm
715 E. CADSDEN STREET
PENSACOLA, FL 32501
(850) 432-3153 (PHONE)
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LIC. #AA-0001779

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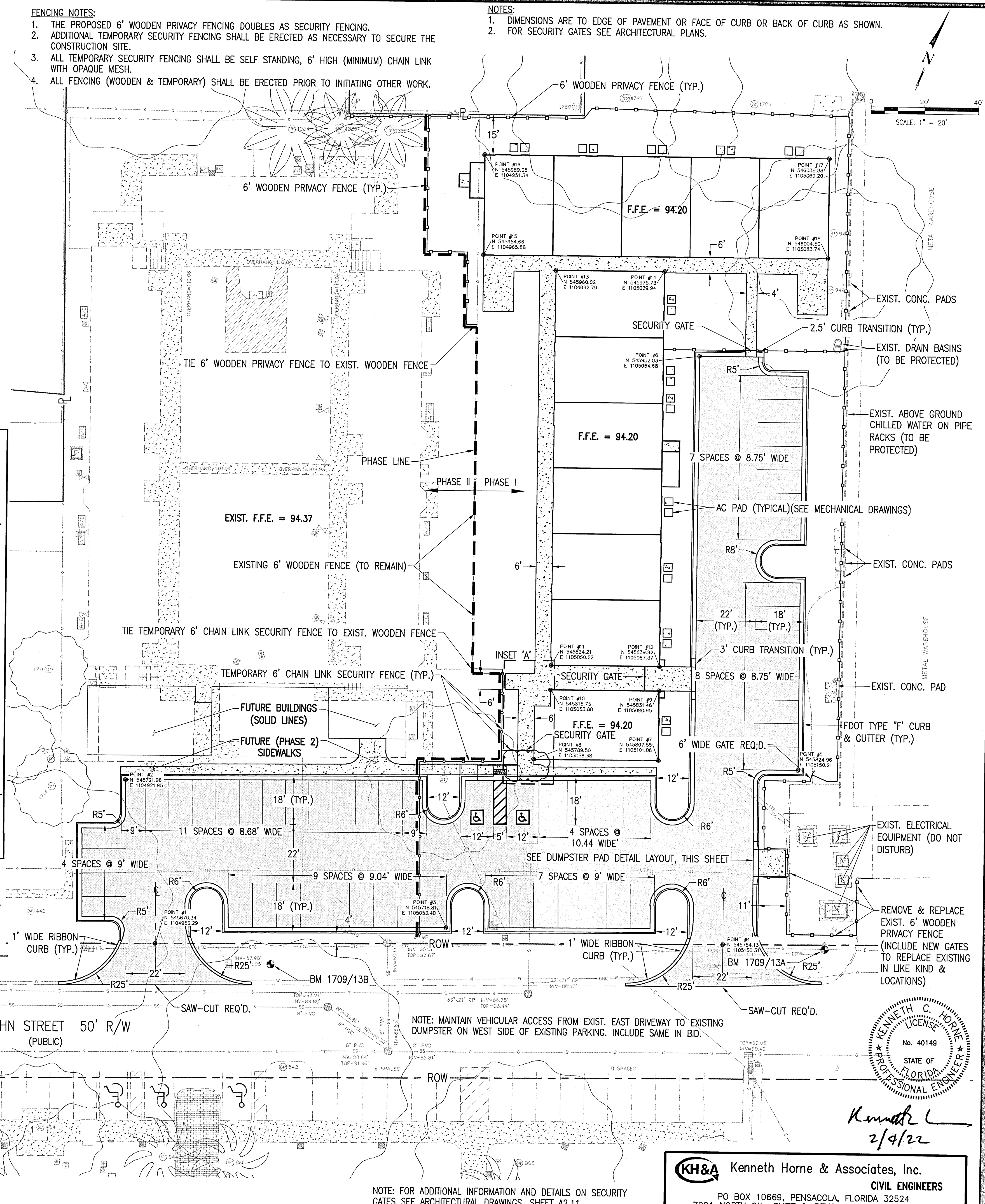
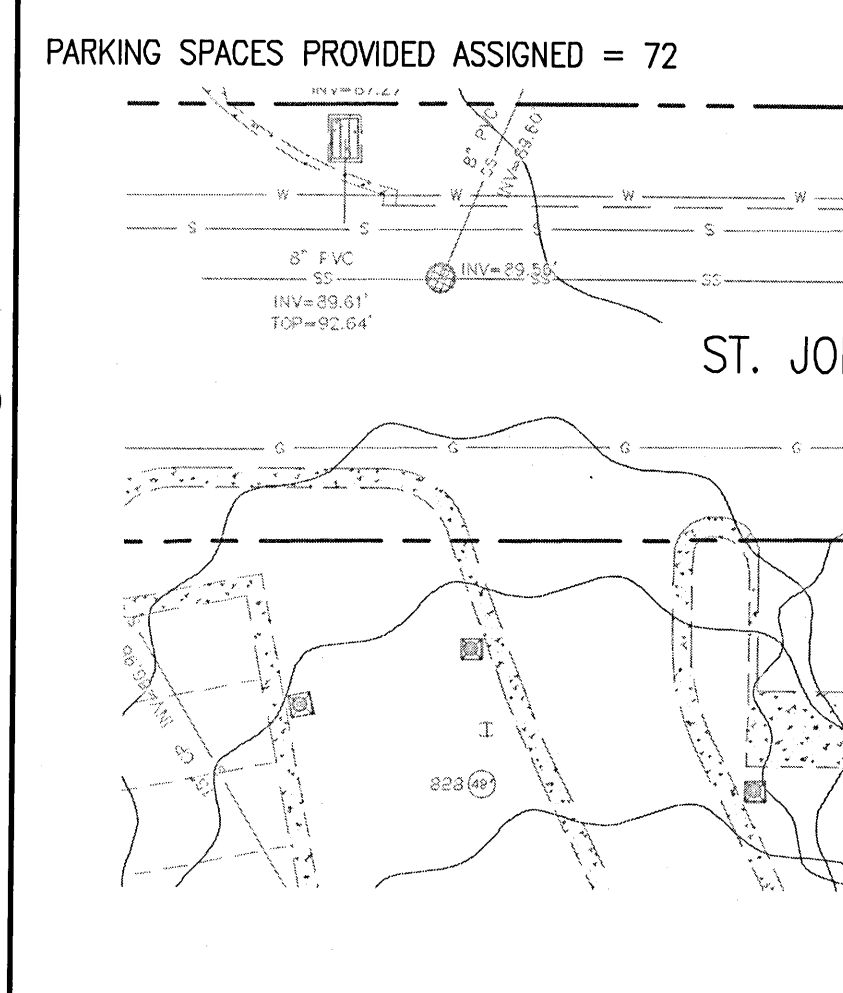
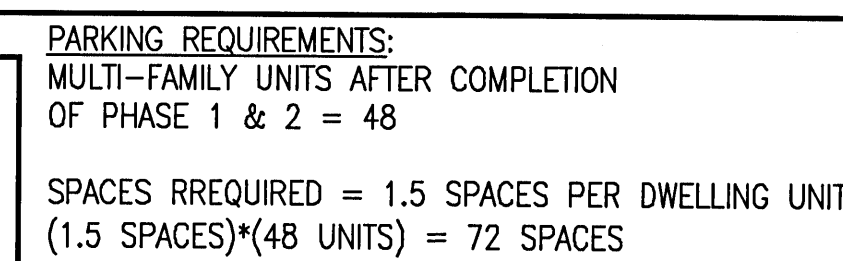
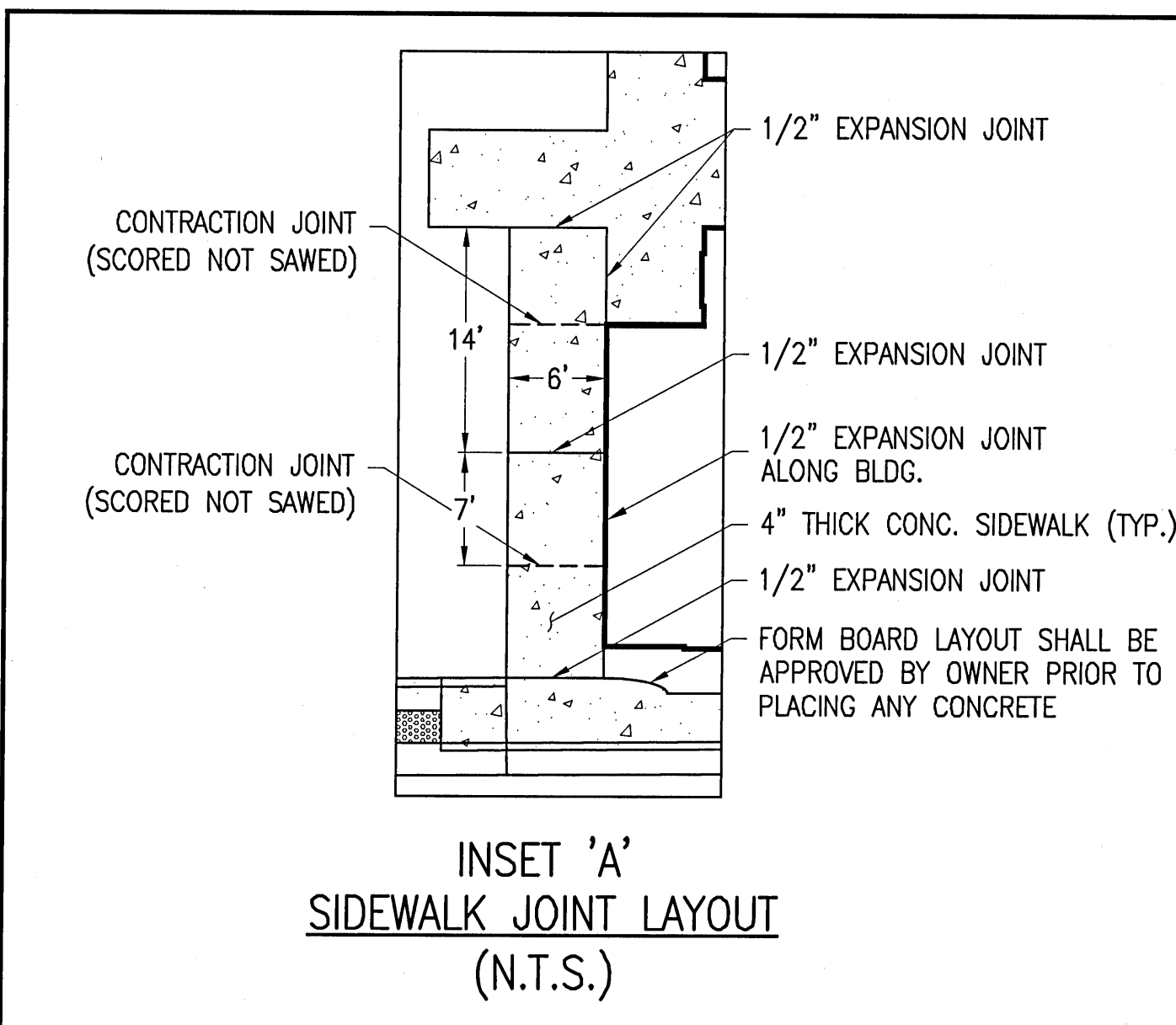
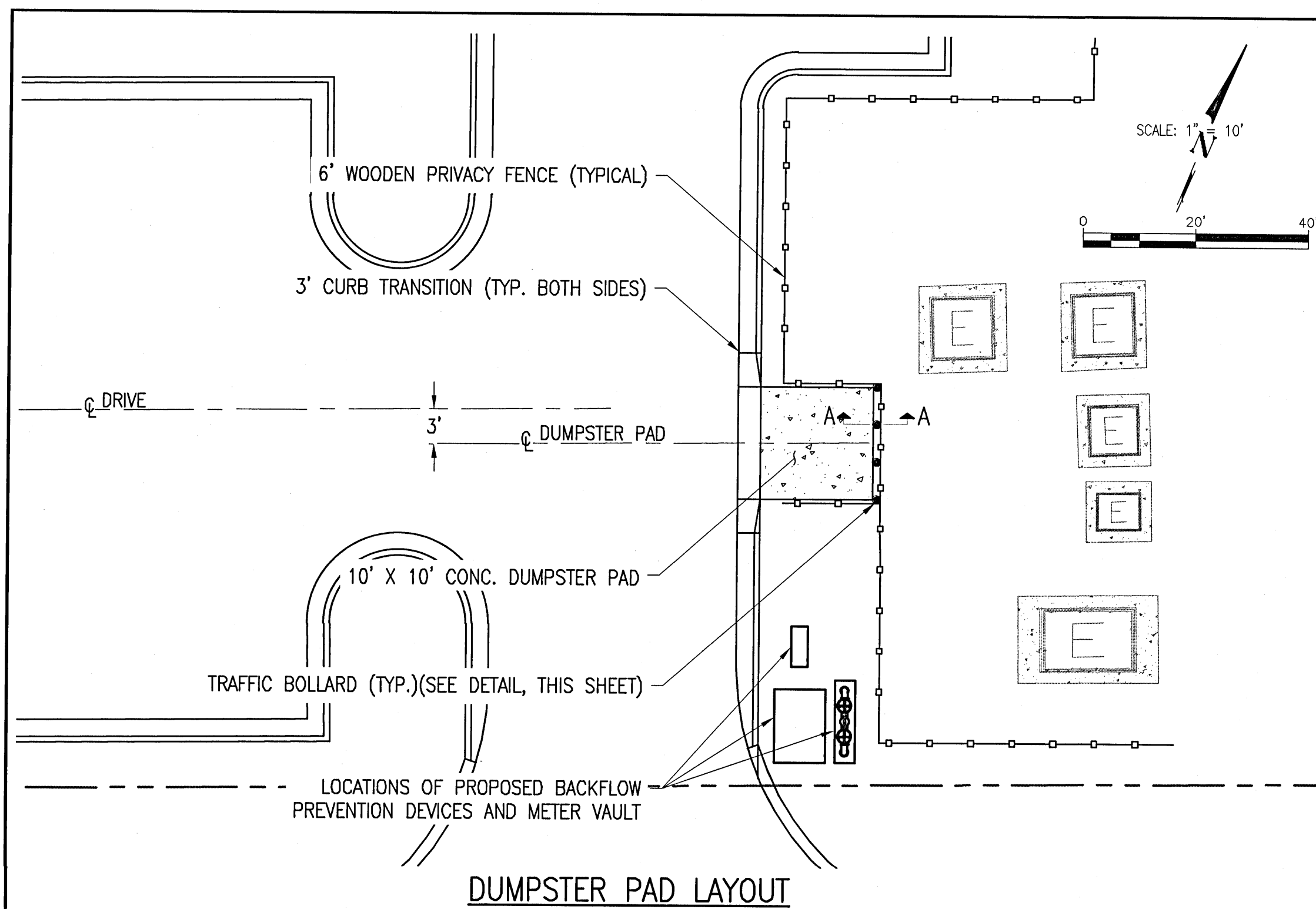
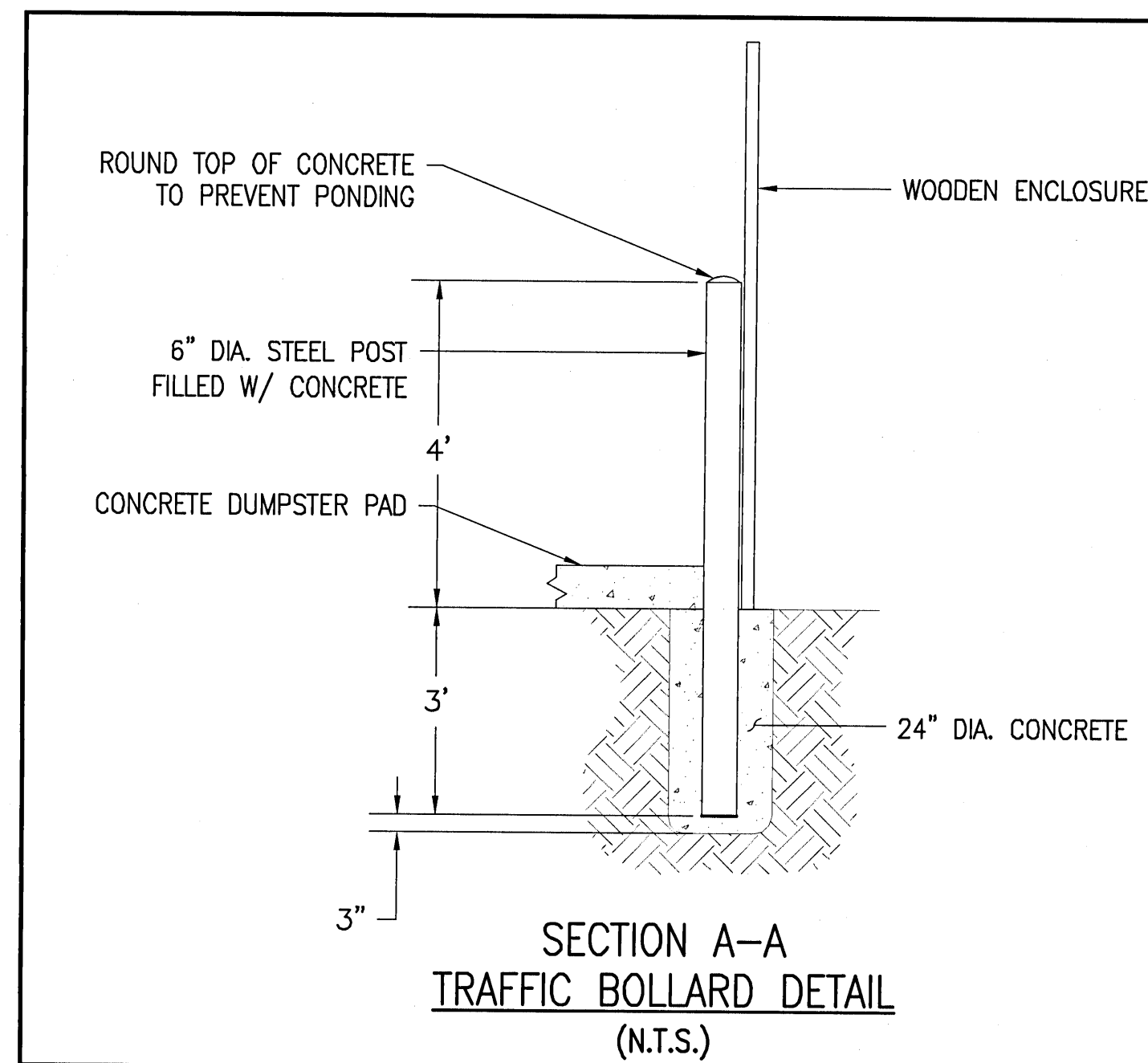
DEMOLITION PLAN

C101

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Kenneth C. Horne
No. 40149
STATE OF FLORIDA
PROFESSIONAL ENGINEER

2/4/22



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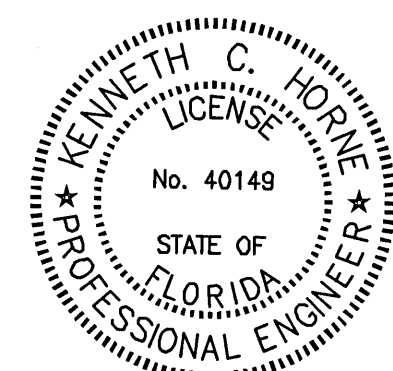
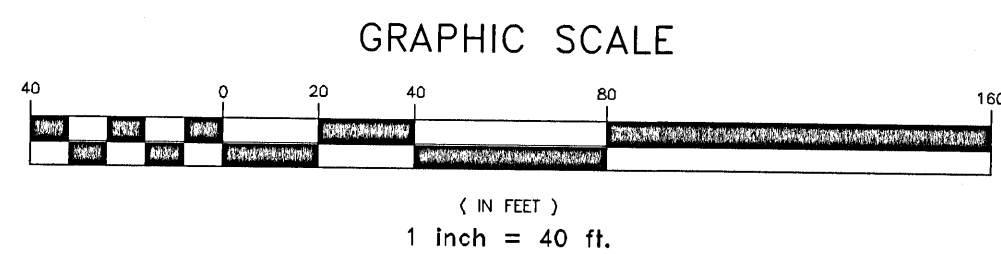
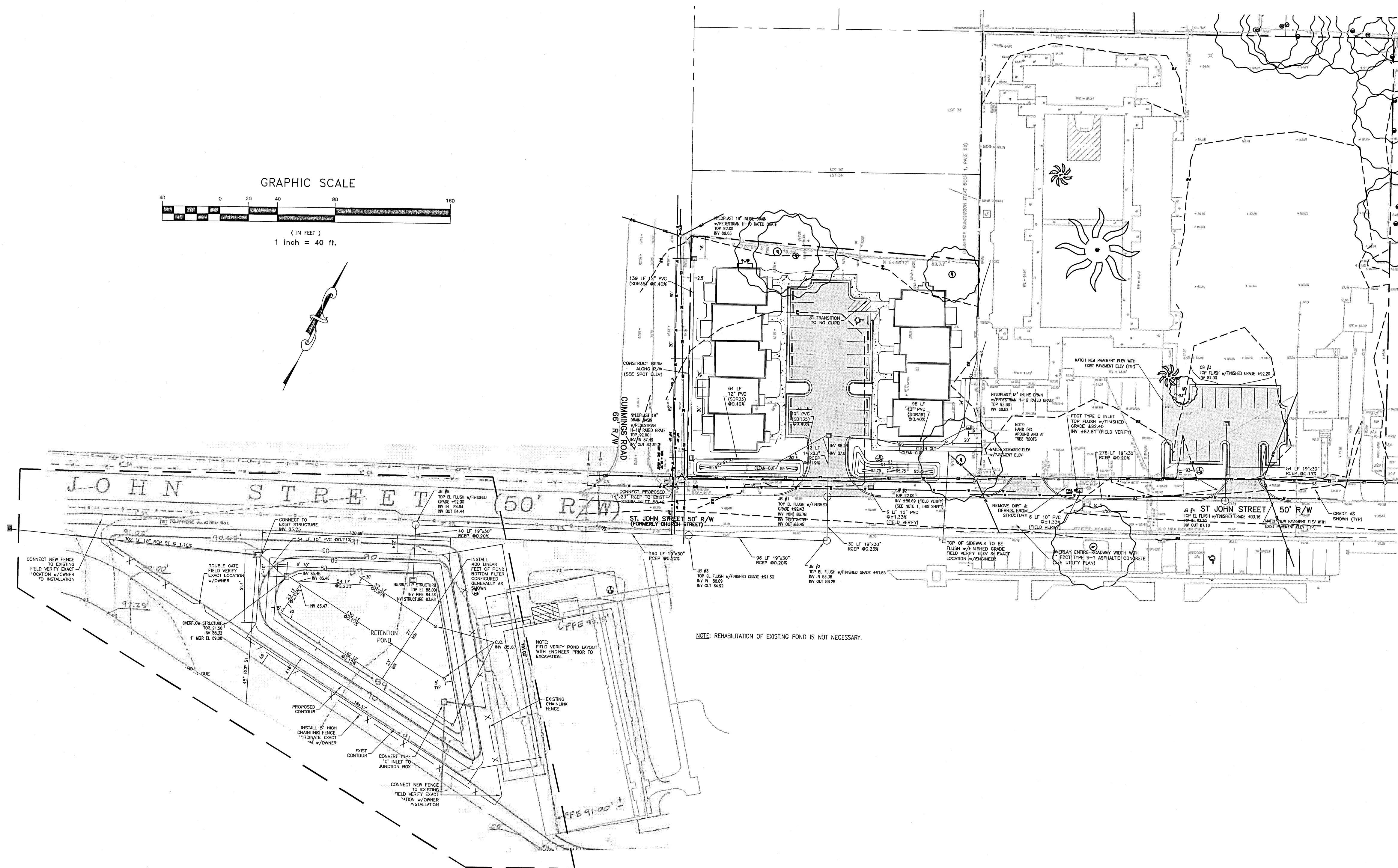
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OFFSITE POND

