CONSTRUCTION PLANS FOR:

FIFTH THIRD

DELRAY BEACH

1820 SOUTH FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA 33483

PROJECT TEAM

PROPERTY OWNER:
1820 FEDERAL DELRAY, LLC.
729 NW 7TH STREET
BOCA RATON, FLORIDA 33486-3507

PROPERTY DEVELOPER:
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CIVIL ENGINEER:
INFINITY ENGINEERING GROUP, LLC
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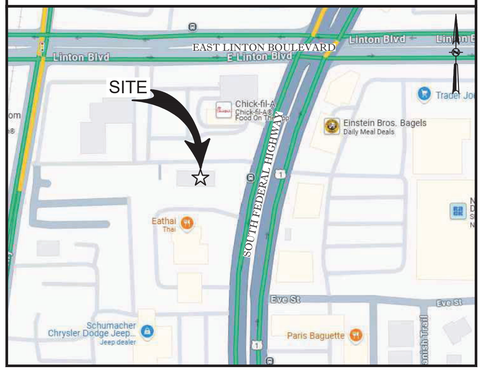
CONTACT: NISIT SAPPARKHAO

ARCHITECT:
BDG ARCHITECTS
550 SOUTH CALDWELL STREET SUITE 1800
CHARLOTTE, NORTH CAROLINA 28202
PH: (704) 981-8951

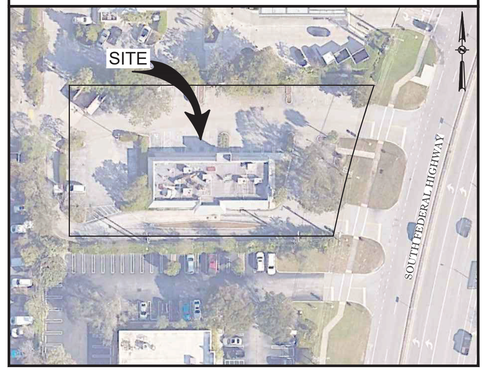
ENGINEERS NOTE

IT IS THE RESPONSIBILITY OF THE OWNER'S ENGINEER TO PROVIDE SITE OBSERVATION AND INSPECTIONS IN ORDER FOR THE OWNERS ENGINEER TO EXECUTE THE "ENGINEERS CERTIFICATION OF COMPLETION" EXACTLY AS STATED ON PAGE C-14 FROM THE CITY OF DELRAY BEACH CURRENT MINIMUM CONSTRUCTION STANDARDS AND SPECIFICATIONS.

VICINITY MAP



AERIAL MAP



PARCEL ID: 12-43-46-28-11-002-0020
PALM BEACH COUNTY, FLORIDA

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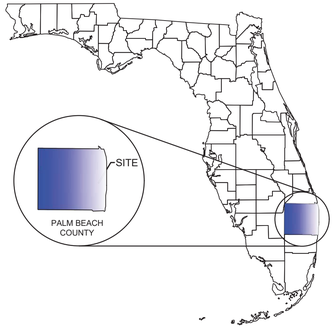

811
Know what's below.
Call before you dig.

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NISIT SAPPARKHAO LICENSE No 64085 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Nisit Sapparkhao
DN: c=US, st=Florida, l=Tampa, o=Infinity Engineering Group LLC, cn=Nisit Sapparkhao, email=nisit@iegroup.net
Date: 2025.10.03 14:23:24 -05'00'
Adobe Acrobat DC -version: 2015.006.30527

DATE

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY NISIT SAPPARKHAO ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES

SHEET
C00.00

GENERAL NOTE

1. ALL CONSTRUCTION SHALL BE EXECUTED AS SHOWN ON THESE PLANS. ANY REVISIONS AND/OR DEVIATIONS MUST BE APPROVED BY THE ENGINEER OF RECORD AND MAY RESULT IN ADDITIONAL PERMITTING EFFORTS THROUGH THE RELATED PERMITTING AGENCY. THE CONTRACTOR SHALL ACKNOWLEDGE THAT REVISIONS AND/OR DEVIATIONS MAY RESULT IN ADDITIONAL PERMITTING REQUIREMENTS AND POSSIBLY AFFECT SCHEDULING OF WORK.

2. UNLESS OTHERWISE NOTED ON PLANS, OR WITHIN THE PROJECT SPECIFICATIONS, ALL MATERIALS AND CONSTRUCTION ARE TO BE IN ACCORDANCE WITH DESIGN AND CONSTRUCTION STANDARDS OF THE PERMITTING AGENCY HAVING JURISDICTION; THE LOCALLY ADOPTED BUILDING CODE; AND ALL APPLICABLE LOCAL AND STATE CODES AND ORDINANCES.