C202

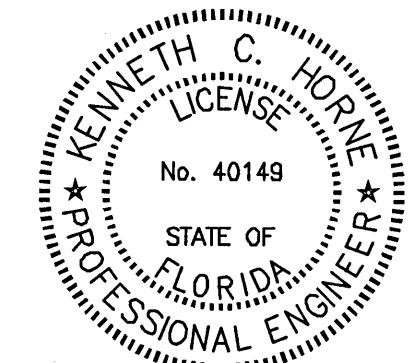
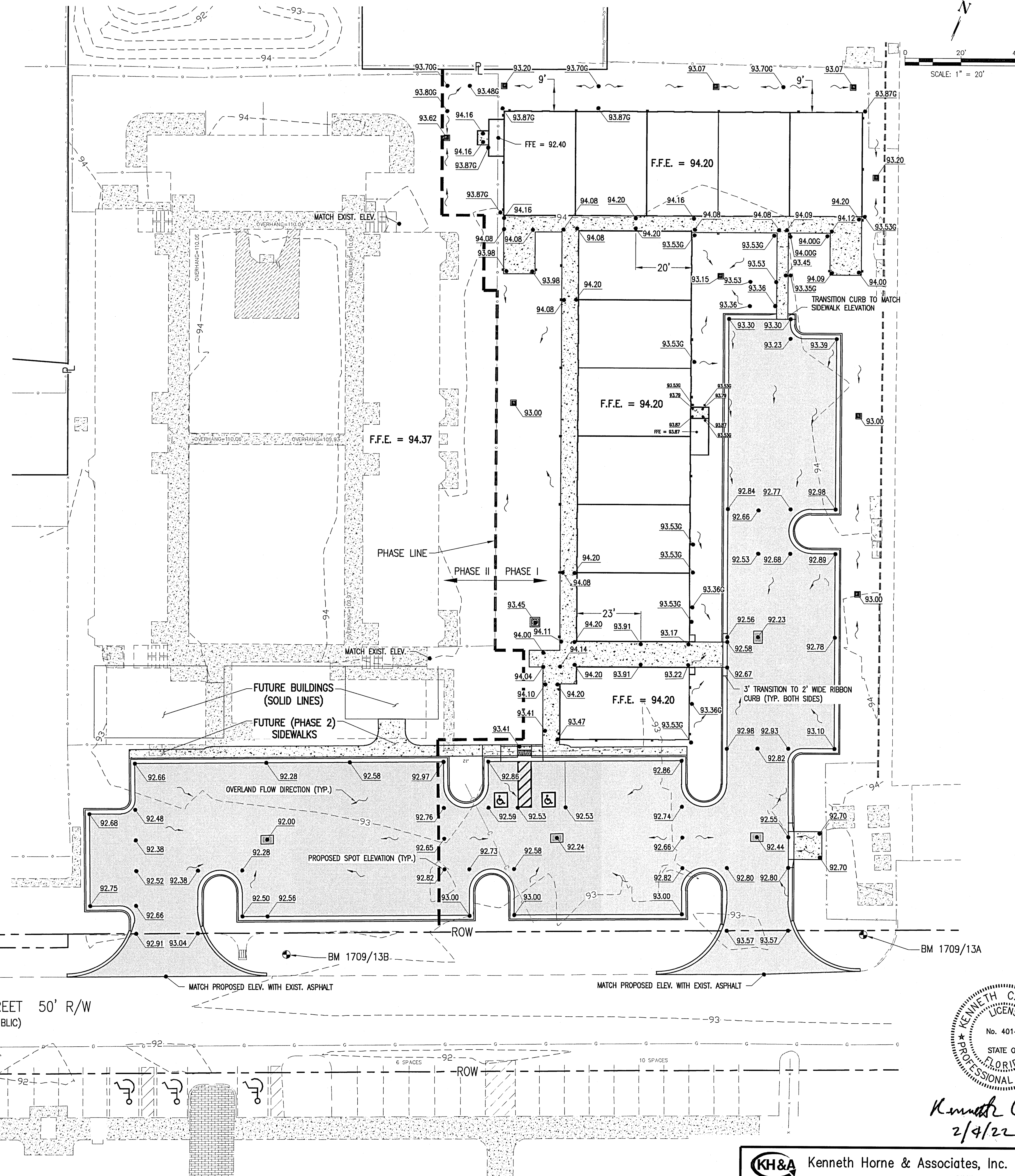
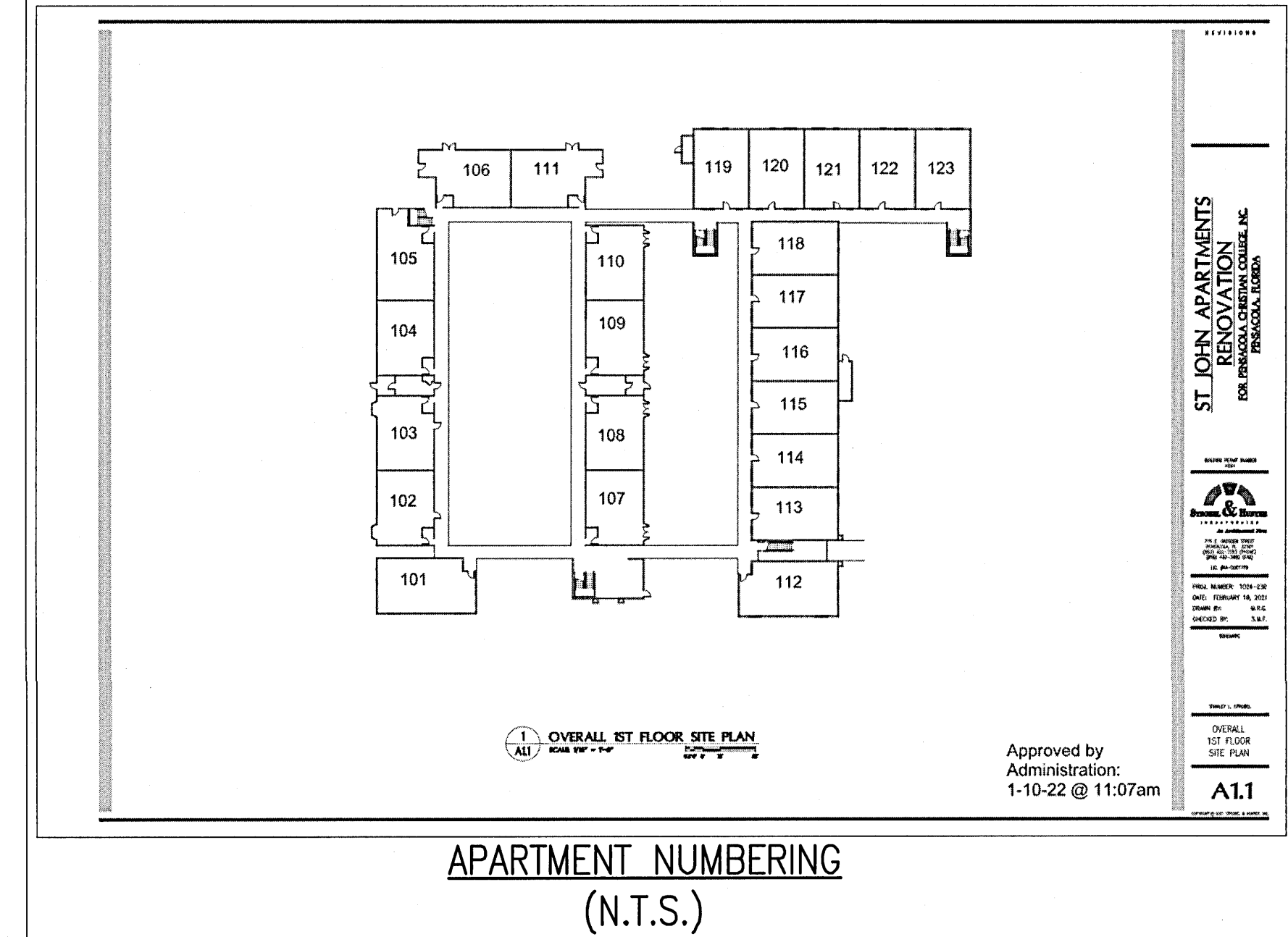
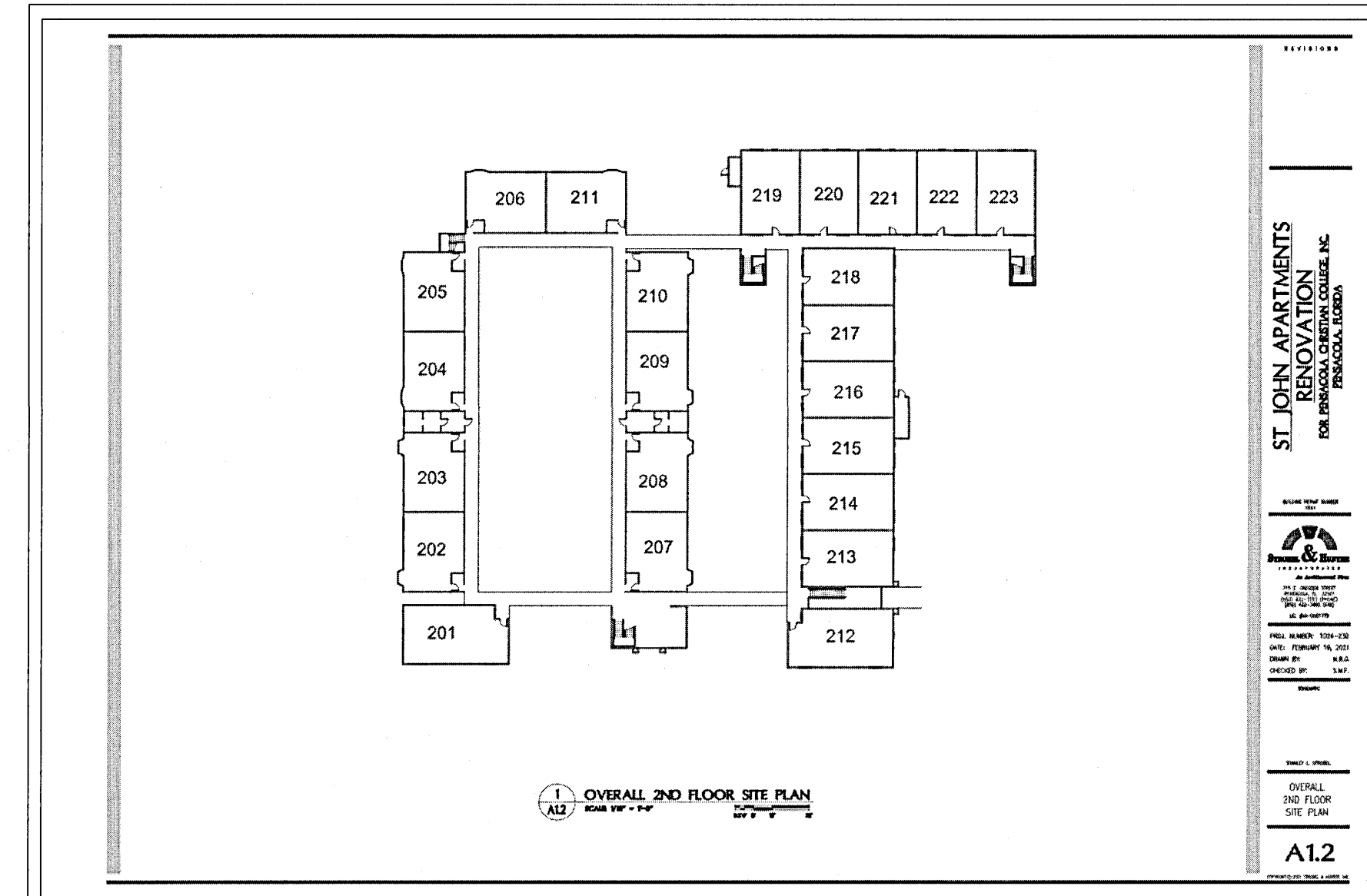


Kenneth C. Horne
2/4/22

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IMPERVIOUS/PERVIOUS TABLE:
 OVERALL PROPERTY AREA = 48,321 SF
 EXISTING IMPERVIOUS (BUILDINGS/PAVEMENT/SLABS) = 6,987 SF
 EXISTING SEMI-PERVIOUS (GRAVEL DRIVE) = 274 SF
 EXISTING PERVIOUS (GRASSED) = 41,060 SF
 PROPOSED BUILDINGS = 12,131 SF (25.1%)
 PROPOSED IMPERVIOUS (PAVEMENT/SIDEWALKS/SLABS) = 16,912 SF (35.0%)
 PROPOSED LANDSCAPE (GRASSED) = 19,278 SF (39.9%)

NOTE:
 PER ESCAMBIA COUNTY'S LAND DEVELOPMENT CODE, ALL TREE REMOVAL,
 LAND CLEARING, FILLING OR PLACEMENT OF FILL MATERIALS ONSITE,
 GRADING, EXCAVATION, BERMING, CUTTING, OR ANY OTHER LAND DISTURBING
 ACTIVITIES THAT MAY ALTER LAND TOPOGRAPHY OR VEGETATIVE COVER SHALL
 BE PERMITTED OR OTHERWISE APPROVED IN WRITING BY THE COUNTY PRIOR
 TO INITIATING SITE WORK.



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110 ST. JOHN APARTMENTS
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 LIC. #AA-C001779

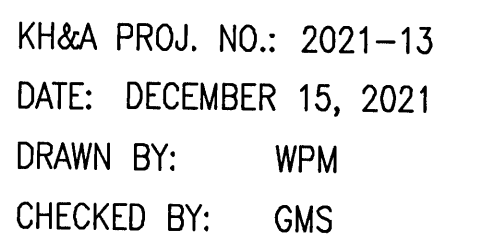
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GRADING PLAN

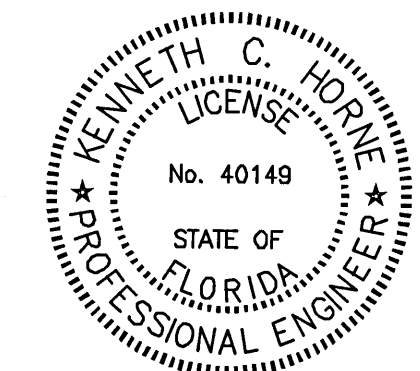
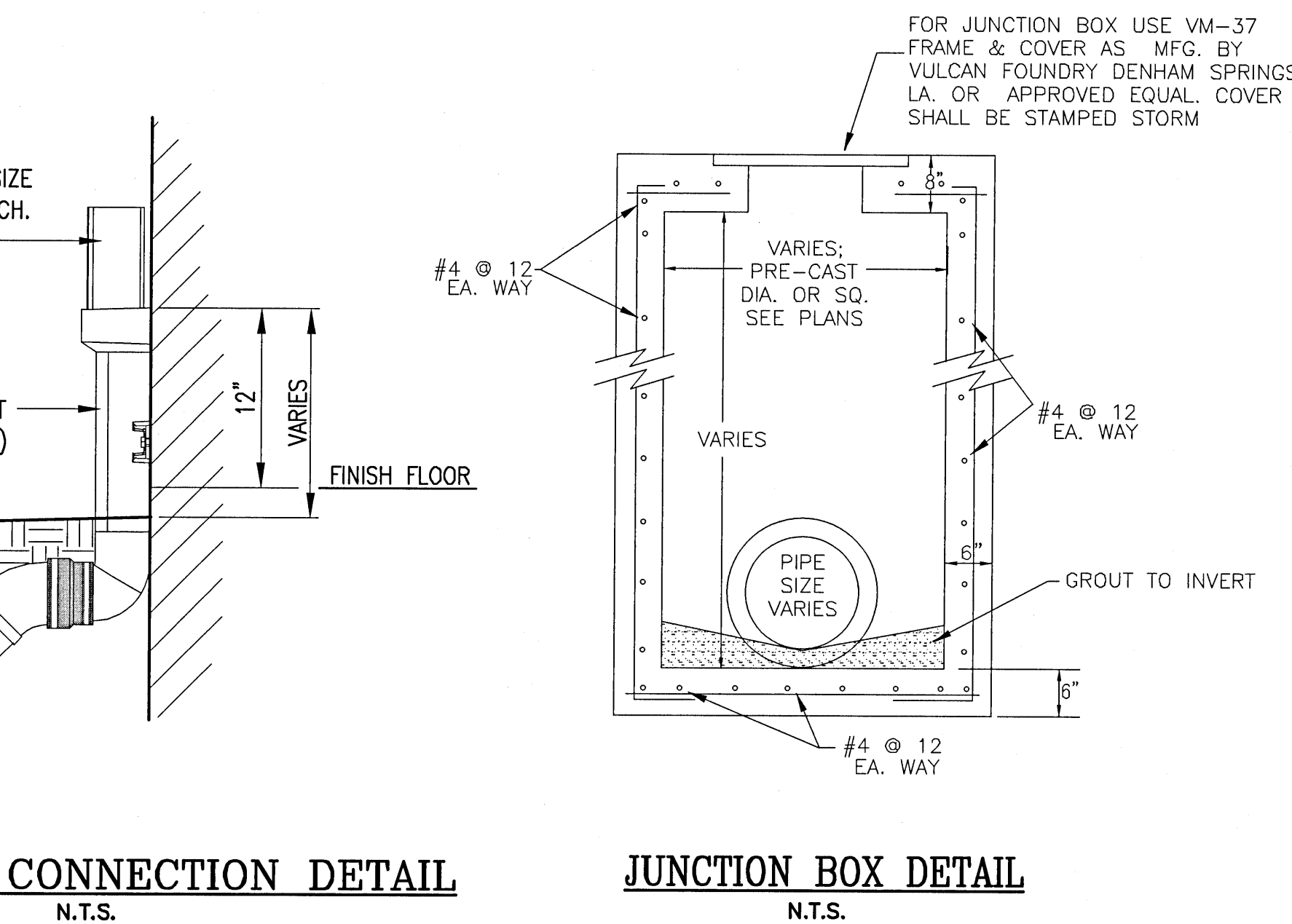
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KHA PROJECT NO: 2021-13