3. PERMITS MAY BE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR IS TO ACKNOWLEDGE AND SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR WORK IN THE PUBLIC RIGHT-OF-WAY.

4. THIS PARCEL OF LAND MAY BE SUBJECT TO ANY AND ALL RECORDED (AND POSSIBLY UNRECORDED) EASEMENTS, RESTRICTIONS, AND COVENANTS.

5. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES FOR VERIFICATION OF UTILITIES WITHIN THE LIMITS OF CONSTRUCTION. CALL AREA ONE CALL SYSTEM 48 HOURS PRIOR TO ANY EXCAVATION.

6. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IN A TIMELY MANNER.

7. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS AND BENCHMARKS FROM DISTURBANCE. SURVEY MONUMENTS DISTURBED BY CONSTRUCTION ARE TO BE REPLACED AND ADJUSTED VIA A LAND SURVEYOR REGISTERED IN THE STATE FOR WHICH THE PROJECT IS LOCATED.

8. THE CONTRACTOR SHALL COORDINATE WORK EFFORTS WITH THE OWNER TO MINIMIZE TRAFFIC INTERFERENCE AND OPERATIONS OF THE FACILITIES.

9. NO BLASTING OR BURNING IS ALLOWED ON THE PROJECT, UNLESS OTHERWISE DIRECTED OR NOTED BY THE ENGINEER.

10. IT IS NOT EXPECTED THAT HAZARDOUS MATERIALS WILL BE ENCOUNTERED. HOWEVER IF MATERIALS SUSPECTED OF CONTAINING HAZARDOUS MATERIALS ARE ENCOUNTERED, DO NOT DISTURB; IMMEDIATELY NOTIFY ENGINEER AND OWNER. HAZARDOUS MATERIALS WILL BE REMOVED BY OWNER UNDER A SEPARATE CONTRACT.

REGULATORY STANDARDS AND REQUIREMENTS

1. COMPLY WITH HAULING AND DISPOSAL REGULATIONS OF AUTHORITIES HAVING JURISDICTION.

2. COMPLY WITH ANSI A10.6, "SAFETY REQUIREMENTS FOR CONSTRUCTION AND DEMOLITION."

3. COMPLY WITH NFPA 241, "SAFEGUARDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS."

DEMOLITION AND CLEARING

1. DEMOLITION AND CLEARING OPERATIONS SHALL CONFORM TO APPLICABLE REGULATIONS RELATING TO ENVIRONMENTAL REQUIREMENTS DISPOSAL OF DEBRIS, BURNING OF DEBRIS ON SITE, AND USE OF HERBICIDES.

2. DEMOLITION WASTE SHALL BE DISPOSED OF IN A LEGAL MANNER. REMOVED DEMOLITION WASTE MATERIALS FROM PROJECT SITE AND DISPOSE OF WASTE IN AN EPA-APPROVED LANDFILL ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION. DO NOT BURY OR BURN DEMOLITION WASTE ON-SITE.

3. HISTORIC ITEMS, RELICS, ANTIQUES, AND SIMILAR OBJECTS, INCLUDING, BUT NOT LIMITED TO CORNERSTONES AND THEIR CONTENTS, COMMEMORATIVE PLAQUES AND TABLETS, AND OTHER ITEMS OF INTEREST OF VALUE TO OWNER THAT MAY BE UNCOVERED DURING DEMOLITION REMAIN THE PROPERTY OF THE OWNER.

4. ARRANGE DEMOLITION SCHEDULE SO AS NOT TO INTERFERE WITH OWNER'S ON-SITE OPERATIONS OR OPERATIONS OF ADJACENT OCCUPIED BUILDINGS.

5. CONDUCT BUILDING DEMOLITION AND DEBRIS REMOVAL OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKWAYS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, WALKWAYS, OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER AND AUTHORITIES HAVING JURISDICTION.

6. AUTHORITY FOR PERFORMING SITE CLEARING INDICATED ON PROPERTY ADJOINING OWNER'S PROPERTY MUST BE OBTAINED BY OWNER PRIOR TO COMMENCEMENT OF CLEARING. DO NOT PROCEED WITH WORK ON ADJOINING PROPERTY UNTIL DIRECTED BY ENGINEER.