C302

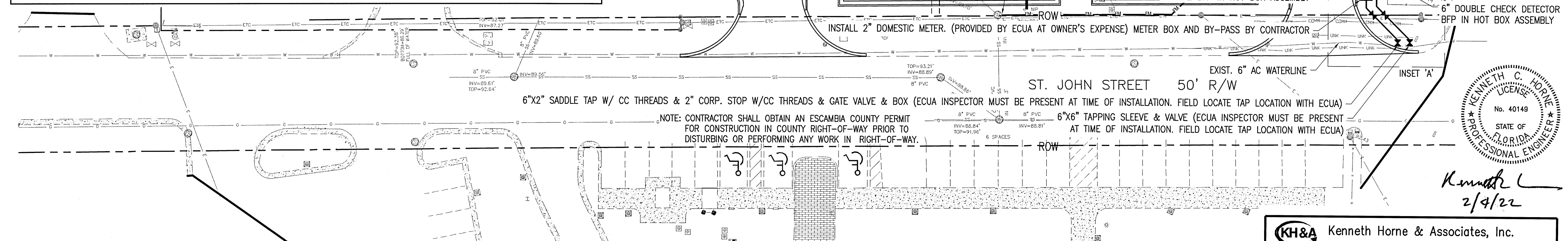
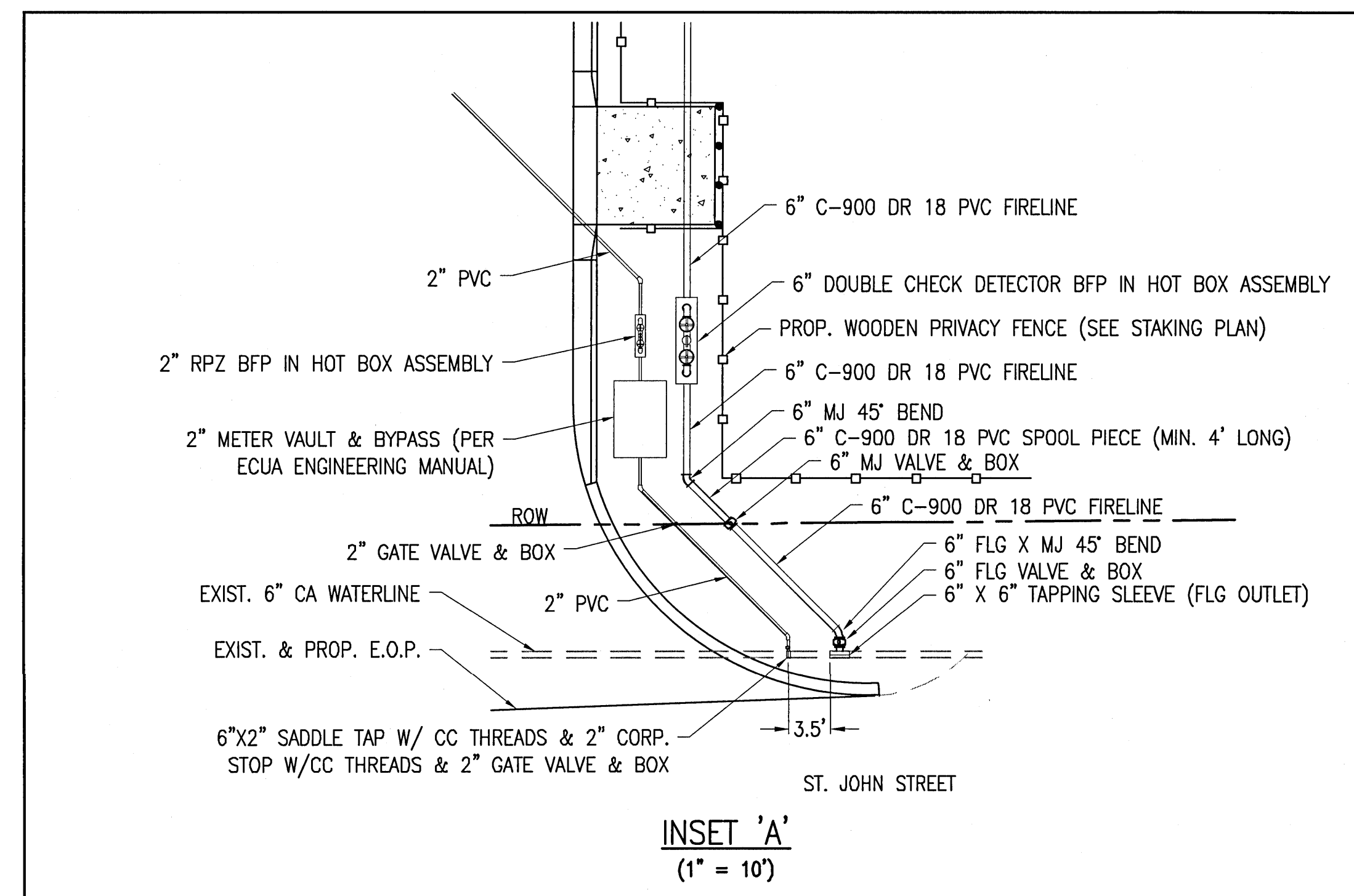
C302



Kenneth L
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1. ALL NEW WATER MAINS SHALL BE CLEANED, DISINFECTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION RULES AND REGULATIONS.
2. OWNER TO WITNESS DISINFECTION & BACTERIOLOGICAL TESTING AND SAMPLING.
3. MAINTAIN 18" MIN. VERTICAL SEPARATION BETWEEN ALL POTABLE WATER MAINS AND SANITARY SEWER GRAVITY AND FORCE MAIN LINES WITH WATER MAIN ABOVE SEWER MAIN.
4. WHERE THE WATER MAIN CROSSES THE SANITARY SEWER, THE SEWER MAIN SHALL BE ENCASED IN CONCRETE FOR A DISTANCE OF 10 FEET BOTH SIDES OF THE WATER MAIN, UNLESS A MINIMUM OF 18" VERTICAL SEPARATION IS MAINTAINED WITH THE WATER MAIN ABOVE THE SEWER MAIN.
5. PVC PIPE FOR WATER IS TO BE AWWA C900, DR25. DEDICATED FIRE MAINS SHALL BE AWWA C900, DR18.
6. PVC PIPE FOR GRAVITY SANITARY SEWER IS TO BE MADE OF CLASS 11332-B COMPOUND CONFORMING TO ASTM-3034.
7. ALL FUTURE INDIVIDUAL SERVICES FOR WATER LINES SHALL BE BURIED WITH A 2" WIDE STRIP OF TENATAPE PIPE LOCATING TAPE, AS MANUFACTURED BY GRIFFOLYN CO., INC., HOUSTON, TEXAS OR APPROVED EQUAL.
8. ALL VALVE BOXES SHALL BE SET FLUSH WITH FINISHED GRADE.
9. THE TOPS OF ALL DISTURBED MANHOLES AND JUNCTION BOXES SHALL BE SET FLUSH WITH THE PAVEMENT OR, WHEN NOT IN THE PAVEMENT, FLUSH WITH FINISHED GRADE.
10. ALL NEW WATER MAINS SHALL HAVE A MINIMUM COVER OF 30 INCHES AND MAXIMUM COVER OF 36 INCHES.
11. CONTRACTOR SHALL COORDINATE WITH THE PENSACOLA CHRISTIAN COLLEGE MAINTENANCE DEPARTMENT AND APPROPRIATE UTILITY COMPANIES FOR REMOVAL AND RELOCATION OF EXISTING UTILITY POLES, AERIAL LINES, UNDERGROUND UTILITIES AS INDICATED ON PLANS.
12. LOCATION OF EXISTING UTILITIES SHOWN ON PLANS ARE APPROXIMATE ONLY AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND DEPTHS BEFORE BEGINNING CONSTRUCTION. FAILURE OF THE PLANS TO SHOW THE EXISTENCE OF ANY UNDERGROUND UTILITIES, STRUCTURES, ETC., SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF PRESERVING AND PROTECTING SAID UTILITIES OR STRUCTURES.
13. POTABLE WATER LINES SHALL BE PRESSURE TESTED IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS. COORDINATE PRESSURE TEST WITH OWNER. OWNER TO WITNESS TEST.
14. AFTER FIELD LOCATION OF UTILITIES, CONTRACTOR IS TO EXCAVATE UTILITIES BY HAND TO VERIFY DEPTH AND EXACT LOCATION.
15. NOTIFY SUNSHINE UTILITIES 48 HOURS IN ADVANCE PRIOR TO DIGGING WITHIN R/W; 1-800-432-4770.
16. CONTRACTOR SHALL COAT INTERIOR OF EXISTING MANHOLE USED TO TIE-IN PROPOSED FORCE MAIN IN ACCORDANCE WITH SECTION 2572 OF THE LATEST EDITION OF THE ECUA ENGINEERING MANUAL.



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PENSACOLA, FLORIDA



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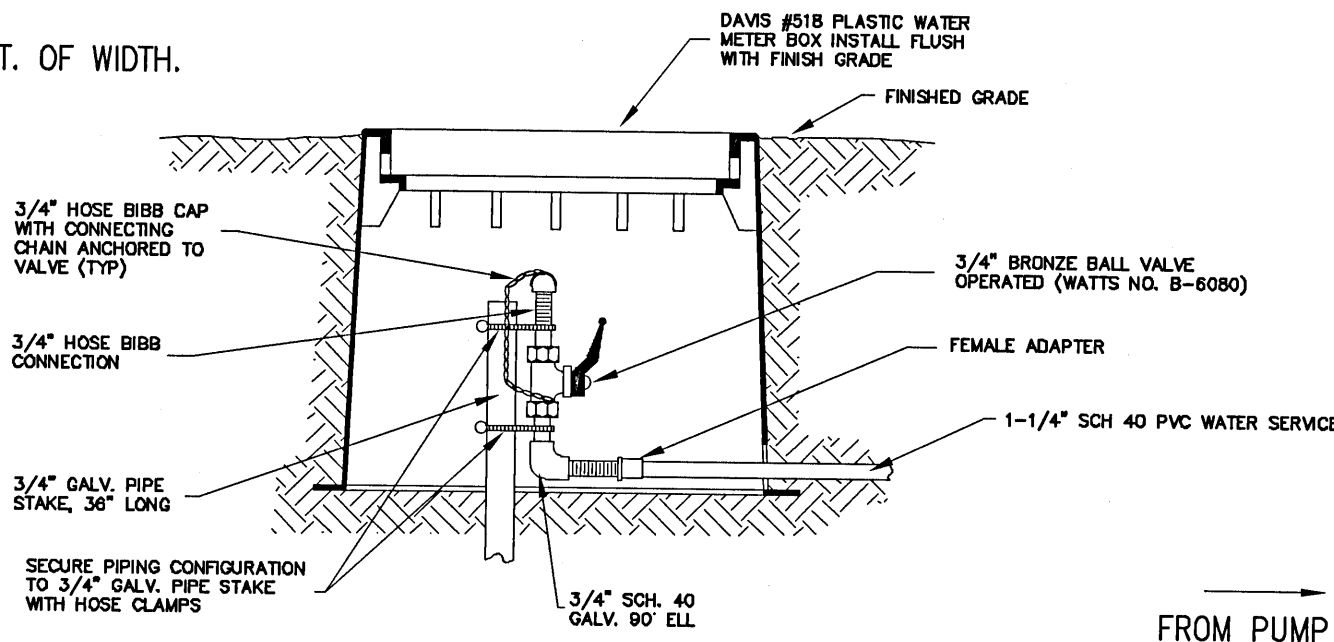
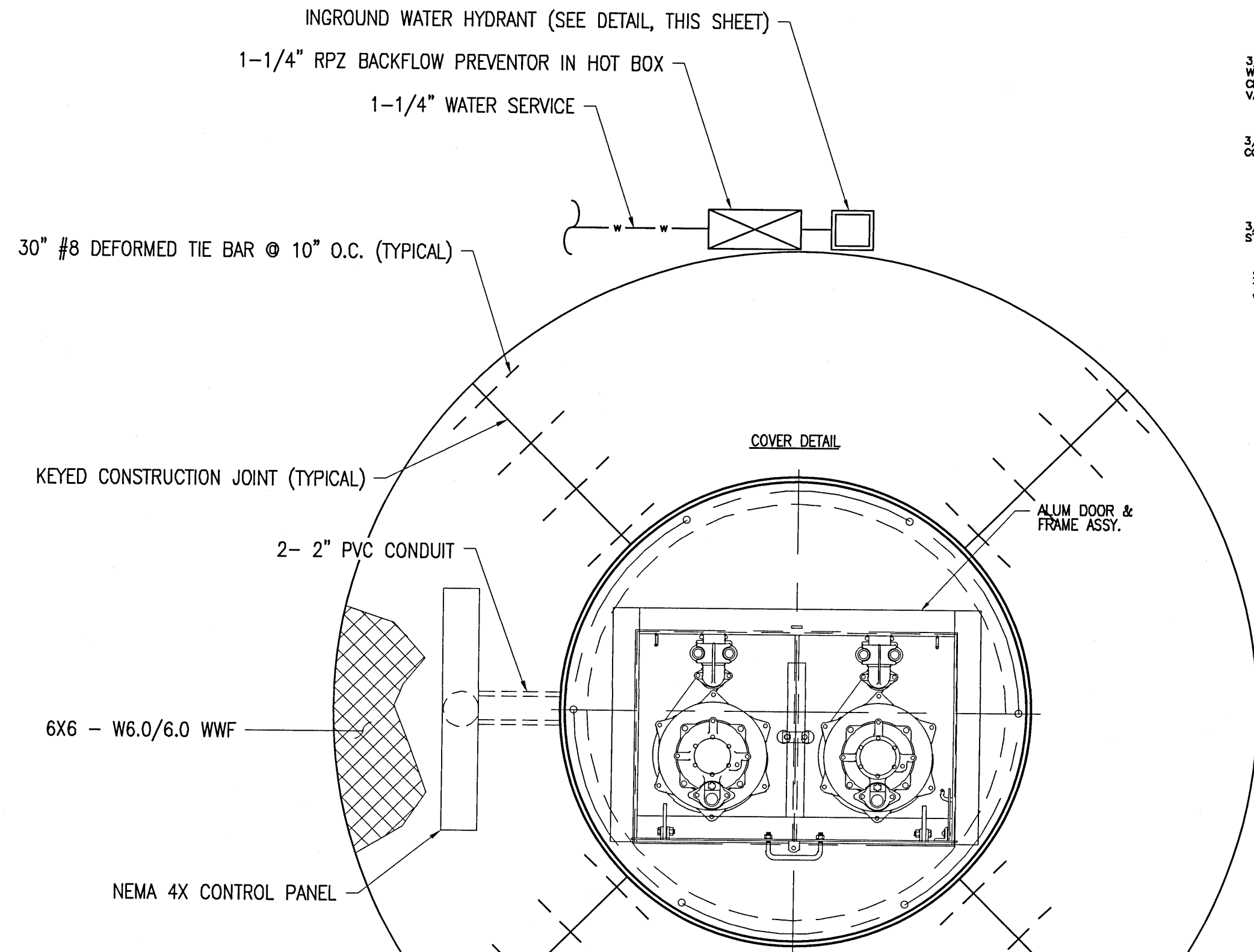
UTILITY PLAN

C401

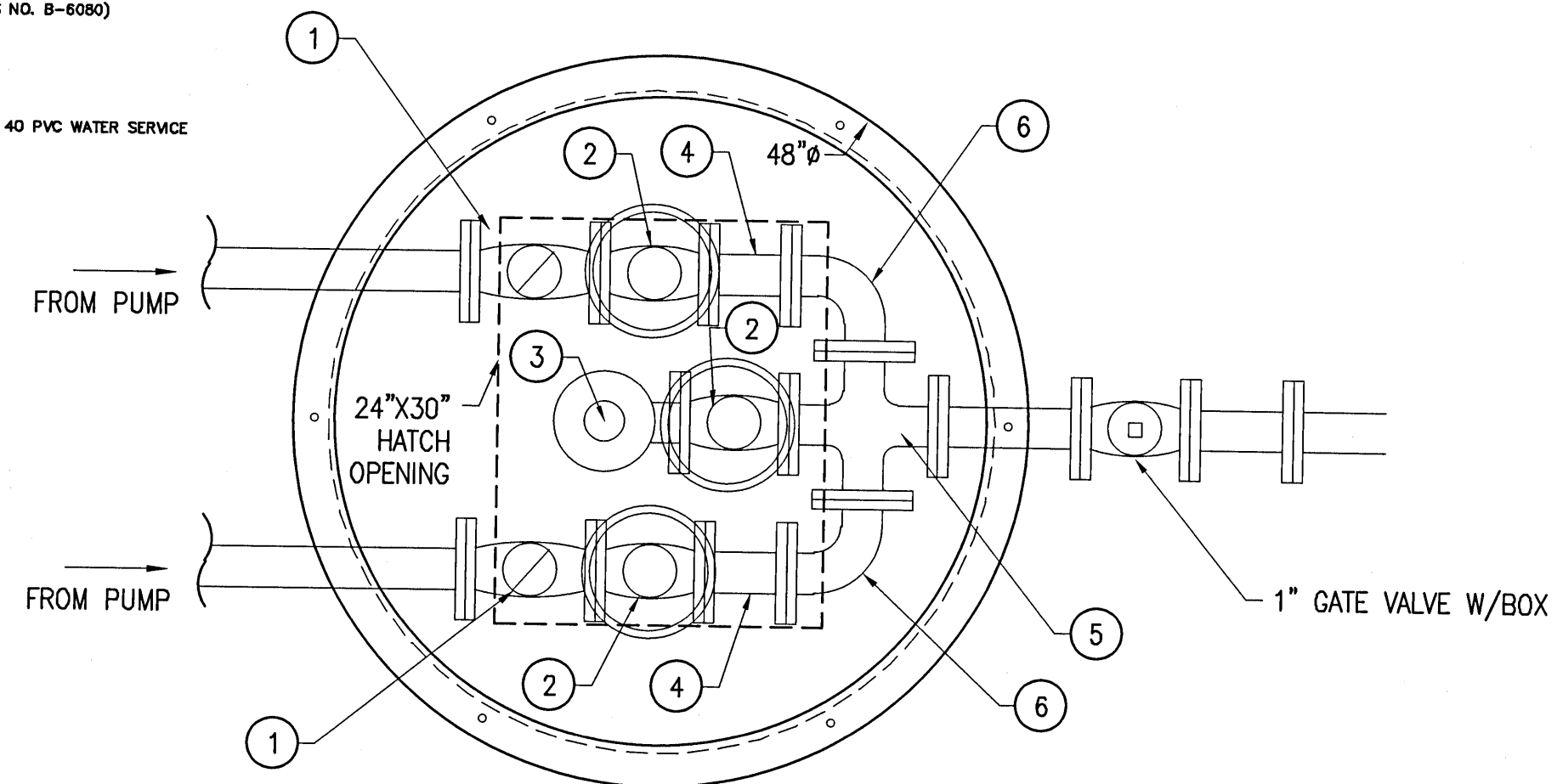
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NOTES:

1. CONTRACTOR TO PROVIDE HOT BOX WITH CONCRETE PAD IN ACCORDANCE WITH BACKFLOW PREVENTOR MANUFACTURERS RECOMMENDATIONS.
2. ENGINEER AND/OR OWNER SHALL INSPECT AND APPROVE CONCRETE FORMS AND REINFORCEMENT PRIOR TO POURING CONCRETE.
3. MINIMUM SECTIONAL REQUIREMENTS FOR WELDED WIRE FABRIC: NOMINAL DIA. = 0.276", NOMINAL WEIGHT = 0.204 LBS/LF, AREA = 0.12 SQ. IN./FT. OF WIDTH.
4. ALL CONCRETE SHALL BE 4,000 PSI, 28-DAY COMPRESSIVE STRENGTH.

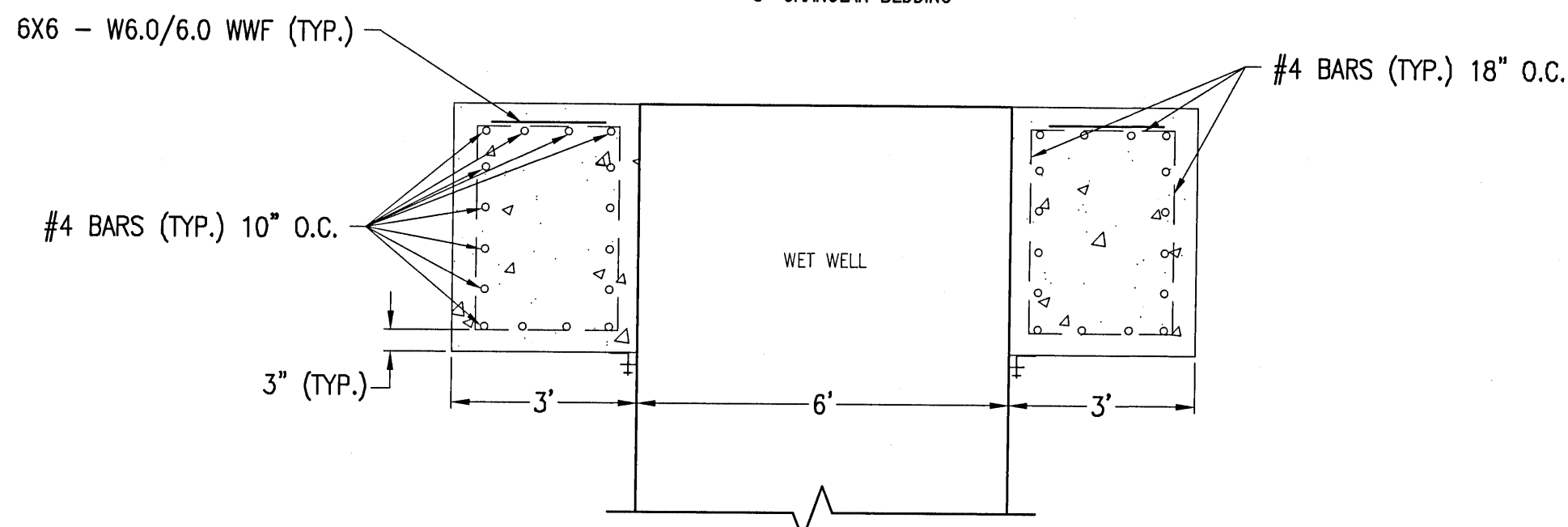
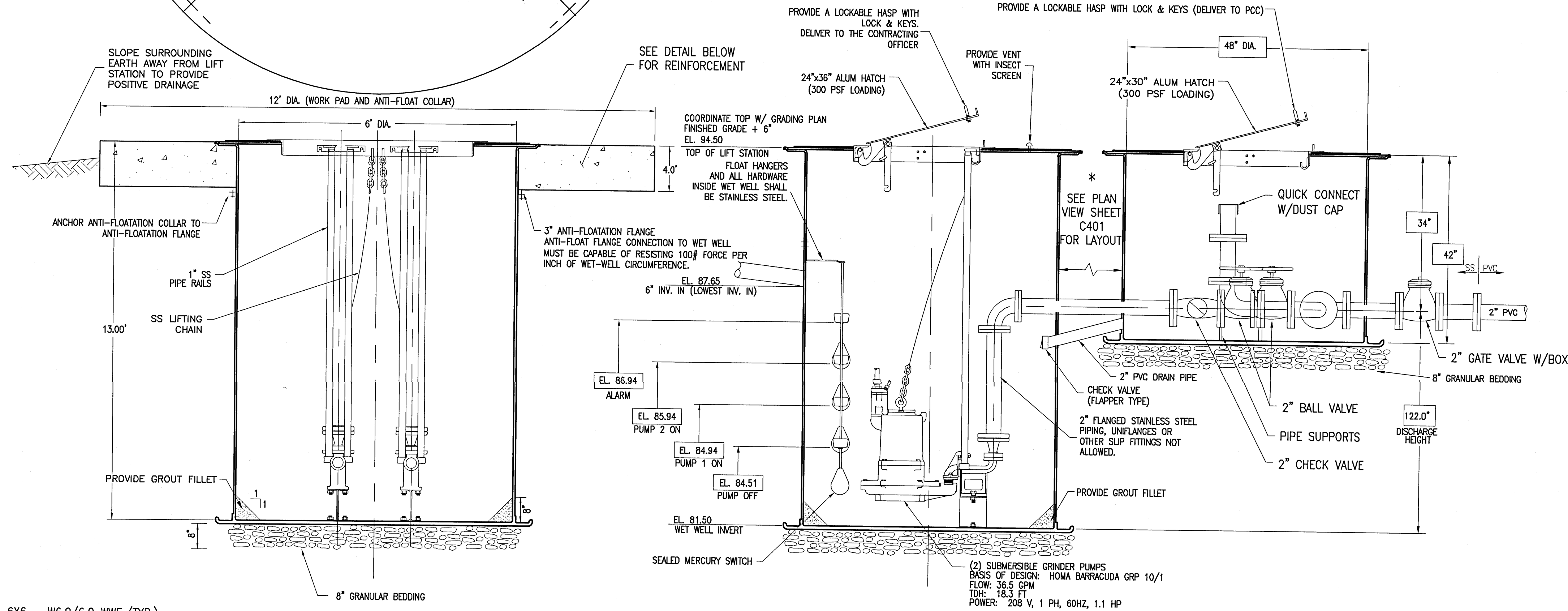