7. PRIOR TO COMMENCEMENT OF DEMOLITION OPERATIONS:
   a. VERIFY THAT HAZARDOUS MATERIALS, IF PRESENT, HAVE BEEN REMEDIATED.
   b. REVIEW PROJECT RECORD DRAWINGS OF EXISTING BUILDING AND EXISTING SITE IMPROVEMENTS.
   c. INVENTORY AND RECORD THE CONDITION OF ITEMS TO BE REMOVED AND SALVAGED. TAKE DIGITAL PHOTOGRAPHS OR VIDEO OF PROJECT SITE AND SURROUNDING PROPERTIES, INCLUDING EXISTING ITEMS TO REMAIN DURING CONSTRUCTION OPERATIONS, RECORD CONDITIONS THAT MIGHT BE MISCONSTRUED AS DAMAGE CAUSED BY SALVAGE OPERATIONS.
   d. CLEAN, PACK, IDENTIFY, AND TRANSPORT SALVAGED ITEMS TO STORAGE AREA DESIGNATED BY OWNER.
   e. REMOVE REFRIGERANT FROM THE MECHANICAL EQUIPMENT ACCORDING TO 40 CFR 82 AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
   f. COORDINATE ANY ADDITIONAL REQUIREMENTS FOR DEMOLISHING OR RELOCATING SITE MECHANICAL AND ELECTRICAL ITEMS WITH OWNER AND OTHER AUTHORITIES HAVING JURISDICTION.
   g. ASSURE THAT ANY REQUIRED INITIAL EROSION AND SEDIMENT CONTROL MEASURES ARE INSTALLED AND IN WORKING ORDER.
   h. LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP-OFF EXISTING UTILITIES SERVING BUILDINGS AND STRUCTURES TO BE DEMOLISHED. CUT AND REMOVE PIPE OR CONDUIT A MINIMUM OF 24 INCHES BELOW GRADE. CAP, VALVE, PLUG AND SEAL REMAINING PORTION OF PIPE OR CONDUIT.
   i. DO NOT START DEMOLITION WORK UNTIL UTILITY DISCONNECTION AND SEALING HAVE BEEN COMPLETED AND VERIFIED IN WRITING.

8. PRIOR TO COMMENCEMENT OF SITE CLEARING OPERATIONS, VERIFY THE FOLLOWING:
   a. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AND IN WORKING ORDER.
   b. UTILITY LOCATOR SERVICE HAS DETERMINED AND FLAGGED THE LOCATION OF UNDERGROUND UTILITIES.
   c. EXISTING SITE IMPROVEMENTS AND UTILITIES TO REMAIN HAVE BEEN PROTECTED.
   d. BENCHMARKS AND SURVEY CONTROL POINTS HAVE BEEN PROTECTED FROM DISTURBANCE.
   e. TREES AND VEGETATION TO REMAIN (OR TO BE RELOCATED) HAVE BEEN LOCATED AND CLEARLY FLAGGED IN ACCORDANCE WITH TREE PROTECTION AND TRIMMING REQUIREMENTS.

9. COORDINATE UTILITY DEMOLITION AND ABANDONMENT WITH UTILITY COMPANY OR AUTHORITY HAVING JURISDICTION.

10. IN THE EVENT BUILDINGS IMMEDIATELY ADJACENT TO THE DEMOLITION AREA WILL BE OCCUPIED, CONDUCT SITE DEMOLITION SO OPERATIONS OF OCCUPIED BUILDINGS WILL NOT BE DISRUPTED. MAINTAIN ACCESS TO AND FROM EXISTING WALKWAYS, EXITS, AND OTHER FACILITIES USED BY OCCUPANTS OF ADJACENT BUILDINGS.

11. PROTECT EXISTING FACILITIES AND ADJACENT WALKWAYS, LOADING DOCKS, BUILDING ENTRIES, AND OTHER BUILDING FACILITIES DURING DEMOLITION OPERATIONS. MAINTAIN EXITS FROM EXISTING BUILDINGS.

12. ERECT TEMPORARY PROTECTION, SUCH AS WALKS, FENCES, RAILINGS, CANOPIES, AND COVERED PASSAGEWAYS, AS NECESSARY, AND AS REQUIRED BY AUTHORITIES HAVING JURISDICTION. REMOVE TEMPORARY BARRIERS AND PROTECTIONS WHERE HAZARDS NO LONGER EXIST. WHERE OPEN EXCAVATIONS OR OTHER HAZARDOUS CONDITIONS REMAIN, LEAVE TEMPORARY BARRIERS AND PROTECTIONS IN PLACE.

13. PROTECT EXISTING UTILITIES FROM DAMAGE DURING DEMOLITION OPERATIONS. MAINTAIN OPERATION OF UTILITY SERVICES TO REMAIN. PROVIDE AT LEAST 72 HOURS' NOTICE TO OCCUPANTS OF AFFECTED BUILDINGS IF SHUTDOWN OF SERVICE IS REQUIRED.

14. IF REMOVAL, RELOCATION, OR ABANDONMENT OF UTILITY SERVICES WILL AFFECT ADJACENT OCCUPIED BUILDINGS, MAINTAIN CONTINUITY OF SERVICE TO ADJACENT BUILDINGS BY PROVIDING TEMPORARY UTILITIES THAT BYPASS BUILDINGS AND STRUCTURES TO BE DEMOLISHED. TEMPORARY BYPASS SERVICES SHALL BE PROVIDED IN ACCORDANCE WITH UTILITY COMPANY OR AUTHORITIES HAVING JURISDICTION.

15. TEMPORARY SHORING: PROVIDE AND MAINTAIN INTERIOR AND EXTERIOR SHORING, BRACING, OR STRUCTURAL SUPPORT TO PRESERVE STABILITY AND PREVENT UNEXPECTED MOVEMENT OR COLLAPSE OF EXISTING IMPROVEMENTS BEING DEMOLISHED. ALL SHORING OPERATIONS SHALL BE DESIGNED BY A LICENSED PROFESSIONAL AND INSTALLED PER OSHA REQUIREMENTS.

16. DEMOLITION OF STRUCTURAL FRAMING MEMBERS SHALL PROCEED SYSTEMATICALLY, FROM HIGHER TO LOWER LEVEL. COMPLETE BUILDING DEMOLITION OPERATIONS ABOVE EACH FLOOR OR TIER BEFORE DISTURBING SUPPORTING MEMBERS ON THE NEXT LOWER LEVEL. REMOVE DEBRIS FROM ELEVATED PORTIONS OF THE BUILDING BY CHUTE, HOIST, OR OTHER DEVICE THAT WILL CONVEY DEBRIS TO GRADE LEVEL IN A CONTROLLED DESCENT.

17. CLEAN ADJACENT STRUCTURES AND IMPROVEMENTS OF DUST, DIRT, AND DEBRIS CAUSED BY BUILDING DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE BUILDING DEMOLITION OPERATIONS BEGAN.

18. CLEARING AND GRUBBING:
   a. REMOVE OBSTRUCTIONS, TREES, SHRUBS, GRASS, AND OTHER VEGETATION TO PERMIT INSTALLATION OF NEW CONSTRUCTION. DO NOT REMOVE TREES, SHRUBS, AND OTHER VEGETATION INDICATED TO REMAIN OR TO BE RELOCATED.
   b. CUT MINOR ROOTS AND BRANCHES OF TREES INDICATED TO REMAIN IN A CLEAN AND CAREFUL MANNER AND ONLY WHERE SUCH ROOTS AND BRANCHES OBSTRUCT INSTALLATION OF NEW CONSTRUCTION.
   c. CLEAR UNDERGROWTH AND DEADWOOD WITHOUT DISTURBING SUBSOIL.
   d. GRIND STUMPS AND REMOVE ROOTS, OBSTRUCTIONS, AND DEBRIS EXTENDING TO A DEPTH BELOW EXPOSED SUBGRADE AS FOLLOWS:
      - FOOTINGS, SLABS ON GRADE AND BOTTOM SLABS OF STRUCTURES: 36 INCHES.
      - ROADS AND PAVEMENT AREAS: 18 INCHES.
      - AREAS TO BE GRASSED OR LANDSCAPED: 8 INCHES.
      - AREAS TO BE FILLED: 12 INCHES.
   e. USE ONLY HAND METHODS FOR GRUBBING WITHIN TREE PROTECTION ZONES.
   f. CHIP REMOVED TREE BRANCHES AND DISPOSE OF OFF-SITE.
   g. UNLESS FURTHER EXCAVATION OF EARTHWORK IS INDICATED, FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY SOIL MATERIAL. PLACE FILL MATERIAL IN HORIZONTAL LAYERS NOT EXCEEDING A LOOSE DEPTH OF 8 INCHES, AND COMPACT EACH LAYER TO A DENSITY EQUAL TO ADJACENT ORIGINAL GROUND.

19. TOPSOIL STRIPPING:
   a. REMOVE SOD AND GRASS BEFORE STRIPPING TOPSOIL.
   b. STRIP TOPSOIL TO WHATEVER DEPTHS ARE ENCOUNTERED IN A MANNER TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER WASTE MATERIALS. REMOVE SUBSOIL AND NON-SOIL MATERIALS FROM TOPSOIL, INCLUDING TRASH, DEBRIS, WEEDS, ROOTS, AND OTHER WASTE MATERIALS.
   c. STOCKPILE TOPSOIL MATERIALS AWAY FROM EDGE OF EXCAVATIONS WITHOUT INTERMIXING WITH SUBSOIL. GRADE AND SHAPE STOCKPILES TO DRAIN SURFACE WATER. COVER TO PREVENT WINDBLOWN DUST. LIMIT HEIGHT OF TOPSOIL STOCKPILES TO 72 INCHES. DO NOT STOCKPILE TOPSOIL WITHIN TREE PROTECTION ZONES. STOCKPILE SURPLUS TOPSOIL TO ALLOW FOR RESPREADING DEEPER TOPSOIL.