NOTE:
CONTROL PANEL SHALL BE MOUNTED IN A NEMA 4X ENCLOSURE AND SHALL INCLUDE: LOCK HASP, CIRCUIT BREAKERS FOR EACH PUMP, ALTERNATING RELAY, HOA SWITCHES AND RUN LIGHTS FOR EACH PUMP, TERMINAL STRIP FOR CONNECTING PUMP AND CONTROL WIRES, TRANSFORMER TO PROVIDE 24 VOLT CONTROL CIRCUIT, SURGE/LIGHTNING PROTECTION, GENERATOR RECEPTACLE AND REQUIRED TO HAVE VISUAL AND AUDIBLE ALARM FOR HIGH LEVEL CONDITION. ELECTRICAL COMPONENTS INSIDE WETWELL SHALL COMPLY WITH NEC REQUIREMENTS FOR CLASS I GROUP D, DIVISION 1. EACH FLEXIBLE POWER CABLE SHALL BE PROVIDED WITH WATER TIGHT SEAL AND STRAIN RELIEF. ATTACH A DURABLE WEATHER RESISTANT SIGN VISIBLE TO THE PUBLIC IDENTIFYING "IN CASE OF EMERGENCY CALL (850) 969-1610". PROVIDE 1-1/4" WATER SERVICE WITH RPZ BACKFLOW PREVENTOR AND HOSE BIBB. INSULATE ALL ABOVE GROUND COMPONENTS. PROVIDE AND INSTALL SCADA SYSTEM IN ACCORDANCE WITH PCC REQUIREMENTS.



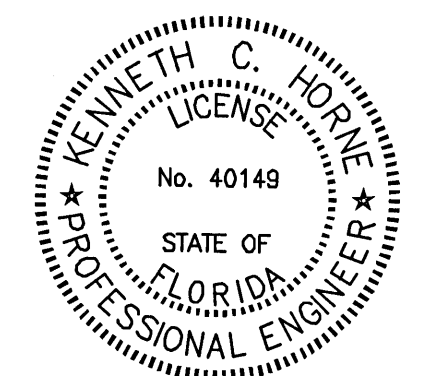
NOTE:
1. ALL PIPING FROM PUMP TO OUTSIDE OF VALVE BOX TO BE STAINLESS STEEL.
2. PUMP-OUT CONNECTION TO BE LOCATED IN CLEAR AREA WITHIN HATCH OPENING.

VALVE BOX PLUMBING SCHEMATIC
N.T.S.



NOTE: MINIMUM REQUIRED CONCRETE VOLUME OF ANTI-FLOAT COLLAR = 12.57 CY

1 DUPLEX INSTALLATION FIBERGLASS SUMP W/ALUM COVER
N.T.S. (SEE SHEET C401 FOR LOCATION AND ORIENTATION)



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LIFT STATION DETAILS

C402

IN LIEU OF PLANTING MITIGATION TREES, THE DEVELOPER WILL PAY THE APPROPRIATE AMOUNT INTO THE ESCAMBIA COUNTY TREE FUND.

REPLACEMENT RATIO (DSM 2-5.2(a)):

1. TWO TREES PROPOSED FOR REMOVAL AT 43 DBH + 49 DBH = 92.
2. 92" X 0.5 (REPLACEMENT RATIO) = 46" (STANDARD, TOTAL CALIPER INCHES TO BE REPLACED/MITIGATED FOR.
3. 46/2.5 (MINIMUM CALIPER INCHES PER/EACH TREE UNDER TREPLACEMENT FEE/CALCULATION = 18.4

REPLACEMENT LIMIT FOR REMOVAL OF STANDARD PROTECTED TREES (DSM 2-5.2(c)):

TOTAL TREE REPLACEMENT FOR NON-HERITAGE TREES NOT TO EXCEED 25 CALIPER INCHES PER DEVELOPED SITE ACRE.
TOTAL DEVELOPED SITE = 1.215 ACRES
REPLACEMENT LIMIT = 1.214 X 25 = 31 INCHES

REQUIRED TOTAL CALIPER REPLACEMENT OF NEW NATIVE CANOPY TREES TREES TO BE PLANTED = 31 INCHES

TOTAL PROJECT REQUIRED CANOPY TREES:

TOTAL 2.5 INCH CANOPY TREES REQUIRED = 31/2.5 = 13 TREES

4. 13 X \$350 (PER EACH MITIGATION TREE PER ESC. CO'S CURRENT FEE SCHEDULE = \$4,550.00.
5. \$4,550 + BASIC \$105 FEE FOR TREE REMOVAL PERMIT (UP TO 2 TREES) = 5,775

TREE REPLACEMENT NOTES:

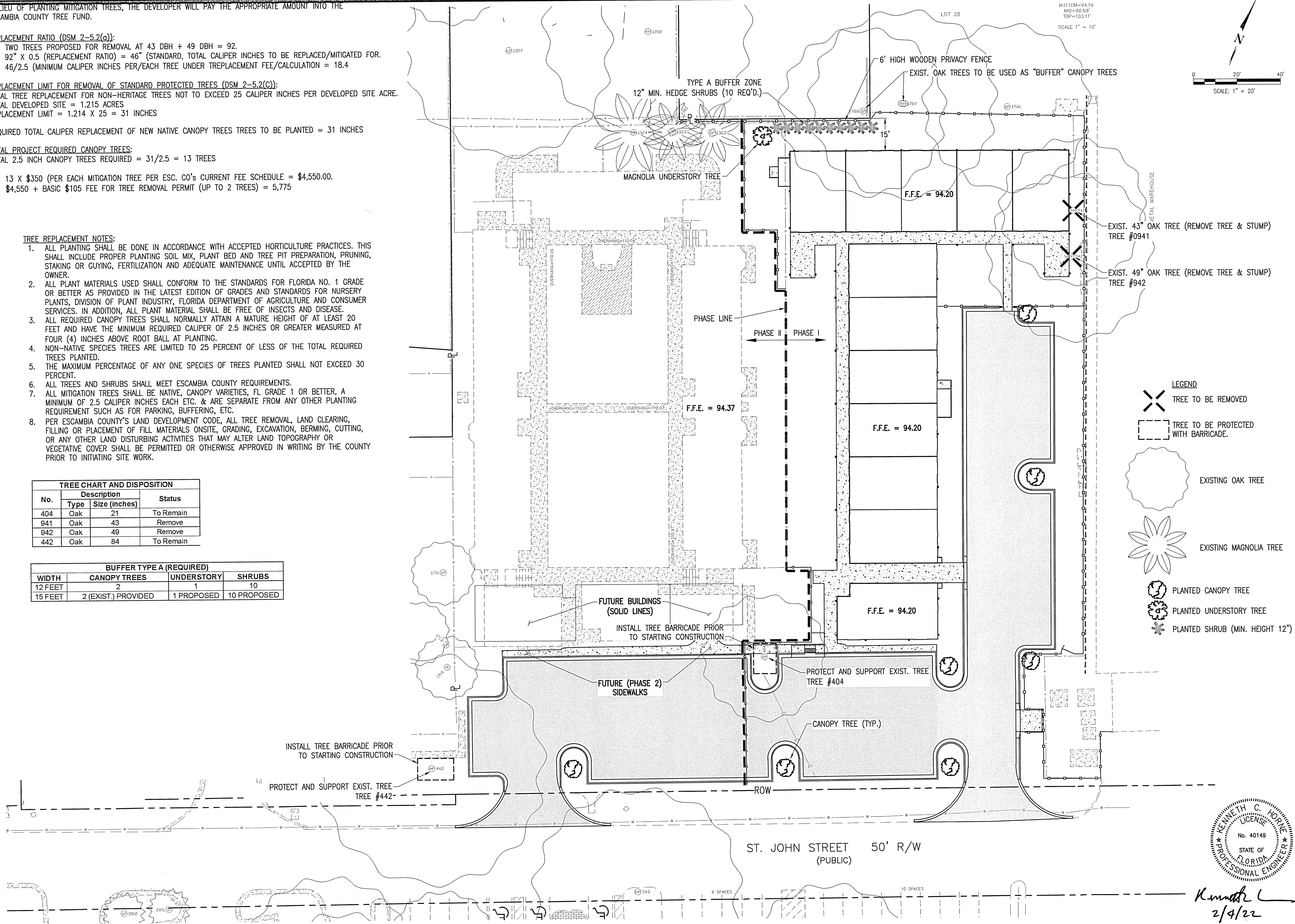
1. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ACCEPTED HORTICULTURE PRACTICES. THIS SHALL INCLUDE PROPER PLANTING SOIL MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING, STAKING OR GUYING, FERTILIZATION AND ADEQUATE MAINTENANCE UNTIL ACCEPTED BY THE OWNER.
2. ALL PLANT MATERIALS USED SHALL CONFORM TO THE STANDARDS FOR FLORIDA NO. 1 GRADE OR BETTER AS PROVIDED IN THE LATEST EDITION OF GRADES AND STANDARDS FOR NURSERY PLANTS, DIVISION OF PLANT INDUSTRY, FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. IN ADDITION, ALL PLANT MATERIAL SHALL BE FREE OF INSECTS AND DISEASE.
3. ALL REQUIRED CANOPY TREES SHALL NORMALLY ATTAIN A MATURE HEIGHT OF AT LEAST 20 FEET AND HAVE THE MINIMUM REQUIRED CALIPER OF 2.5 INCHES OR GREATER MEASURED AT FOUR (4) INCHES ABOVE ROOT BALL AT PLANTING.
4. NON-NATIVE SPECIES TREES ARE LIMITED TO 25 PERCENT OF LESS OF THE TOTAL REQUIRED TREES PLANTED.
5. THE MAXIMUM PERCENTAGE OF ANY ONE SPECIES OF TREES PLANTED SHALL NOT EXCEED 30 PERCENT.
6. ALL TREES AND SHRUBS SHALL MEET ESCAMBIA COUNTY REQUIREMENTS.
7. ALL MITIGATION TREES SHALL BE NATIVE, CANOPY VARIETIES, FL GRADE 1 OR BETTER, A MINIMUM OF 2.5 CALIPER INCHES EACH ETC. & ARE SEPARATE FROM ANY OTHER PLANTING REQUIREMENT SUCH AS FOR PARKING, BUFFERING, ETC.
8. PER ESCAMBIA COUNTY'S LAND DEVELOPMENT CODE, ALL TREE REMOVAL, LAND CLEARING, FILLING OR PLACEMENT OF FILL MATERIALS ONSITE, GRADING, EXCAVATION, BERMING, CUTTING, OR ANY OTHER LAND DISTURBING ACTIVITIES THAT MAY ALTER LAND TOPOGRAPHY OR VEGETATIVE COVER SHALL BE PERMITTED OR OTHERWISE APPROVED IN WRITING BY THE COUNTY PRIOR TO INITIATING SITE WORK.

TREE CHART AND DISPOSITION

No.	Description	Status
404	Oak 21	To Remain
941	Oak 43	Remove
942	Oak 49	Remove
442	Oak 84	To Remain

BUFFER TYPE A (REQUIRED)

WIDTH	CANOPY TREES	UNDERSTORY	SHRUBS
12 FEET	2	1	10
15 FEET	2 (EXIST.) PROVIDED	1 PROPOSED	10 PROPOSED



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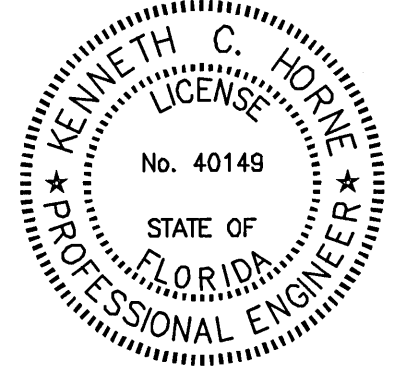
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LANDSCAPE PLAN

C501

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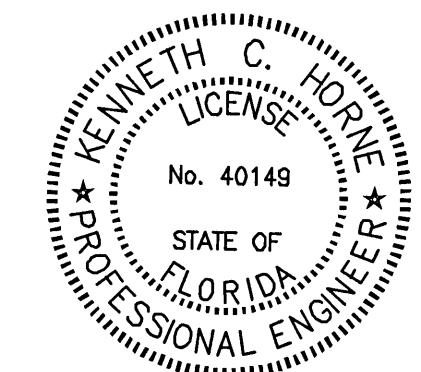
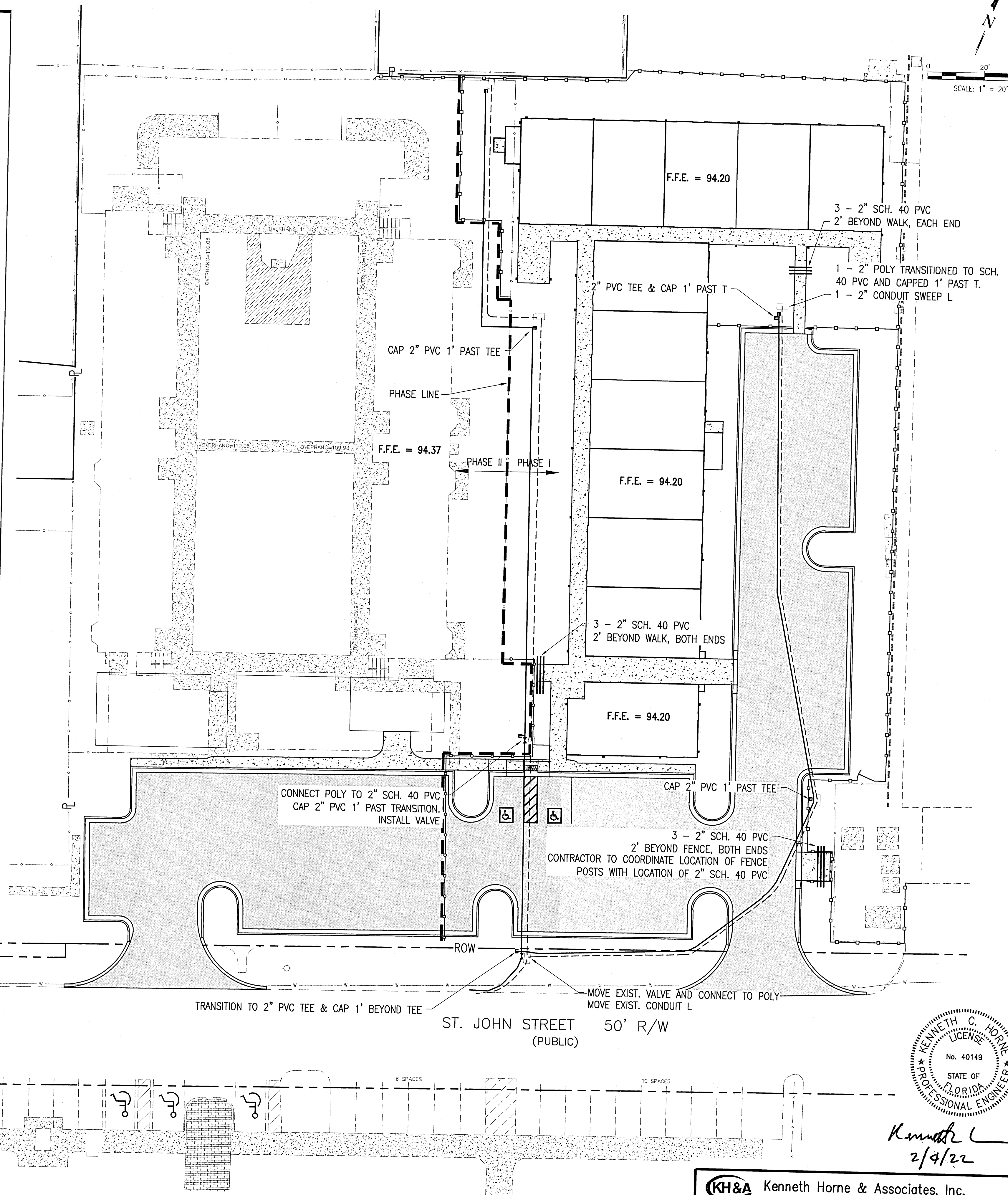
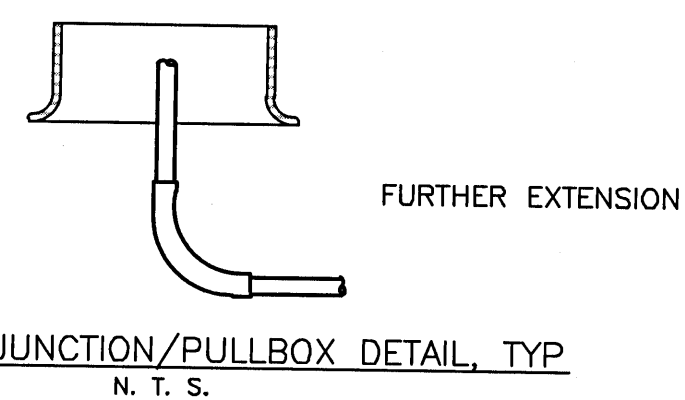
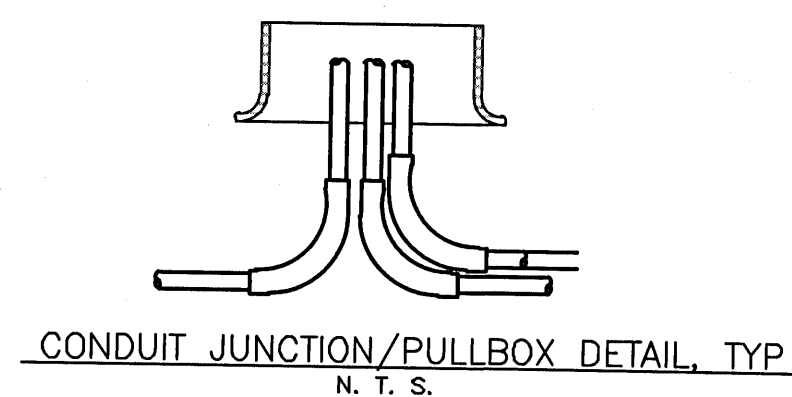
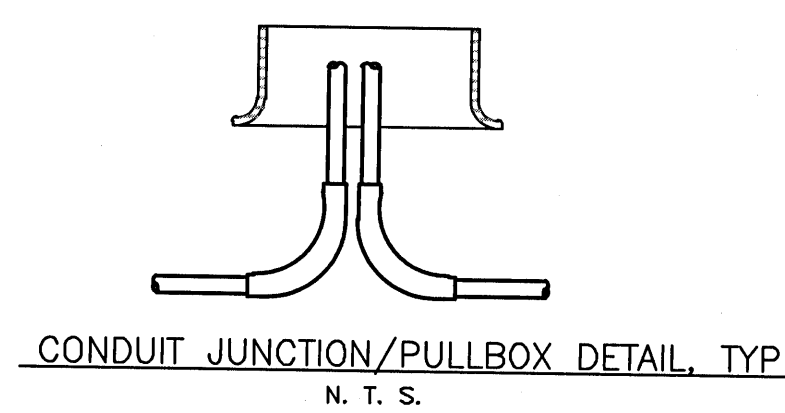
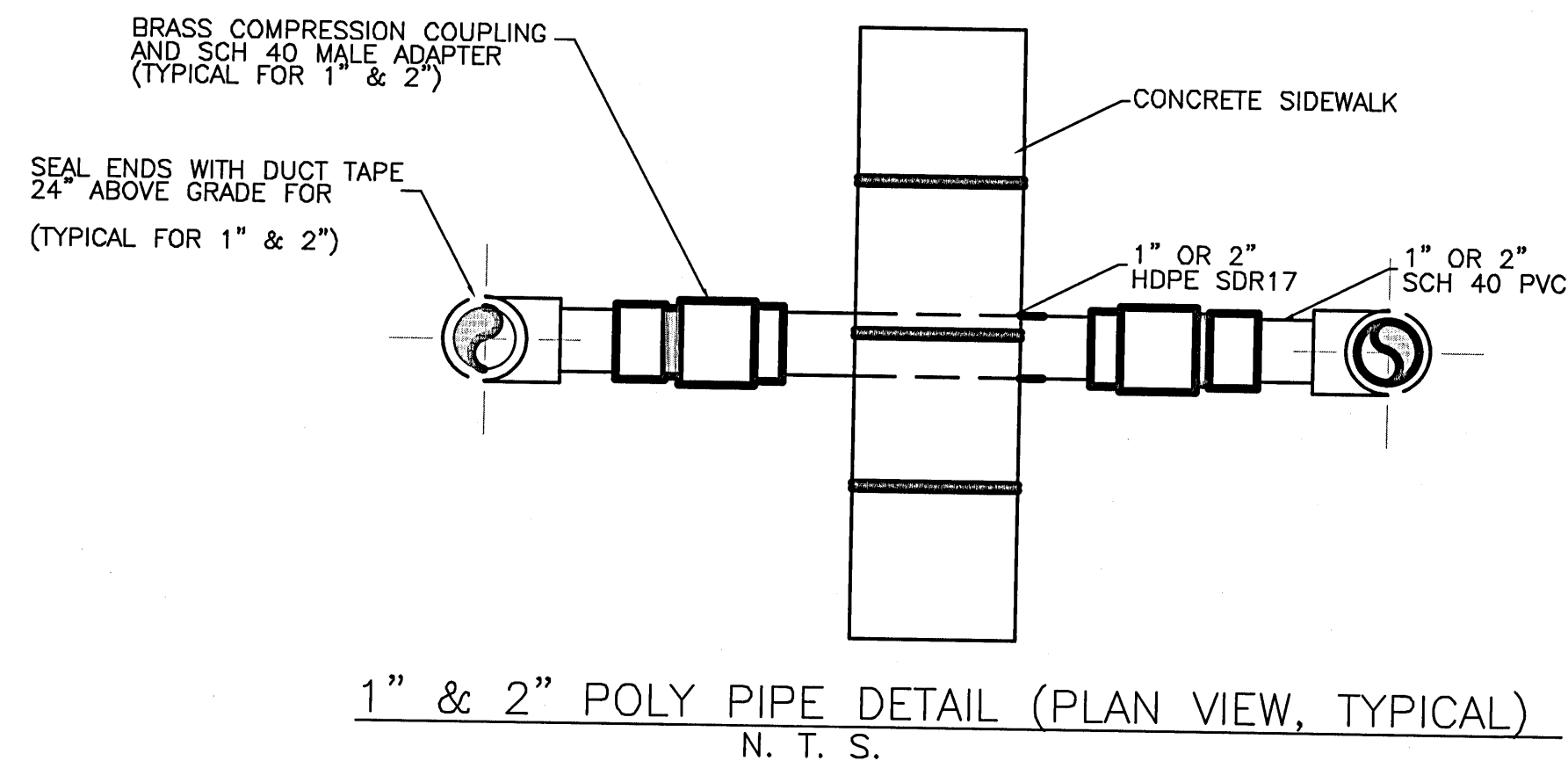
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IRRIGATION DETAILS

NOTES:

1. CONTRACTOR SHALL GUARANTEE THE INSTALLATION WORKMANSHIP FOR A PERIOD OF ONE-YEAR FROM THE DATE OF COMPLETION.
2. ALL 2" PVC PIPE SHALL BE SCHEDULE 40, NSF-PW, AND SHALL CONFORM TO ASTM D-1785.
3. ALL SOLVENT WELD FITTINGS SHALL BE SCHEDULE 40, NSF-PW, AND SHALL CONFORM TO ASTM D-2466.
4. ALL 4" FITTINGS SHALL BE CAST IRON M-J.
5. ALL PIPE JOINTS AND CONNECTIONS SHALL BE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. PERFORM ALL SOLVENT-WELD CONNECTIONS IN ACCORDANCE WITH ASTM D-2855.
6. ALL THREADED PVC PIPE FITTINGS SHALL MEET THE REQUIREMENTS OF SCHEDULE 80 AS SET FORTH IN ASTM D-2464.
7. ALL PVC CEMENT SHALL MEET ASTM D-2564. ALL PVC CLEANER SHALL MEET ASTM F-656.
8. ALL 4" WELDS SHALL BE MADE WITH UNITED ELICHEM IND. UNI-WELD 1700, HEAVY BODIED-GRAY.
9. ALL 2" AND SMALLER WELDS SHALL BE WITH UNITED ELICHEM IND. UNI-WELD 2400.
10. ALL 2" POLYETHYLENE (PE) PIPE SHALL BE IPS HIGH DENSITY (HD), SDR11.
11. ALL CONNECTIONS BETWEEN HDPE AND PVC SHALL BE WITH MECHANICAL JOINT (MJ) FITTINGS.
12. WHERE HDPE PIPE IS INSTALLED BENEATH PAVEMENT, NO SLEEVE IS REQUIRED.



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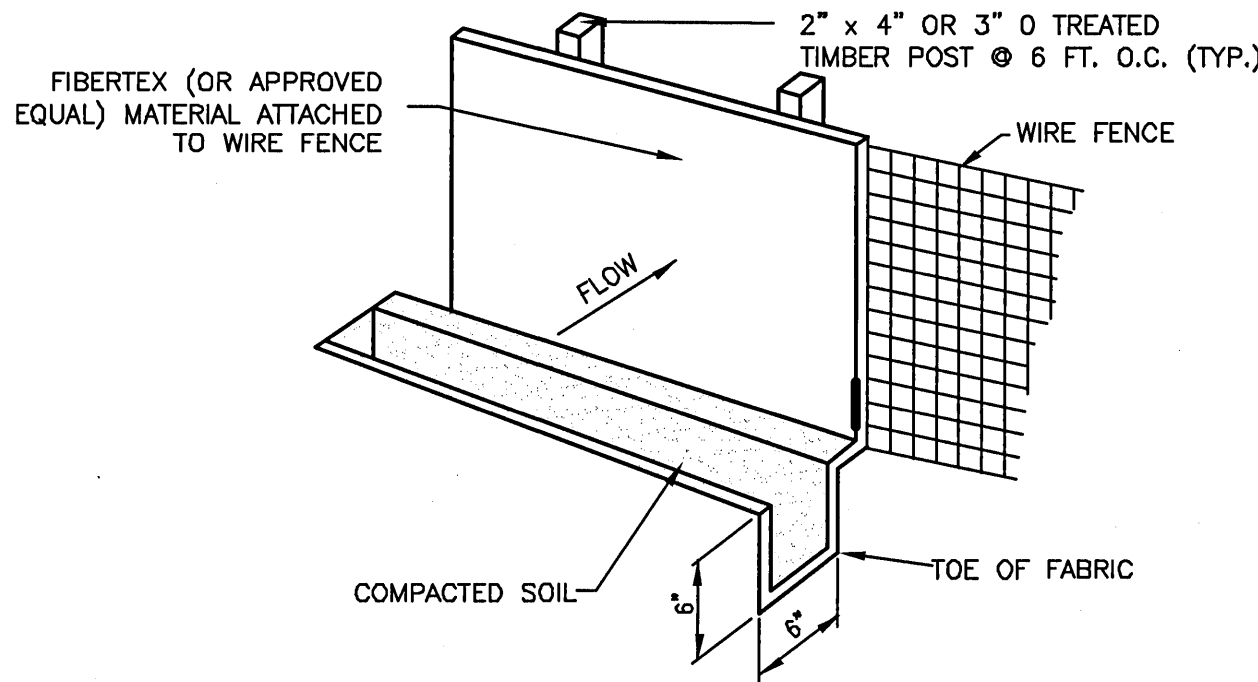
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IRRIGATION PLAN

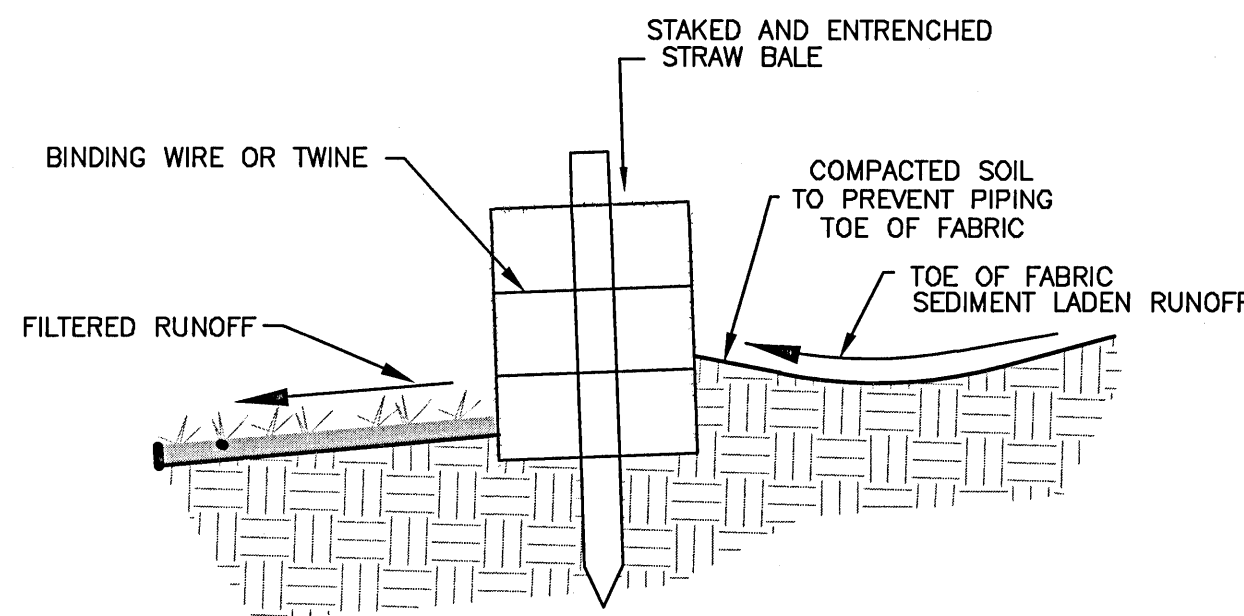
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EROSION AND SEDIMENTATION CONTROL NOTES:

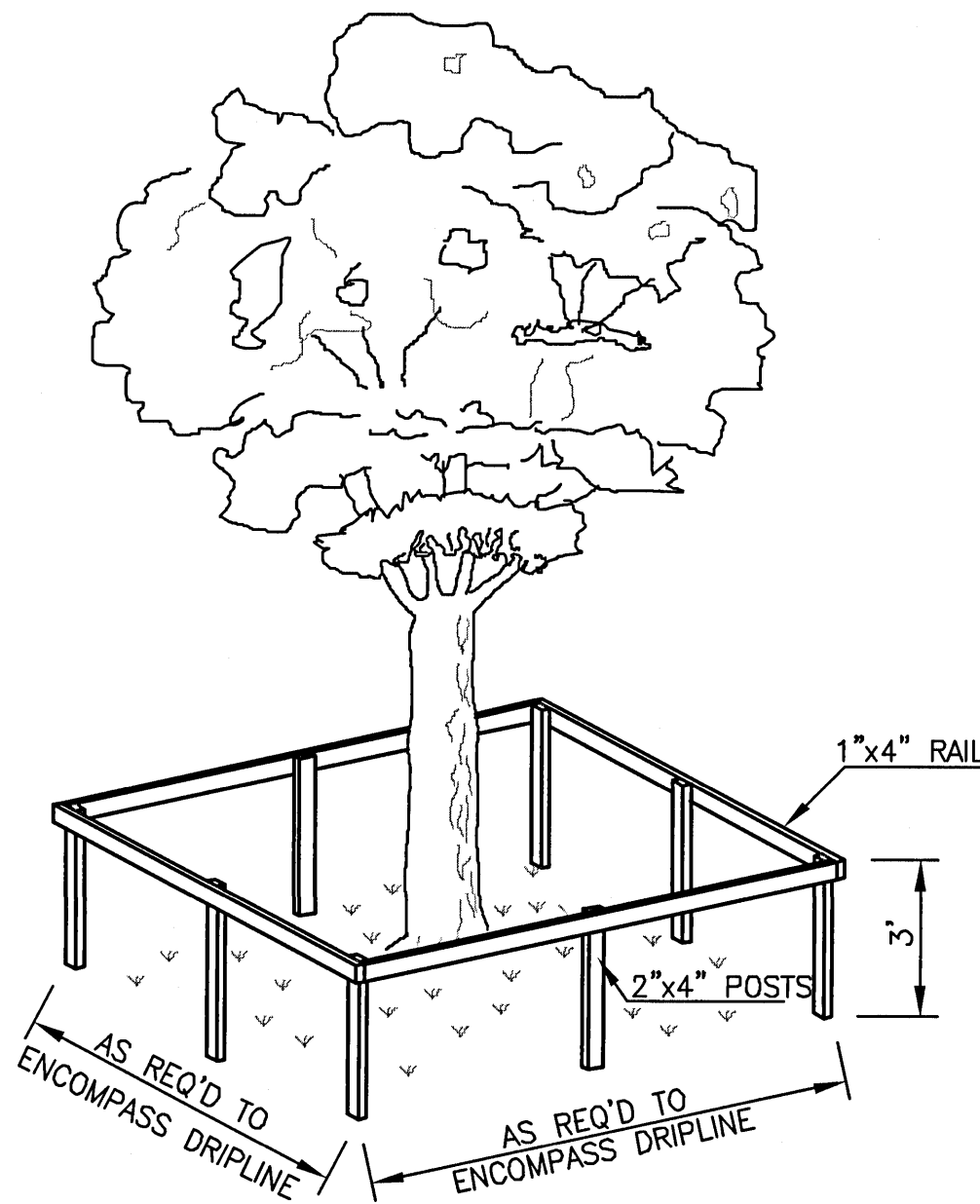
- SILT FENCE SHALL BE PLACED IN A SINGLE ROW, LENGTHWISE ON THE CONTOUR, WITH ENDS OF ADJACENT FENCES TIGHTLY ABUTTING ONE ANOTHER PRIOR TO EARTHWORK OPERATIONS.
- THE SILT FENCE BARRIER SHALL BE ENTRENCHED AND BACK FILLED. A TRENCH SHALL BE EXCAVATED THE LENGTH OF THE PROPOSED BARRIER TO A MINIMUM DEPTH OF 6 INCHES. THE EXCAVATED SOIL SHALL CONFORM TO THE GROUND LEVEL ON THE DOWNHILL SIDE AND SHALL BE BUILT UP TO 4 INCHES AGAINST THE UPHILL SIDE OF THE BARRIER.
- SILT FENCE BARRIERS SHALL BE SECURELY ANCHORED.
- SILT FENCE BARRIERS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS, BUT NOT BEFORE THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.
- SILT FENCE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
- CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE, END RUNS AND UNDERCUTTING BENEATH FENCE.
- NECESSARY REPAIRS TO SILT FENCE BARRIERS OR REPLACEMENT OF FENCE SHALL BE ACCOMPLISHED PROMPTLY.
- SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF OF THE HEIGHT OF THE BARRIER.
- SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.
- CONTRACTOR IS REQUIRED TO SUBMIT AND COMPLY WITH AN NPDES PERMIT.



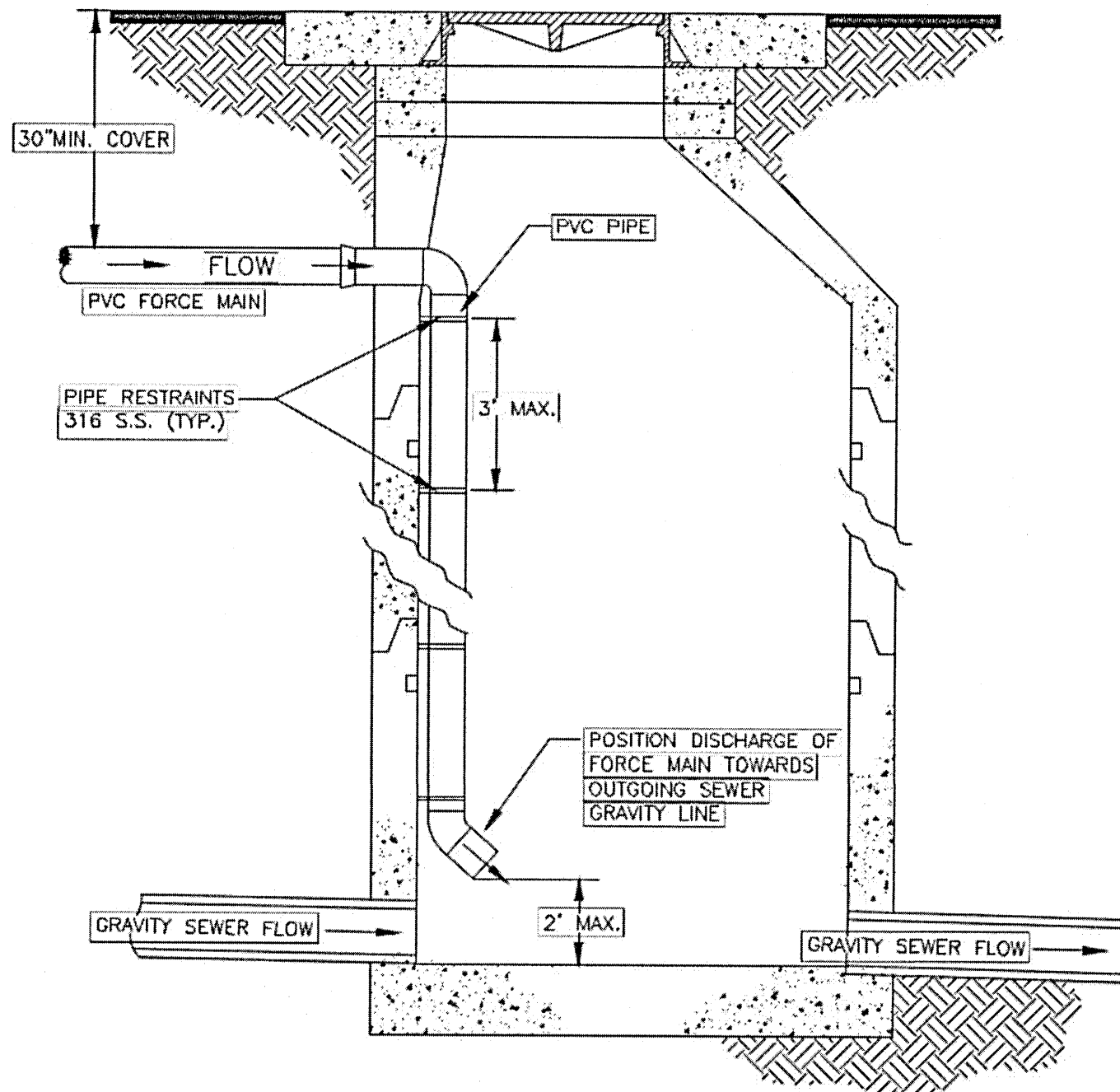
SILT FENCE DETAIL
N.T.S.



HAY BALE DETAIL
N.T.S.



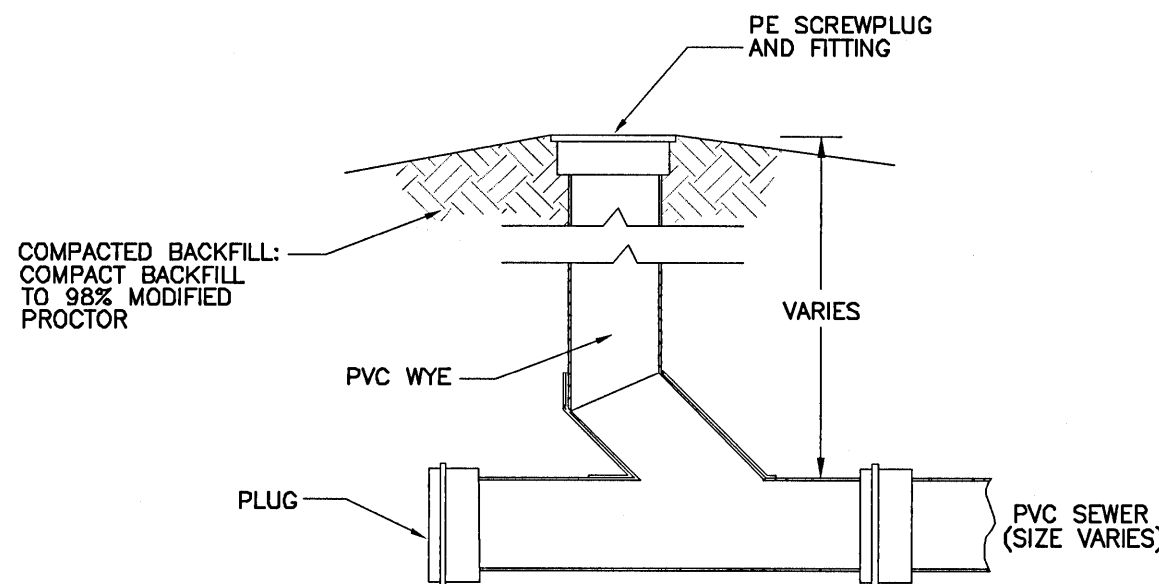
TREE PROTECTION DETAIL
N.T.S.



FORCE MAIN CONNECTION TO EXISTING MANHOLE DETAIL
(N.T.S.)