20. SITE IMPROVEMENTS:
   a. REMOVE EXISTING ABOVE- AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO FACILITATE NEW CONSTRUCTION. REMOVE SLABS, PAVING, CURBS, GUTTERS, AND AGGREGATE BASE AS INDICATED.
   b. UNLESS EXISTING FULL-DEPTH JOINTS COINCIDE WITH LINE OF DEMOLITION, NEATLY SAW-CUT LENGTH OF EXISTING PAVEMENT TO REMAIN BEFORE REMOVING EXISTING PAVEMENT. SAWCUT ALL FACES VERTICALLY.
   c. PAINT CUT ENDS OF STEEL REINFORCEMENT IN CONCRETE TO REMAIN TO PREVENT CORROSION.

21. DISPOSAL:
   a. REMOVE SURPLUS SOIL MATERIAL, UNSUITABLE TOPSOIL, OBSTRUCTIONS, DEMOLISHED MATERIALS, AND WASTE MATERIALS, INCLUDING TRASH AND DEBRIS, AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY.
   b. REMOVE AND TRANSPORT DEBRIS AND RUBBISH IN A MANNER THAT WILL PREVENT SPILLAGE ON STREETS OR ADJACENT AREAS. CLEAN UP SPILLAGE FROM STREETS AND ADJACENT AREAS.
   c. COMPLY WITH FEDERAL, STATE AND LOCAL HAULING AND DISPOSAL REGULATIONS.
   d. SEPARATE RECYCLABLE MATERIALS PRODUCED DURING SITE CLEARING FROM OTHER NON-RECYCLABLE STORE OR STOCKPILE WITHOUT INTERMIXING WITH OTHER MATERIALS AND TRANSPORT THEM TO RECYCLING FACILITIES.

TREE PROTECTION AND TRIMMING

1. INSTALL TEMPORARY FENCING AROUND TREE PROTECTION ZONES TO PROTECT TREES AND VEGETATION DESIGNATED TO REMAIN FROM CONSTRUCTION DAMAGE. MAINTAIN TEMPORARY FENCING AROUND TREE PROTECTION ZONES. AND REMOVE WHEN CONSTRUCTION IS COMPLETE.

2. KEEP TREE PROTECTION ZONES FREE OF WEEDS AND TRASH.

3. DO NOT STORE CONSTRUCTION MATERIALS, DEBRIS, OR EXCAVATED MATERIAL INSIDE TREE PROTECTION ZONE; OR PERMIT VEHICLES OR FOOT TRAFFIC WITHIN TREE PROTECTION ZONE, OR ALLOW FIRES WITHIN TREE PROTECTION ZONE.

4. PROTECT TREE ROOT SYSTEMS FROM THE FOLLOWING:
   a. DAMAGE CAUSED BY RUNOFF OR SPILLAGE OF NOXIOUS MATERIALS WHILE MIXING, PLACING, OR STORING CONSTRUCTION MATERIALS;
   b. DAMAGE CAUSED BY PONDING, ERODING, OR EXCESSIVE WETTING FROM DEWATERING OPERATIONS.

5. UNLESS OTHERWISE INDICATED, DO NOT EXCAVATE WITHIN TREE PROTECTION ZONES. WHERE EXCAVATION FOR NEW CONSTRUCTION IS UNAVOIDABLE, HAND CLEAR AND EXCAVATE TO MINIMIZE DAMAGE TO ROOT SYSTEMS.

6. WHERE UTILITY TRENCHES ARE UNAVOIDABLE WITHIN TREE PROTECTION ZONES, TUNNEL UNDER OR AROUND ROOTS BY DRILLING, AUGER BORING, PIPE JACKING, OR DIGGING BY HAND. DO NOT CUT MAIN LATERAL ROOTS OR TAPROOTS.

7. PROMPTLY REPAIR TREES DAMAGED BY CONSTRUCTION OPERATIONS WITHIN 24 HOURS. TREAT DAMAGED TRUNKS, LIMBS, AND ROOTS ACCORDING TO ARBORIST'S WRITTEN INSTRUCTIONS.