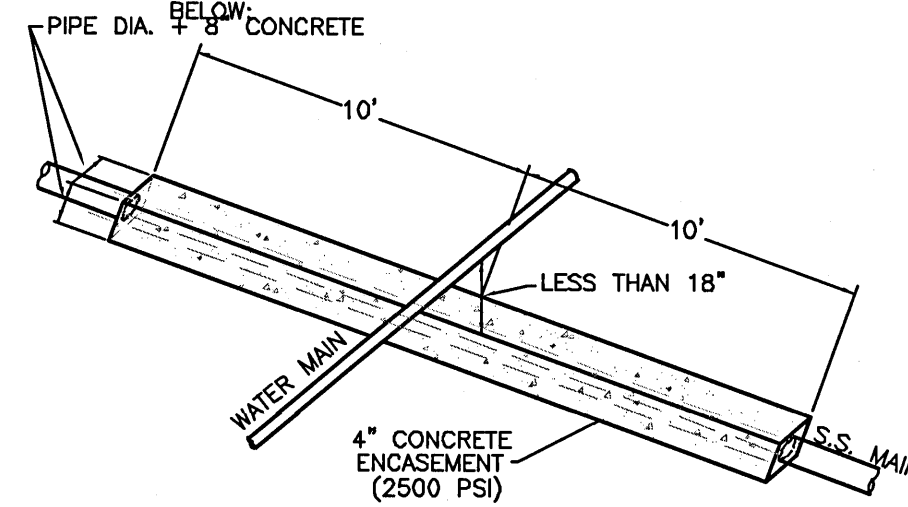
TREE PROTECTION NOTES:

- ALL ADEQUATE TREE PROTECTION MEASURES AND BARRICADES SHALL BE INSTALLED PRIOR TO SITE DISTURBANCE AND MAINTAINED IN GOOD WORKING ORDER UNTIL PROJECT IS COMPLETE AND SITE BECOMES STABILIZED.
- DURING DEVELOPMENT ACTIVITIES, PROTECTED TREES SHALL BE PROTECTED FROM ACTIVITIES WHICH MAY INJURE OR KILL THEM.
- THE ENTIRE DRIP LINE OF THE TREE SHALL BE PRESERVED IN A NATURAL STATE OR PROVIDED WITH PERVIOUS LANDSCAPING. WHERE THIS IS IMPRACTICAL, A WAIVER MAY BE GRANTED; HOWEVER, IN NO CASE SHALL MORE THAN FIFTY (50) PERCENT OF THE DRIP LINE BE COVERED WITH IMPERMEABLE MATERIALS. AT LEAST FIFTY (50) PERCENT OF THE AREA WITHIN THE DRIP LINE AND THE AREA WITHIN FIVE (5) FEET OF THE TRUNK SHALL BE PRESERVED IN A NATURAL STATE OR PROVIDED WITH PERVIOUS LANDSCAPING. WITHIN FIVE (5) FEET OF THE TRUNK, THE SOIL SHALL BE MAINTAINED AT ITS ORIGINAL GRADE WITH NO TRENCHING OR CUTTING OF ROOTS. BEYOND FIVE (5) FEET OF THE TREE TRUNK AND WITHIN THE DRIP LINE, A LIGHT FILL OF POROUS GRAVELLY MATERIAL UP TO SIX (6) INCHES DEEP MAY BE ADDED BUT NO GRADE LOWERING SHALL OCCUR. TO ACCOMPLISH DEEPER FILLING, A DRAINAGE SYSTEM SHALL BE INSTALLED WITHIN THE AREA DEFINED IN A DRIP LINE OF THE TREE AND A DRYWALL SHALL BE CONSTRUCTED AT A DISTANCE AT LEAST FIVE (5) FEET FROM THE TRUNK OF THE TREE BEFORE GRAVEL AND POROUS FILL ARE ADDED.
- WITHIN THE DRIP LINE, THERE SHALL BE NO STORAGE OF FILL OR COMPACTION OF THE SOIL AS FROM HEAVY EQUIPMENT, OR ANY SPILLING, STORAGE OR DISPOSAL OF CONCRETE, MORTAR, PAINT, SOLVENTS, CHEMICALS, OR OTHER POTENTIALLY HARMFUL SUBSTANCES.
- ALL TREES TO BE PROTECTED SHALL BE PROTECTED BY MEANS OF A PHYSICAL BARRIER WHICH WILL LIMIT ACCESS TO SAID TREE. SAID PROTECTIVE BARRIER SHALL BE COMPOSED OF WOOD OR OTHER SUITABLE MATERIALS WHICH ASSURE COMPLIANCE WITH THE INTENT OF THIS ORDINANCE. SAID PROTECTIVE BARRIERS, WHERE REQUIRED, SHALL REMAIN UNTIL SUCH TIME AS CONSTRUCTION IS COMPLETE. A MINIMUM OF ONE HUNDRED (100) PERCENT OF THE AREA WITHIN THE DRIP LINE SHALL BE SO PROTECTED UNLESS A WAIVER IS GRANTED. ALSO, DURING CONSTRUCTION, NO ATTACHMENTS OR WIRES SHALL BE ATTACHED TO ANY PROTECTED TREE. BARRIERS WILL BE REQUIRED FOR ALL TREES BEING PROTECTED EXCEPT IN THE FOLLOWING CASES:
 - ROAD RIGHT-OF-WAYS, UTILITY EASEMENTS, ETC. THESE AREAS MAY BE RIBBED BY PLACING STAKES A MAXIMUM OF FIFTY (50) FEET APART AND TAPING RIBBON, PLASTIC TAPE, ROPE, ETC., FROM STAKE TO STAKE ALONG THE OUTSIDE PERIMETERS OF SUCH AREAS TO BE CLEARED.
 - LARGE PROPERTY AREAS SEPARATE FROM THE CONSTRUCTION OR LAND CLEARING AREA INTO WHICH NO EQUIPMENT WILL VENTURE MAY ALSO BE RIBBONED OFF.



PVC CLEAN-OUT DETAIL
(N.T.S.)

SANITARY SEWER LINES (GRAVITY OR PRESSURE) SHALL HAVE 18" OR GREATER VERTICAL CLEARANCE BELOW ANY POTABLE WATER LINE WHEN CROSSING. A MINIMUM OF 6" VERTICAL CLEARANCE IS REQUIRED FOR OTHER UTILITIES. HORIZONTAL CLEARANCE BETWEEN SANITARY SEWER LINE THAT IS PARALLEL TO AND LESS THAN 18" BELOW A POTABLE WATER LINE SHALL BE 10" OR GREATER. A MINIMUM OF 30" IS REQUIRED FOR OTHER UTILITIES. IF THIS IS NOT POSSIBLE OR PRACTICAL, SEE:

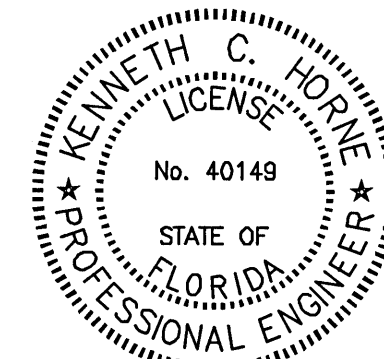


FOR CROSSING: ENCASE AS ABOVE SO THAT THE ENDS OF ENCASEMENT ARE AT LEAST 12' FROM ANY WATER LINE JOINT. WATER LINE JOINT MUST NOT BE CLOSER THAN 5' TO THE POINT OF CROSSING, OR IT MUST ALSO BE ENCASED.

ALTERNATE 1: USE EQUALLY (OR HIGHER) RATED PRESSURE PIPE FOR SEWER WITH NO JOINTS CLOSER THAN 12' APART AND 6" VERTICAL.
ALTERNATE 2: PLACE SEWER LINE INTO STEEL CASING AND CENTER 20' PIECE WITH 4' VERTICAL CLEARANCE AND SEAL ENDS.

FOR PARALLEL: AND 6' TO 10' APART USE ALTERNATE 2, BUT IF MORE THAN 40' IN LENGTH, ALTERNATE 1 MUST BE USED AND JOINTS ARE TO BE STAGGERED. IF LINES MUST BE 3' TO 6' APART, ALTERNATE 1 MUST BE USED WITH A HIGHER RATED PRESSURE PIPE FOR SEWER (i.e., WATER LINE IS DR25 THEN USE DR18 OR 21 FOR SEWER).

SEWER-WATER SEPARATION & CLEARANCES DETAIL
N.T.S.



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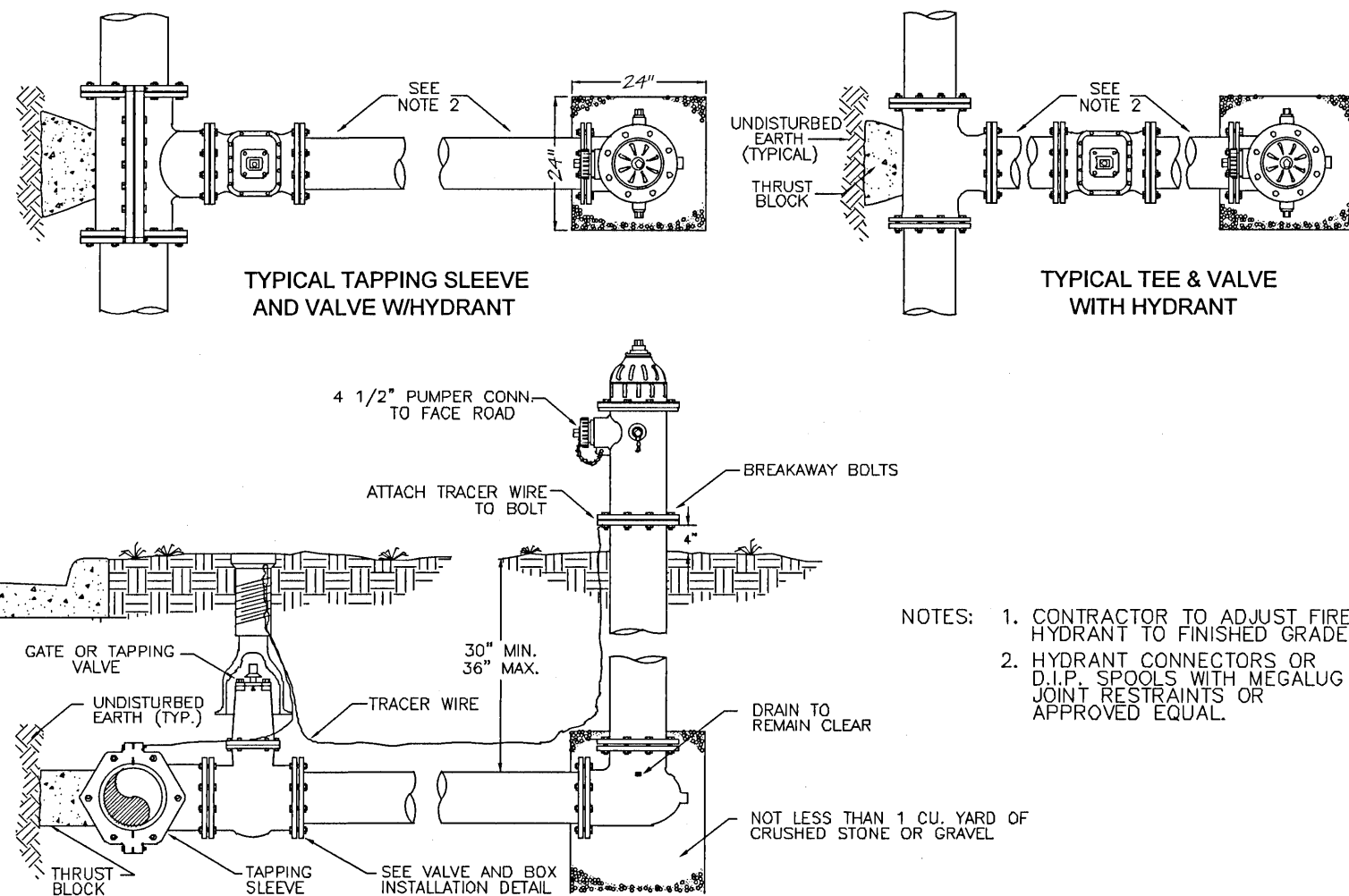
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CHLORINE REQUIRED FOR STERILIZATION

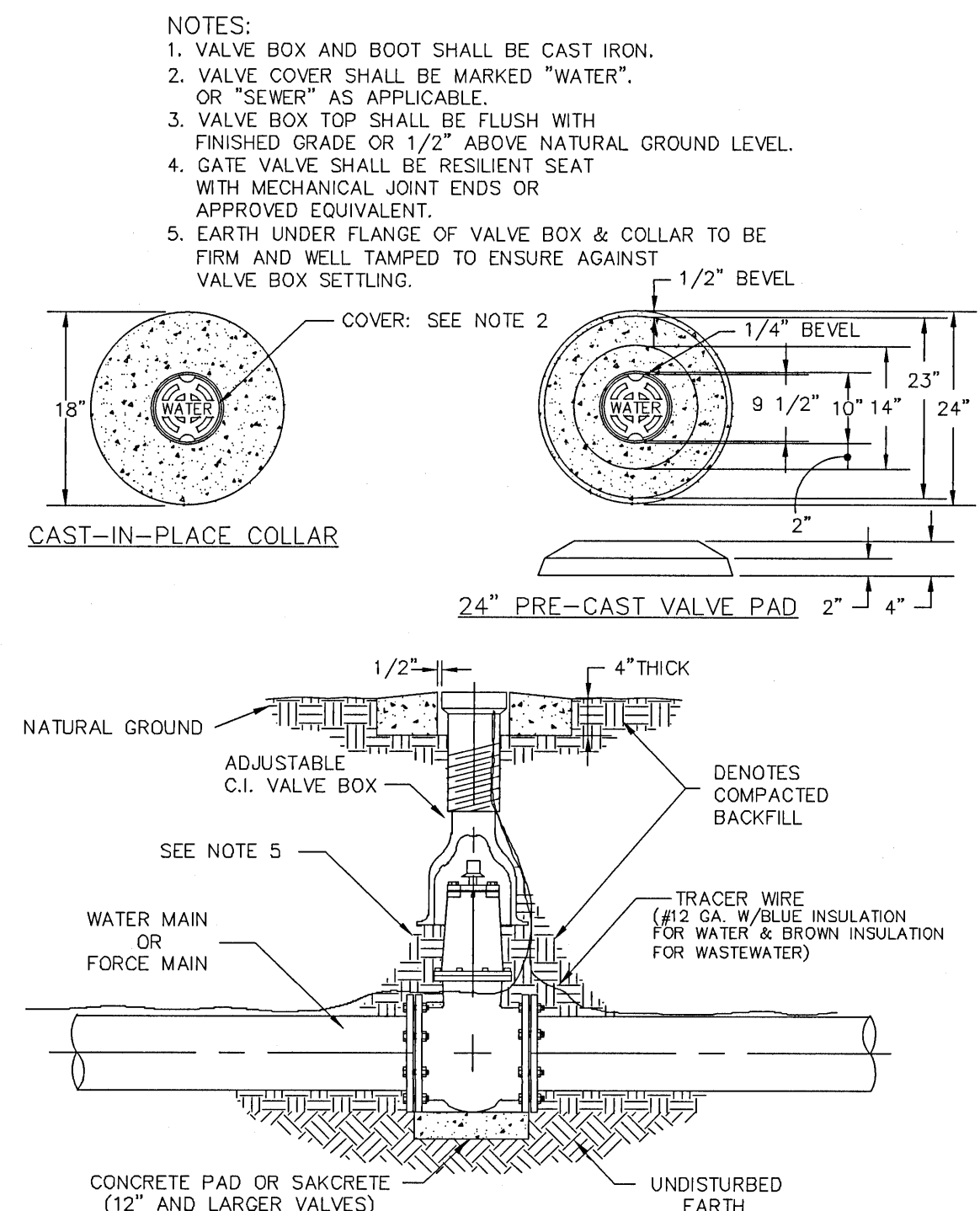
PIPE SIZE	SPECIFICATION	I.D. INCHES	GALLS./100'	CHLORINE REQUIRED PER 100' FOR 25ppm	CHLORINE REQUIRED PER 100' FOR 50ppm
2"	D2241 DR26	2.193	20	0.10 oz.	0.20 oz.
3"	D2241 DR26	3.230	43	0.22 oz.	0.44 oz.
4"	C-900 DR18	4.230	73	0.37 oz.	0.75 oz.
	C-900 DR25	4.390	79	0.40 oz.	0.81 oz.
6"	C-900 DR18	6.090	151	0.78 oz.	1.55 oz.
	C-900 DR25	6.300	162	0.83 oz.	1.66 oz.
8"	C-900 DR18	7.980	260	1.33 oz.	2.67 oz.
	C-900 DR25	8.280	280	1.44 oz.	2.87 oz.
12"	C-900 DR18	11.650	554	2.84 oz.	5.69 oz.
	C-900 DR25	12.080	595	3.06 oz.	6.12 oz.
16"	C-900 DR18	15.470	977	5.01 oz.	10.03 oz.
	C-900 DR25	16.010	1,046	5.37 oz.	10.74 oz.
20"	C-900 DR18	19.200	1,504	7.72 oz.	15.45 oz.
	C-900 DR25	19.870	1,611	8.27 oz.	16.55 oz.
24"	C-900 DR18	N/A	N/A	N/A	N/A
	C-900 DR25	23.742	2,300	11.81 oz.	23.62 oz.

NOTE :
 - 16", 20" and 24" PIPE SIZES ARE C.I.O.D.
 - FOR HTH WITH 65% AVAILABLE CHLORINE
 - 1 US GALLON WEIGHS 8.345 #
 - APPROX. 1 oz./100 gal FOR 50 ppm
 - APPROX. 0.5 oz./100 gal FOR 25 ppm

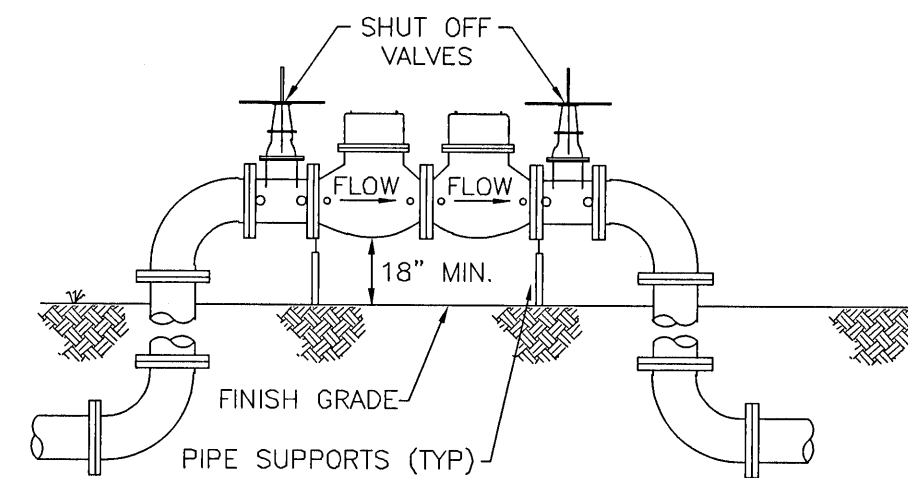
CHLORINE REQUIRED FOR STERILIZATION



TYPICAL FIRE HYDRANT INSTALLATION: TAPPING SLEEVE & VALVE and TEE CONNECTION N.T.S.



TYPICAL VALVE & BOX INSTALLATION N.T.S.



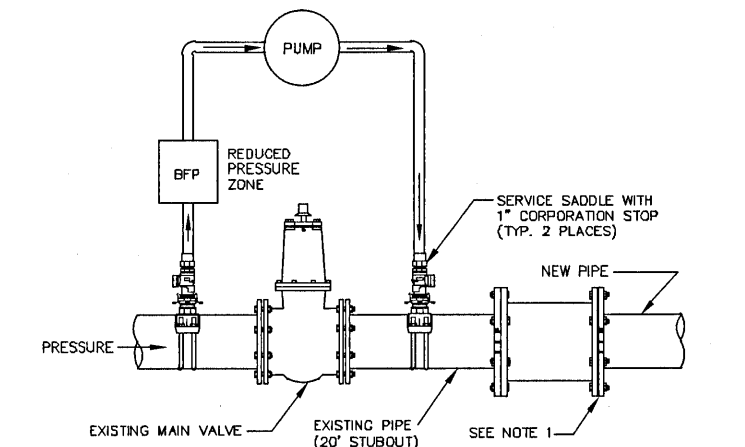
NOTE: CHECK VALVE ASSEMBLY PROVIDED SHALL BE HERSEY MODEL DDC II, DETECTOR CHECK, OR APPROVED EQUAL. INSTALL WITH ARMSTRONG ARMAFLEX II INSULATION. PROVIDE GREEN WEATHERPROOF PROTECTIVE FINISH. REDUCED PRESSURE BACKFLOW PREVENTERS SHALL BE HERSEY AERCAP MODEL 6 CM OR, APPROVED EQUAL.

THRUST BLOCKS ARE NOT SHOWN BUT SHALL BE INSTALLED.

BACKFLOW PREVENTER N.T.S.

NOTES:

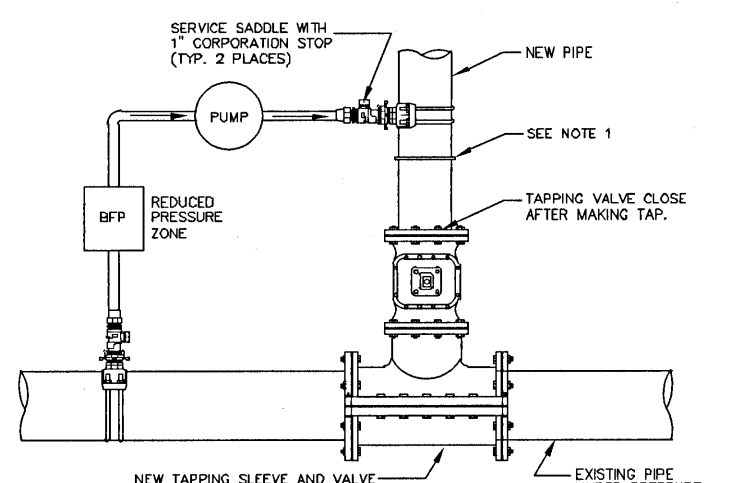
1. NEW PIPE SHALL BE CARRIED OR PLUGGED FOR PRESSURE TEST. ONCE TEST IS SATISFACTORILY COMPLETED NEW MAIN IS TO BE CONNECTED TO EXISTING MAIN IN A MANNER ACCEPTABLE TO E. C. U. A.
2. THE CONTRACTOR SHALL FLUSH LINE PRIOR TO STARTING THE CHLORINATION PROCEDURE. ALL FLUSHING SHALL BE DONE THROUGH THE EXISTING VALVE WITH ALL HYDRANTS AND SERVICE LINES OPEN. E.C.U.A. INSPECTOR SHALL BE THE ONLY PERSON ALLOWED TO OPERATE THE VALVE AND SHALL BE PRESENT DURING FLUSHING OPERATION. ONCE FLUSHING IS COMPLETE THE INSPECTOR SHALL CLOSE THE VALVE.
3. ONCE SATISFACTORY BACTERIOLOGICAL SAMPLES ARE OBTAINED THE CONTRACTOR SHALL CLOSE BOTH CORPORATION STOPS AND REMOVE SERVICE TUBING, PUMP AND BACK FLOW PREVENTER. CAP CORPORATION STOPS WITH BRASS CAPS.
4. CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY FOR FILLING, CHLORINATING AND TESTING PROCEDURES. CONTRACTOR SHALL PROVIDE SAMPLING TAPS AT THOSE LOCATIONS APPROVED BY THE E.C.U.A. INSPECTOR. E.C.U.A. SHALL COLLECT TEST SAMPLES.
5. IF 20" STUB OUT IS NOT PRESENT SPECIAL ARRANGEMENTS WILL HAVE TO BE MADE TO DEPRESSURIZE THE EXISTING MAIN TO MAKE CONNECTION TO THE EXISTING VALVE.