8. TREE PRUNING: PRUNE TREES ACCORDING TO ANSI A300 (PART 1), 'TREE, SHRUB, AND OTHER WOODY PLANT MAINTENANCE - STANDARD PRACTICES (PRUNING)."

EROSION AND SEDIMENTATION CONTROL

1. PRIOR TO COMMENCEMENT OF ANY CLEARING AND EXCAVATION WITHIN A WORK AREA, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND IN WORKING ORDER.

2. PERFORM WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE AND FEDERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT.

3. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING EROSION AND SEDIMENT CONTROL FEATURES TO PREVENT AND CONTROL SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION AREAS AND ENTERING EXISTING STORMWATER FACILITIES AND SURFACE WATERS. ADDITIONAL MEASURES BEYOND THOSE SHOWN WITHIN THESE PLANS MAY BE NECESSARY DURING CONSTRUCTION, INCLUDING TEMPORARY VEGETATIVE MEASURES AND INSTALLATION OF OTHER SILT TRAPPING MEASURES.

4. THE CONTRACTOR IS REQUIRED TO ADJUST THE EROSION AND SEDIMENT CONTROLS AS NECESSARY AND AS SHOWN ON THE DRAWINGS: AND ADD ADDITIONAL CONTROL MEASURES AS REQUIRED TO INSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND SEDIMENT CONTROL REQUIREMENTS.

5. ALL BEST MANAGEMENT EROSION AND SEDIMENT CONTROL PRACTICES WILL BE INSPECTED BY THE SUPERINTENDENT, THE PERSON RESPONSIBLE FOR THE DAY TO DAY OPERATIONS; OR SOMEONE APPOINTED BY THE SUPERINTENDENT, AT LEAST EVERY OTHER WEEK AND FOLLOWING A STORM EVENT OF 0.5 INCHES OR GREATER.

6. ALL BEST MANAGEMENT CONTROL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT.

EARTHWORK

1. IN THE EVENT OF ANY UNFORESEEN CONDITIONS THAT ARE ENCOUNTERED AND NOT COVERED BY THESE NOTES DURING GRADING OPERATIONS, THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.

2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND RELATED OFF-SITE WORK SO AS TO ESTABLISH THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES SPECIFIED WITHIN THE PLANS.

3. ADEQUATE SHORING IS TO BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CAVING OF THE EXCAVATION. ALL SHORING AND ASSOCIATED TEMPORARY STRUCTURES SHALL BE DESIGNED BY A LICENSED PROFESSIONAL AND INSTALLED PURSUANT TO OSHA REQUIREMENTS.

SOIL MATERIALS:

1. UNSATISFACTORY SOILS CONSIST OF SOIL CLASSIFICATION GROUPS ML, OL, CH, MH, OH, AND PT, OR A COMBINATION OF THESE GROUPS. UNSATISFACTORY SOILS ALSO INCLUDE SATISFACTORY SOILS NOT MAINTAINED WITHIN 3 PERCENT OF OPTIMUM MOISTURE CONTENT AT TIME OF COMPACTION.

2. SATISFACTORY SOILS: ASTM D 2487 SOIL CLASSIFICATION GROUPS AS IDENTIFIED ON THE DRAWINGS, OR A COMBINATION OF THESE GROUPS; FREE OF ROCK OR GRAVEL LARGER THAN 3 INCHES IN ANY DIMENSION, DEBRIS WASTE, FROZEN MATERIALS, VEGETATION, AND OTHER DELETERIOUS MATERIAL.

SUBGRADE INSPECTION:

1. PROOF-ROLL SUBGRADE BELOW THE BUILDING SLABS AND PAVEMENTS WITH HEAVY PNEUMATIC-TIRED EQUIPMENT TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING. DO NOT PROOF-ROLL WET OR SATURATED SUBGRADES.
   a. COMPLETELY PROOF-ROLL SUBGRADE IN TWO DIRECTIONS, REPEATING PROOF ROLLING IN DIRECTION PERPENDICULAR TO FIRST DIRECTION. LIMIT VEHICLE SPEED TO 3 MPH,
   b. PROOF-ROLL WITH A LOADED 10-WHEEL, TANDEM-AXLE DUMP TRUCK WEIGHING NOT LESS THAN 15 TONS.
   c. EXCAVATE SOFT SPOTS, UNSATISFACTORY SOILS. AND AREAS OF EXCESSIVE PUMPING OR RUTTING, AS DETERMINED BY ENGINEER AND REPLACE WITH COMPACTED BACKFILL OR FILL AS DIRECTED.

2. RECONSTRUCT SUBGRADES DAMAGED BY FREEZING TEMPERATURES, FROST, RAIN, ACCUMULATED WATER, OR CONSTRUCTION ACTIVITIES AS DIRECTED BY ENGINEER, WITHOUT ADDITIONAL COMPENSATION.

BACKFILL:

1. THE CONTRACTOR SHALL PLACE AND COMPACT BACKFILL IN EXCAVATIONS PROMPTLY, BUT NOT BEFORE COMPLETING THE FOLLOWING:
   a. CONSTRUCTION BELOW FINISH GRADE INCLUDING, WHERE APPLICABLE, SUBDRAINAGE, DAMP PROOFING, WATERPROOFING, AND PERIMETER INSULATION.
   b. SURVEYING LOCATIONS OF UNDERGROUND UTILITIES FOR RECORD DRAWINGS.
   c. TESTING AND INSPECTING UNDERGROUND UTILITIES.
   d. REMOVING CONCRETE FORMWORK.
   e. REMOVING TRASH AND DEBRIS.
   f. REMOVING TEMPORARY SHORING AND BRACING, AND SHEETING.
   g. INSTALLING PERMANENT OR TEMPORARY HORIZONTAL BRACING ON HORIZONTALLY SUPPORTED WALLS.

COMPACTION OF SOIL BACKFILLS AND FILLS:

1. CONTRACTOR SHALL PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8-INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4-INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.

2. PLACE BACKFILL AND FILL SOIL MATERIALS EVENLY ON ALL SIDES OF STRUCTURES TO REQUIRED ELEVATIONS, AND UNIFORMLY ALONG THE FULL LENGTH OF EACH STRUCTURE.

3. COMPACT SOIL MATERIALS TO NOT LESS THAN THE PLAN SPECIFIED PERCENTAGES OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698 OR ASTM D 1557. (SEE CIVIL DETAILS FOR SUMMARY OF TRENCH BACKFILL AND BEDDING MATERIALS AND PLACEMENT SPECIFICATIONS).

GRADING:

1. GENERAL: UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE. FREE OF IRREGULAR SURFACE CHANGES. COMPLY WITH COMPACTION REQUIREMENTS AND GRADE TO DETAILED/INDICATED CROSS-SECTIONS. LINES, AND ELEVATIONS INDICATED IN PLANS. PROVIDE A SMOOTH TRANSITION BETWEEN ADJACENT EXISTING GRADES AND NEW GRADES. CUT OUT SOFT SPOTS, FILL LOW SPOTS, AND TRIM HIGH SPOTS TO COMPLY WITH REQUIRED SURFACE TOLERANCES.

2. SITE GRADING: SLOPE GRADES TO DIRECT WATER AWAY FROM BUILDINGS AND TO PREVENT PONDING. FINISH SUBGRADES TO REQUIRED ELEVATIONS WITHIN THE FOLLOWING TOLERANCES:
   a. LAWN OR UNPAVED AREAS: PLUS OR MINUS ONE (1) INCH.
   b. WALKS: PLUS OR MINUS ONE (1) INCH.
   c. PAVEMENTS: PLUS OR MINUS ONE-HALF (1/2) INCH.
   d. GRADING INSIDE BUILDING LINES: FINISH SUBGRADE TO A TOLERANCE OF ONE-HALF (1/2) INCH WHEN TESTED WITH A 10-FOOT STRAIGHTEDGE.

3. SUBBASE AND BASE COURSES:
   a. PLACE SUBBASE AND BASE COURSE ON SUBGRADES FREE OF MUD, FROST, SNOW, OR ICE.
   b. PLACE SUBBASE AND BASE COURSE 6 INCHES OR LESS IN COMPACTED THICKNESS IN A SINGLE LAYER.
   c. PLACE SUBBASE AND BASE COURSE EXCEEDING 6 INCHES IN COMPACTED THICKNESS IN LAYERS OF EQUAL THICKNESS, WITH NO COMPACTED LAYER MORE THAN 6 INCHES THICK OR LESS THAN 3 INCHES.

4. COMPACT SUBBASE AND BASE COURSE AT OPTIMUM MOISTURE CONTENT TO REQUIRED GRADES, LINES. CROSS SECTIONS. AND THICKNESS ACCORDING TO ASTM D 698 OR ASTM D 1557, AS INDICATED ON THE DRAWING DETAILS.

FIELD QUALITY CONTROL:

1. THE TESTING AGENCY WILL INSPECT AND TEST SUBGRADES AND EACH FILL OR BACKFILL LAYER. CONTRACTOR SHALL PROCEED WITH SUBSEQUENT EARTHWORK ONLY AFTER TEST RESULTS FOR PREVIOUSLY COMPLETED WORK COMPLY WITH REQUIREMENTS.