TYPICAL CONNECTION FOR NEW LINE FILLING, PRESSURE TESTING, FLUSHING AND CHLORINATION. (EXISTING STUBOUT)

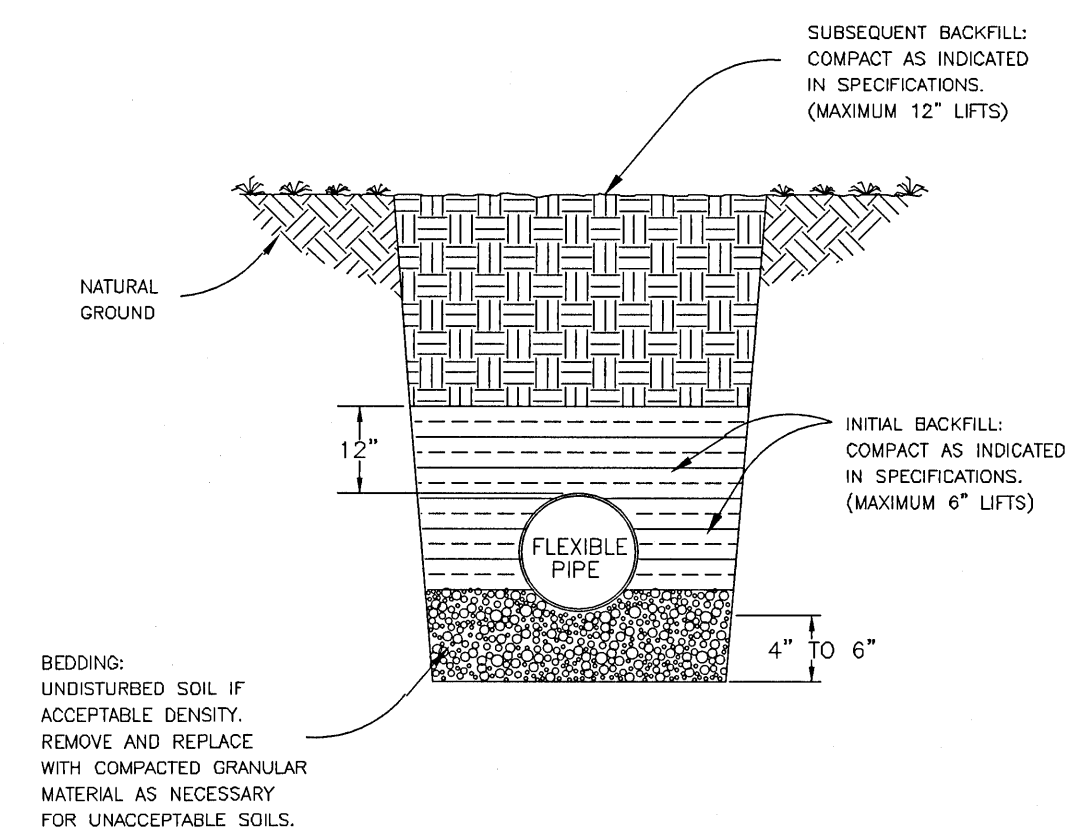
NOTES:

1. NEW PIPE SHALL BE CARRIED OR PLUGGED FOR PRESSURE TEST. ONCE TEST IS SATISFACTORILY COMPLETED NEW MAIN IS TO BE CONNECTED TO TAPPING VALVE. TAPPING VALVE IS TO REMAIN CLOSED.
2. THE CONTRACTOR SHALL FLUSH LINE PRIOR TO STARTING THE CHLORINATION PROCEDURE. ALL FLUSHING SHALL BE DONE THROUGH THE TAPPING VALVE WITH ALL HYDRANTS AND SERVICE LINES OPEN. E.C.U.A. INSPECTOR SHALL BE THE ONLY PERSON ALLOWED TO OPERATE THE VALVE AND SHALL BE PRESENT DURING FLUSHING OPERATION. ONCE FLUSHING IS COMPLETE THE INSPECTOR SHALL CLOSE THE VALVE.
3. ONCE SATISFACTORY BACTERIOLOGICAL SAMPLES ARE OBTAINED THE CONTRACTOR SHALL CLOSE BOTH CORPORATION STOPS AND REMOVE SERVICE TUBING, PUMP AND BACK FLOW PREVENTER. CAP CORPORATION STOPS WITH BRASS CAPS.
4. CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY FOR FILLING, CHLORINATING AND TESTING PROCEDURES. CONTRACTOR SHALL PROVIDE SAMPLING TAPS AT THOSE LOCATIONS APPROVED BY THE E.C.U.A. INSPECTOR. E.C.U.A. SHALL COLLECT TEST SAMPLES.

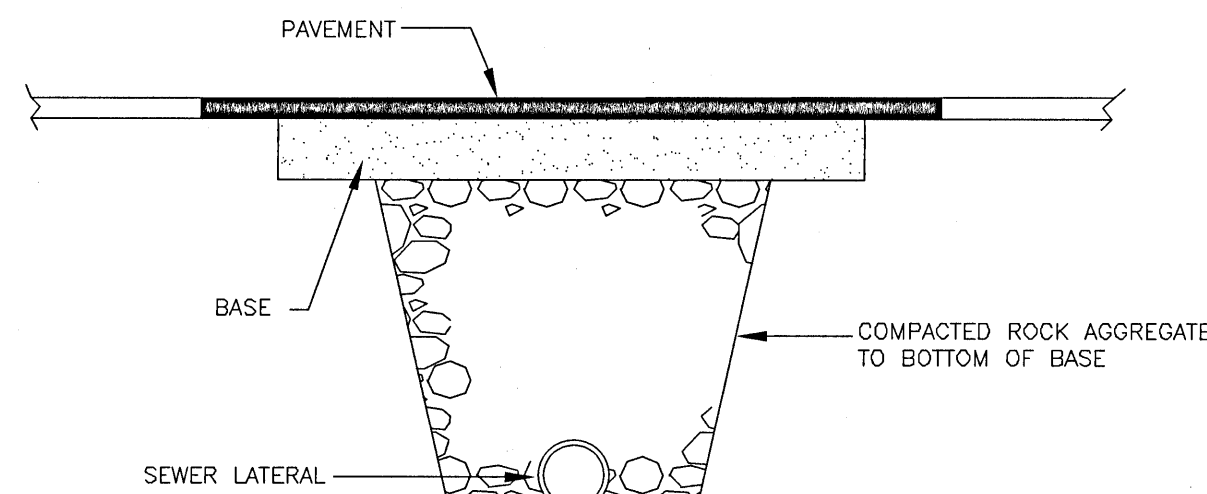


TYPICAL CONNECTION FOR NEW LINE FILLING, PRESSURE TESTING, FLUSHING AND CHLORINATION. (TAPPING SLEEVE AND VALVE)

TYPICAL DISINFECTION & CHLORINATION N.T.S.

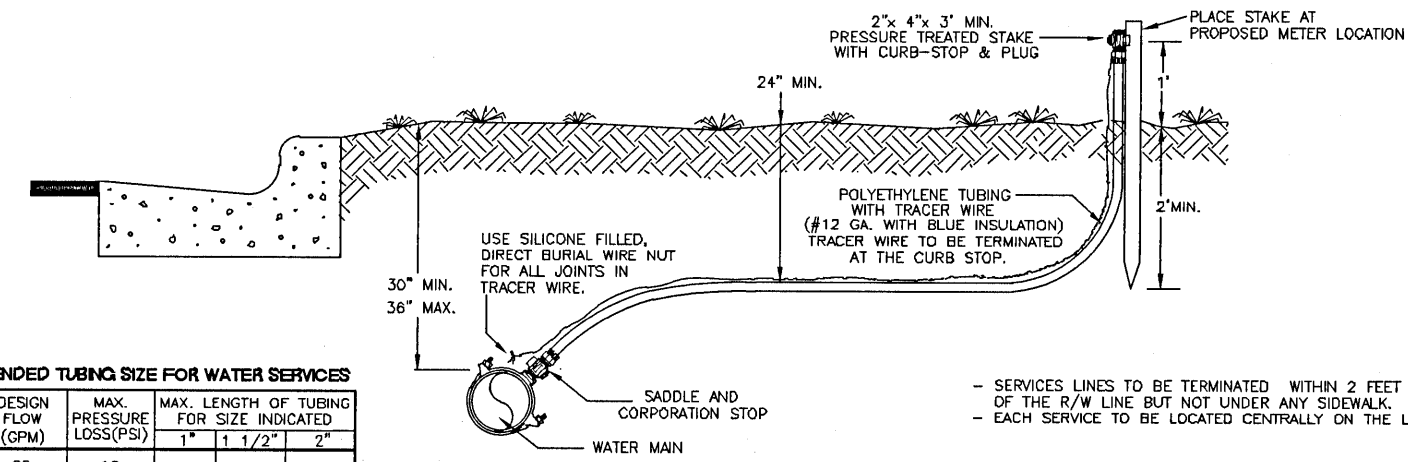


FLEXIBLE PIPE BEDDING N.T.S.

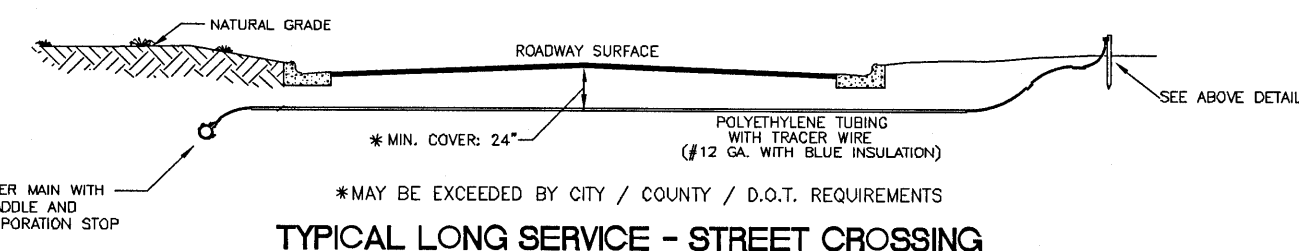


BEDDING FOR SHALLOW LATERALS N.T.S.

RECOMMENDED TUBING SIZE FOR WATER SERVICES					
SIZE OF METER	DESIGN FLOW (GPM)	MAX. PRESSURE (PSI)	MAX. LENGTH OF TUBING FOR SIZE INDICATED	1"	1 1/2"
5/8"	20	10	92	661	2879
1"	50	10	17	121	492
1 1/2"	100	10	10	34	136
2"	160	10			57



TYPICAL SHORT SERVICE



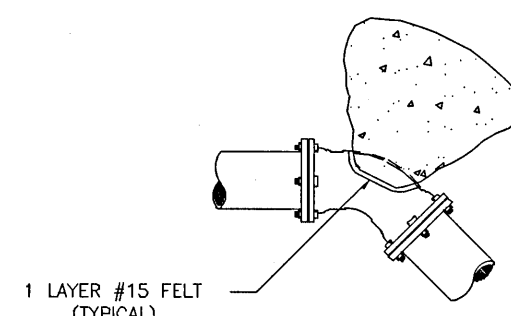
TYPICAL LONG SERVICE - STREET CROSSING

TYPICAL WATER SERVICE INSTALLATION N.T.S.

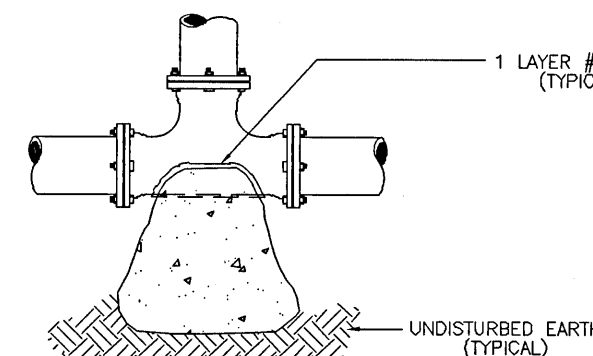
MINIMUM THRUST BLOCK DIMENSIONS: SURFACE AREA AGAINST UNDISTURBED SOIL

PIPE SIZE	DEAD END	45° BEND	90° BEND	22.5° BEND
4"	1' x 2'	1.5' x 1.5'	1' x 1.5'	1' x 1'
6"	2' x 2'	2.5' x 2.5'	2' x 1.5'	1' x 1.5'
8"	2.25' x 3'	3' x 3'	2' x 2.5'	1.5' x 1.5'
10"	3.5' x 3'	4' x 3.75'	3.75' x 3'	2' x 2'
12"	4' x 4'	4' x 4'	3' x 4'	2' x 3'
16"	5' x 5.5'	6' x 6.5'	4' x 5'	3' x 3.5'

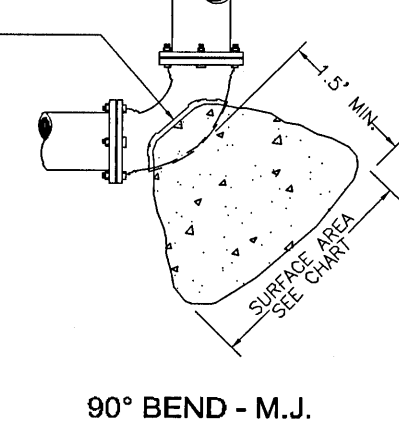
- NOTES:
 1. ONE LAYER OF #15 FELD TO BE USED TO PREVENT ADHESION OF CONCRETE TO FITTING.
 2. ALL THRUST BLOCKS TO BE BACKED BY UNDISTURBED SOIL.
 3. THRUST BLOCK DIMENSIONS BASED ON SM SOIL CLASSIFICATION.
 4. CONCRETE MIN. 2500 PSI.
 5. JOINT RESTRAINTS ARE TO BE USED ON ALL FITTINGS, TRUST BLOCKS REQUIRED ON 90° BENDS, 45° BENDS, TEES, TAPPING SLEEVES, AND DEAD ENDS.



45° BEND - M.J.

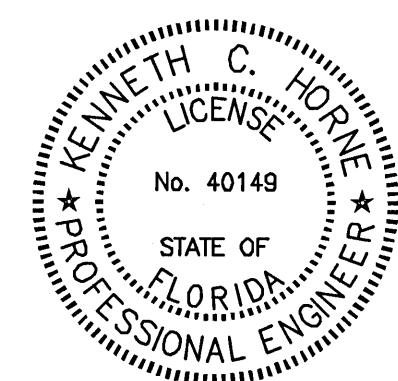


TEE - M.J.



90° BEND - M.J.

TYPICAL THRUST BLOCK INSTALLATIONS N.T.S.



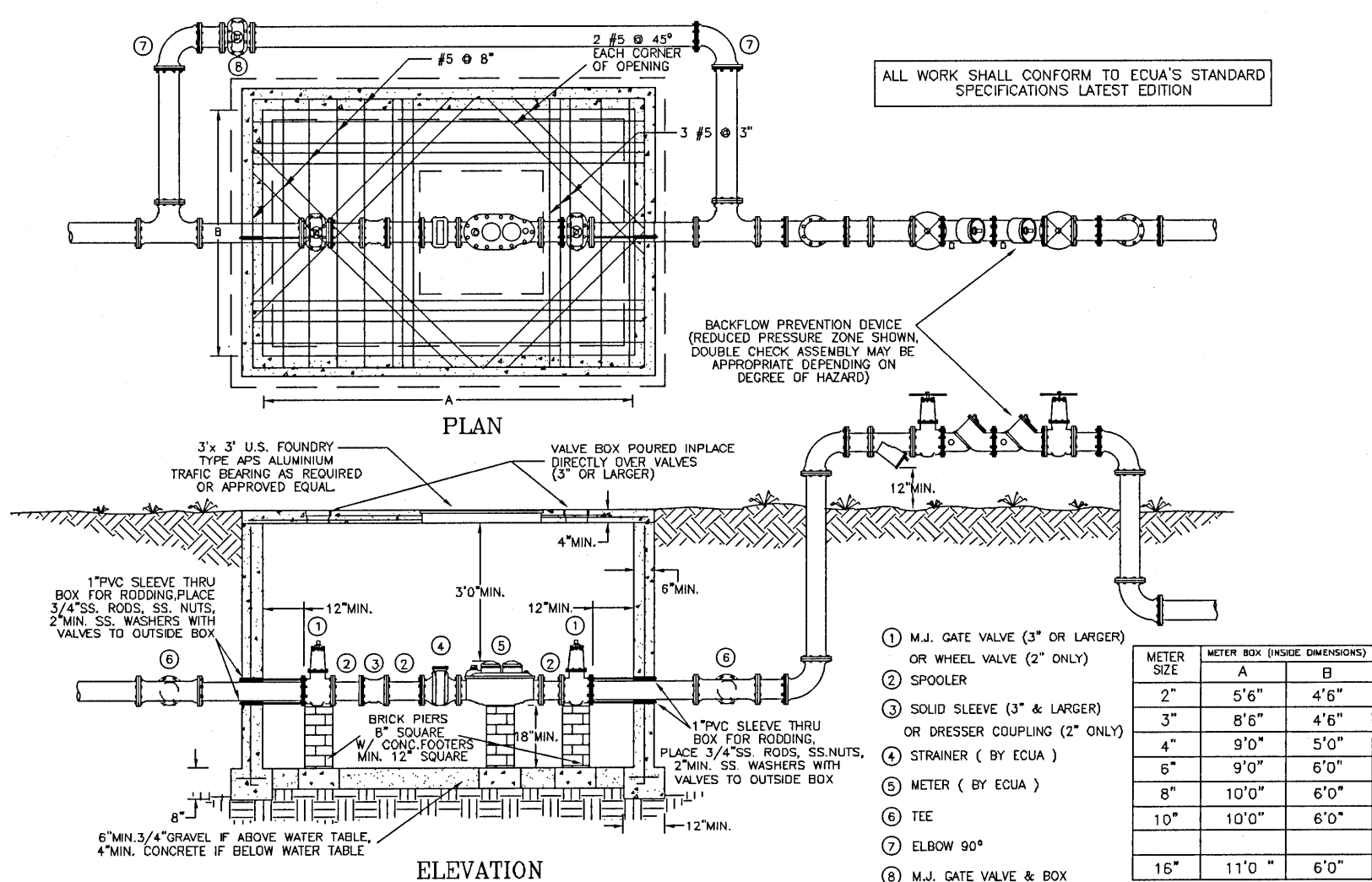
PIPE JOINT RESTRAINT TABULATION

SHOWING DISTANCES IN FEET FROM THE FITTING TO BE RESTRAINED TO THE LAST RESTRAINING GLAND REQUIRED

PIPE SIZE AND TYPE	HORIZONTAL BENDS				DEAD ENDS	TEES (Length Along Branch)
	90 Deg.	45 Deg.	22.5 Deg.	11.25 Deg.		
3" DI	18	8	4	2	33	20
4" DI	22	9	4	2	39	25
6" DI	31	13	6	3	55	37
8" DI	40	17	8	4	72	49
10" DI	48	20	9	5	85	60
12" DI	56	23	11	5	101	71
16" DI	70	29	14	7	129	92
20" DI	84	35	17	8	156	112
24" DI	96	40	19	9	181	131
4" PVC	28	12	6	3	62	39
6" PVC	39	16	8	4	87	58
8" PVC	50	21	10	5	114	78
10" PVC	60	25	12	6	136	94
12" PVC	70	29	14	7	160	112
16" PVC	88	36	17	9	205	146
20" PVC	105	43	21	10	247	177
24" PVC	120	50	24	12	287	207

- NOTES:
 1. Valves are based on test pressure = 150 psi, soil = sm, trench type = 3, depth = 2.5'.
 safety factor = 2.0 (1.5 for tees with LFI = 2').
 2. Restrained lengths for vertical offsets, reducers & unequal size tees must be individually calculated.
 3. AS a minimum all fittings shall be restrained to the next joint.

PIPE JOINT RESTRAINT TABULATION N.T.S.



TYPICAL COMPOUND/TURBINE METER SERVICE 2" AND LARGER N.T.S.

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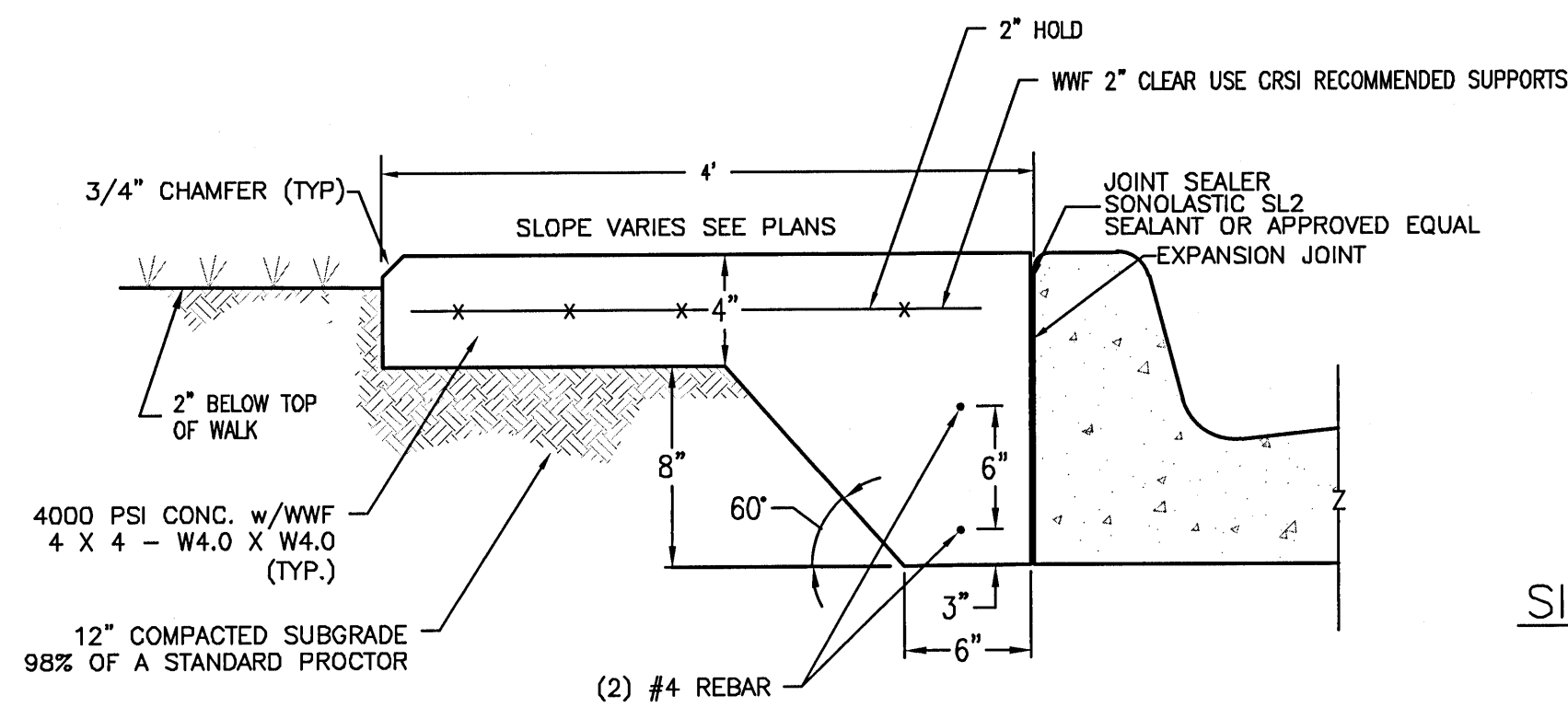
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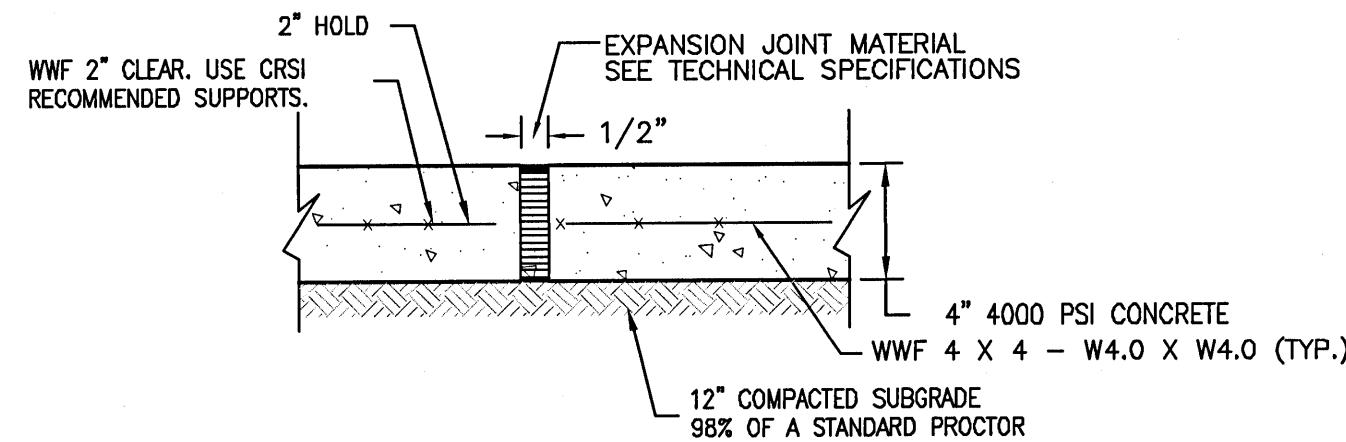
DETAILS

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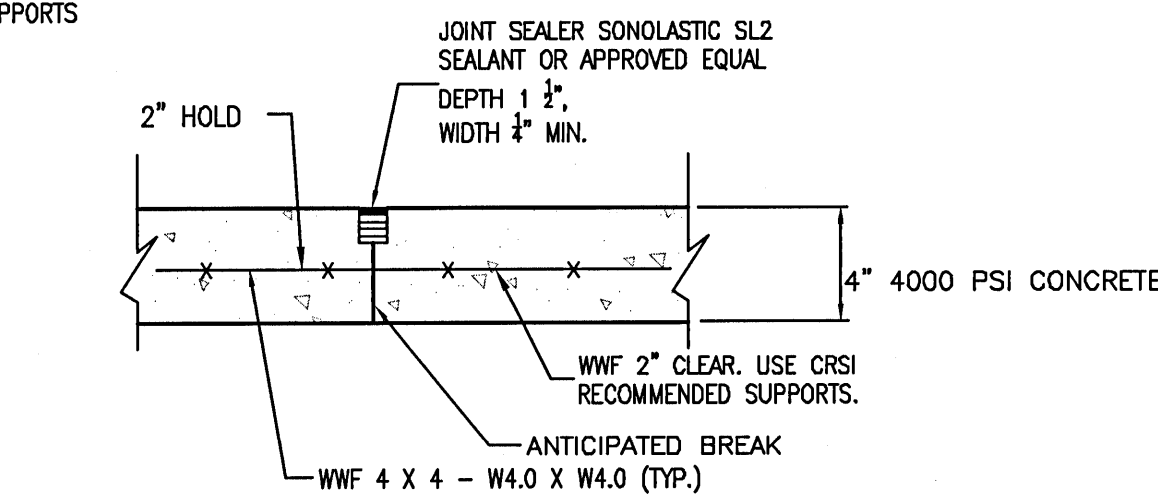
1. CONTRACTOR TO TAKE CARE WHEN FINISHING EXPANSION JOINTS SO THAT ALL JOINTS ARE SMOOTH AND UNIFORM.
2. CLEAN/WASH BROOM AS APPROPRIATE AND NECESSARY DURING CONCRETE FINISHING.
3. POORLY FINISHED, ROUGH, OR CRACKING CONCRETE SHALL BE REMOVED AND REPLACED AT CONTRACTOR'S EXPENSE.
4. CONTRACTOR TO CONTACT AND COORDINATE WITH GEOTECHNICAL LABORATORY FOR ALL CONCRETE TESTING. USE GEOTECHNICAL ENGINEER SELECTED BY OWNER. OWNER TO PAY FOR TESTING.
5. CONSTRUCT EXPANSION JOINTS WHERE NEW CONCRETE ABUTS NEW OR EXISTING CONCRETE CURBS, ASPHALT, OR OTHER STRUCTURES AND/OR AT DISTANCE EQUAL TO WIDTH OF WALK.
6. JOINT SEALER TO BE FLEXIBLE EPOXY JOINTING COMPOUND, AS SPECIFIED.
7. CONTRACTOR TO SUBMIT CURING METHOD TO ENGINEER, PRIOR TO SIDEWALK INSTALLATION.
8. REINFORCING FOR PROPOSED WALK TO BE WWF 4X4 W4.0 X W4.0 ON CHAIRS AND HELD 2" CLEAR FROM THE TOP OF THE WALK.
9. ALL WWF TO BE FURNISHED IN FLAT SHEETS.
10. CONTRACTOR TO TAKE EXTRA CARE TO ENSURE WWF IS PLACED CORRECTLY.
11. AFTER WWF IS INSTALLED AND PRIOR TO PLACING CONCRETE, SAID WWF IS TO BE INSPECTED BY OWNER/ENGINEER.
12. ALL CONTROL JOINTS TO BE SCORED NOT SAWED.
13. SUBMITTALS MUST INCLUDE NAME OF PROJECT, OWNER, AND DATES OF MATERIAL SAMPLINGS.
14. CONSTRUCT EXPANSION JOINTS WHERE NEW CONCRETE ABUTS NEW OR EXISTING CONCRETE, CURBS, ASPHALT, OR OTHER STRUCTURES AND AT A DISTANCE OF EIGHT FEET APART, WITH CONTROL JOINTS HALF THE DISTANCE BETWEEN EXPANSION JOINTS.



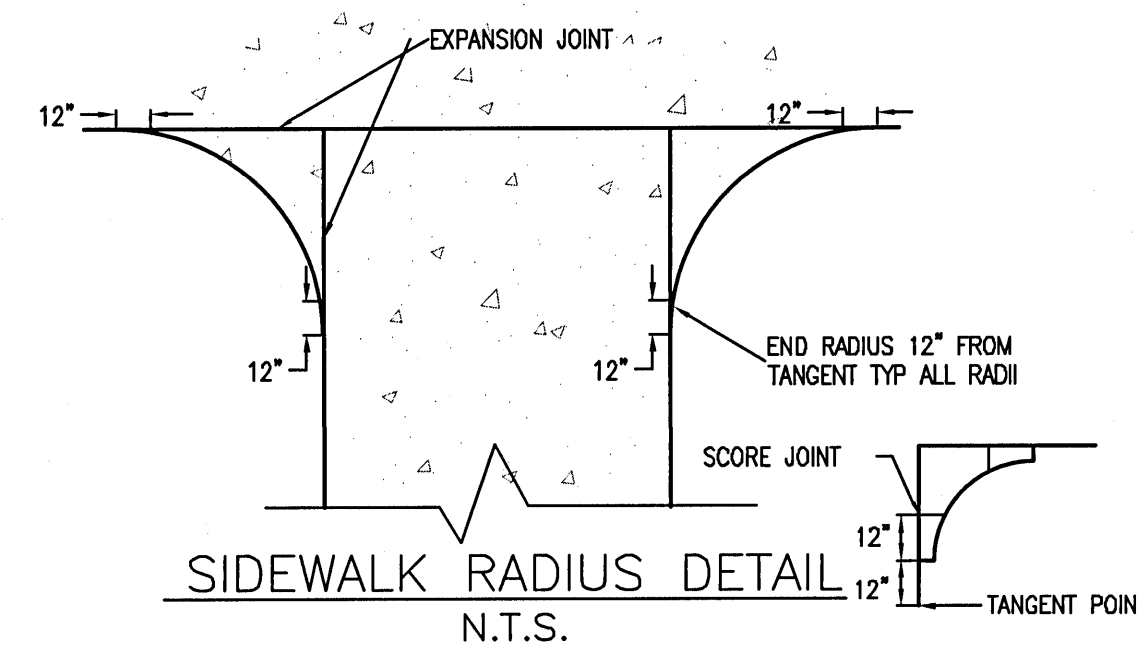
SIDEWALK DETAIL
N.T.S.



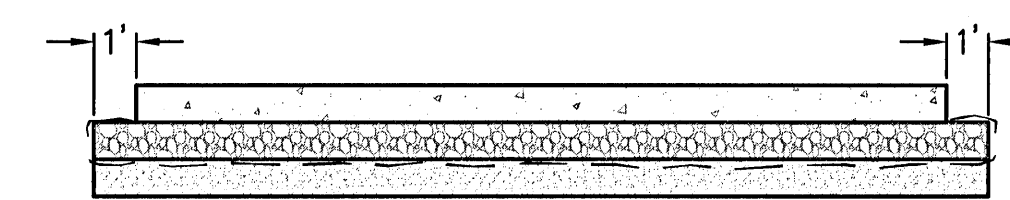
SIDEWALK EXPANSION JOINT DETAIL
N.T.S.



SIDEWALK CONTROL JOINT DETAIL
N.T.S.



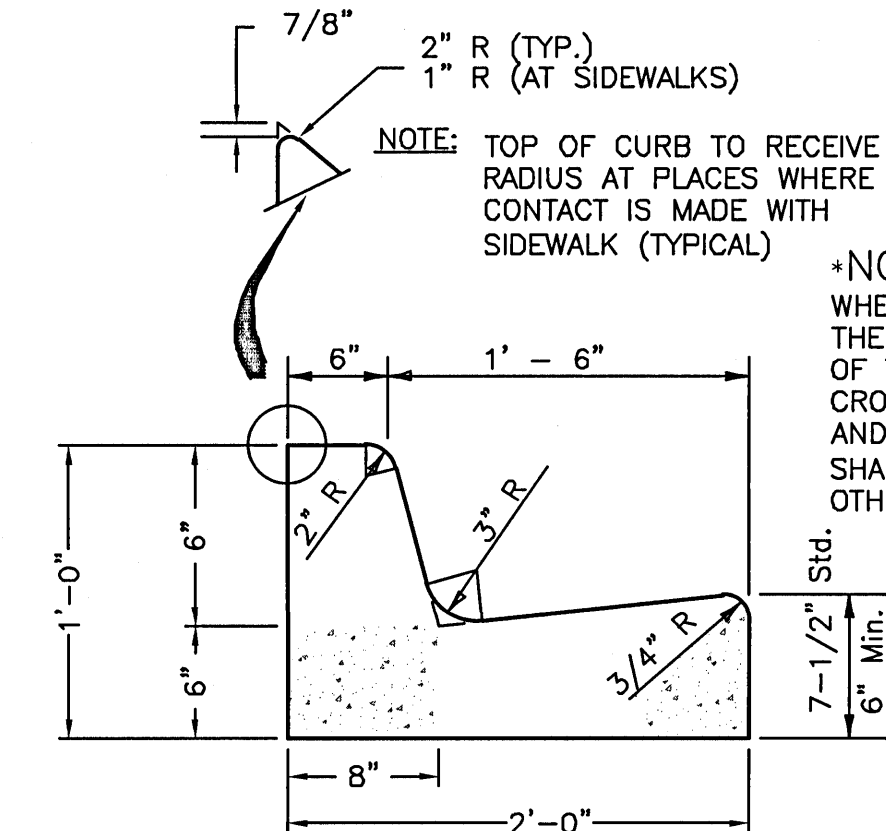
SIDEWALK RADIUS DETAIL
N.T.S.



LEGEND:

- PROPOSED 6" PCC PAVEMENT (3,000 PSI, 28-DAY COMPRESSIVE STRENGTH MIN.)
- PROPOSED GRADED AGGREGATE BASE COURSE (8" THICK MIN. 100% OF MAX. DENSITY PER ASTM D1557)
- COMPACTED SUBGRADE (12" THICK COMPACTED 98% OF MAX. DENSITY PER ASTM D698)
- GEOTEXTILE FABRIC

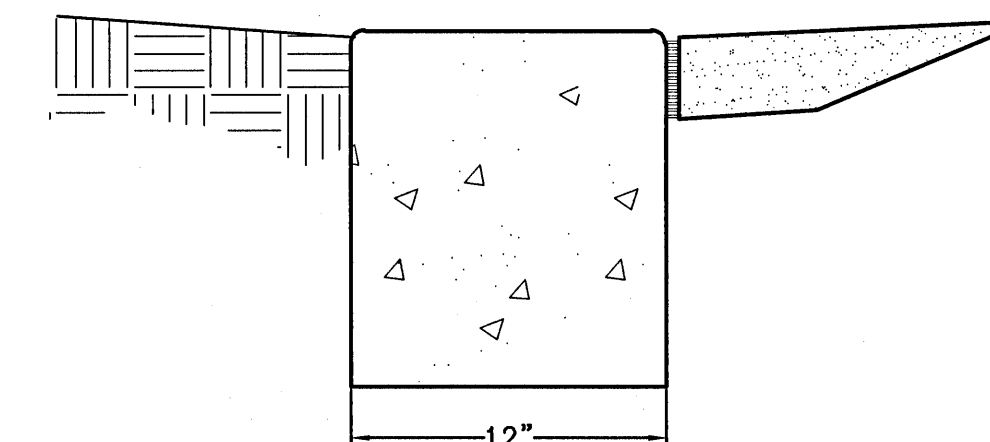
DUMPSTER PAD TYPICAL SECTION
N.T.S.



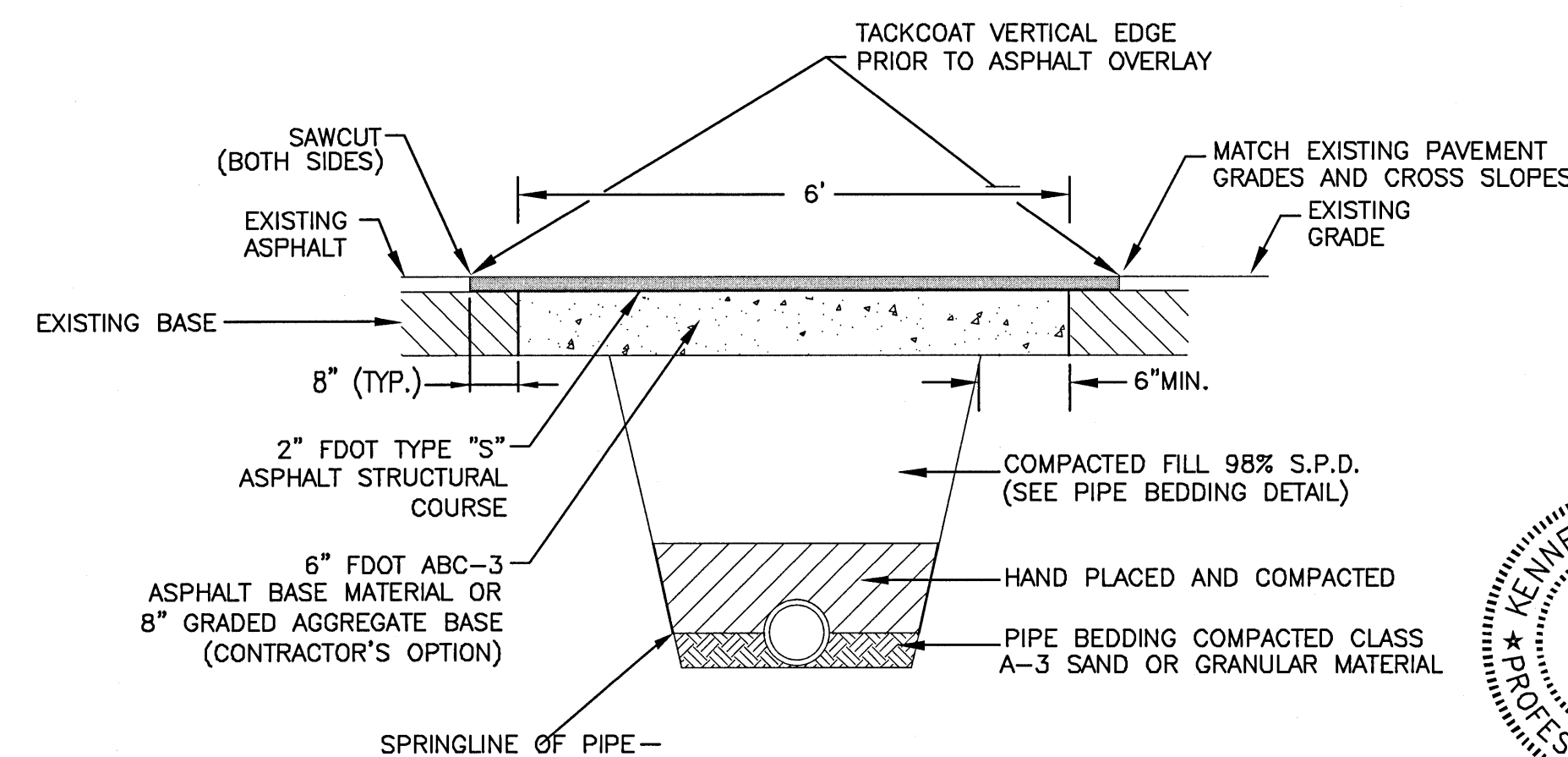
F.D.O.T. TYPE "F"
CURB & GUTTER DETAIL
N.T.S.

NOTES:

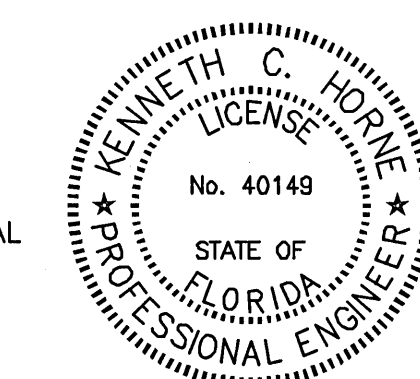
1. SAWED OR SCORED CONTROL JOINTS SHALL BE SPACED AT 10 FT. MAXIMUM INTERVALS.
2. CONSTRUCT EXPANSION JOINTS WHERE NEW CONCRETE ABUTS NEW OR EXISTING CONCRETE CURBS, OR OTHER STRUCTURES AND/OR ON 20 FT. CENTERS.
3. JOINT SEALER TO BE SONOLASTIC SL2 SEALANT, OR APPROVED EQUAL.



1' WIDE RIBBON CURB
N.T.S.



ASPHALT ROADWAY
CUT & PATCH DETAIL
N.T.S.



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