2. FOOTING SUBGRADE: AT FOOTING SUBGRADES, AT LEAST ONE TEST OF EACH SOIL STRATUM WILL BE PERFORMED TO VERIFY DESIGN BEARING CAPACITIES. SUBSEQUENT VERIFICATION AND APPROVAL OF OTHER FOOTING SUBGRADES MAY BE BASED ON A VISUAL COMPARISON OF SUBGRADE WITH TESTED SUBGRADE WHEN APPROVED BY ENGINEER.

3. THE TESTING AGENCY WILL TEST COMPACTION OF SOILS IN PLACE ACCORDING TO ASTM D 1556, ASTM D 2167, ASTM D 2922, AND ASTM D 2937, AS APPLICABLE. TESTS WILL BE PERFORMED AT THE FOLLOWING LOCATIONS AND FREQUENCIES:
   a. PAVED AND BUILDING SLAB AREAS: AT SUBGRADE AT EACH COMPACTED FILL AND BACKFILL LAYER, AT LEAST 1 TEST FOR EVERY 10,000 SQ. FT. OR LESS OF PAVED AREA OR BUILDING SLAB, BUT IN NO CASE FEWER THAN 3 TESTS.
   b. FOUNDATION WALL BACKFILL: AT EACH COMPACTED BACKFILL LAYER, AT LEAST 1 TEST FOR EACH 100 FEET OR LESS OF WALL LENGTH, BUT NO FEWER THAN 2 TESTS.
   c. TRENCH BACKFILL: AT EACH COMPACTED INITIAL AND FINAL BACKFILL LAYER, AT LEAST 1 TEST FOR EACH 150 FEET OR LESS OF TRENCH LENGTH, BUT NO FEWER THAN 2 TESTS.

5. IF THE TESTING AGENCY REPORTS THAT SUBGRADES, FILLS, OR BACKFILLS HAVE NOT ACHIEVED DEGREE OF COMPACTION SPECIFIED, SCARIFY AND MOISTEN OR AERATE, OR REMOVE AND REPLACE SOIL TO DEPTH REQUIRED; RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS OBTAINED.

6. ALL FIELD QUALITY CONTROL TESTS THAT FAIL TO MEET THE SPECIFIED COMPACTION DENSITY SHALL BE REPORTED TO THE ENGINEER.

GENERAL UTILITY NOTES

1. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES FOR VERIFICATION OF UTILITIES WITHIN THE LIMITS OF CONSTRUCTION. CALL THE AREA ONE CALL SYSTEM 48 HOURS PRIOR TO ANY EXCAVATION.

2. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.

3. THE CONTRACTOR SHALL COORDINATE WORK EFFORTS WITH THE OWNER TO MINIMIZE TRAFFIC INTERFERENCE AND OPERATIONS OF THE FACILITIES.

4. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEYING MONUMENTS AND BENCHMARKS FROM DISTURBANCE. SURVEY MONUMENTS DISTURBED BY CONSTRUCTION ARE TO BE REPLACED AND ADJUSTED VIA A LAND SURVEYOR REGISTERED IN THE STATE FOR WHICH THE PROJECT IS LOCATED.

5. EXISTING UTILITIES SHOWN HEREIN ARE BASED ON AVAILABLE RECORDS AND FIELD INVESTIGATIONS. THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES PRIOR TO EXCAVATION WITHIN WORK AREAS. THE ENGINEER SHALL BE NOTIFIED UPON DISCOVERY OF ANY DISCREPANCIES THAT WILL AFFECT INSTALLATION OF WORK OR DISCOVERY OF UNCHARTED UTILITIES WHICH MAY REQUIRE RELOCATION. NOTIFICATION SHALL BE DONE IN A TIMELY MANNER.

6. WHERE APPLICABLE, THE CONTRACTOR SHALL MAINTAIN ALL FENCING, SIGNS, DETOURS, FLAGMEN, SIGNALS, ETC., FOR ANY OPEN TRENCHES, HOLES OR PITS. ALL TRENCHES, HOLES OR PITS SHALL BE CLOSED OR PROTECTED BY BARRICADES AT THE END OF THE DAY.

7. PERMITS MAY BE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR IS TO ACKNOWLEDGE AND SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR WORK WITHIN PUBLIC RIGHT-OF-WAY.

8. THE CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS DURING CONSTRUCTION WHICH SHOW THE CONSTRUCTED CONDITIONS OF ALL WORK INSTALLED. SEE "AS-BUILT" REQUIREMENTS FOR ADDITIONAL INFORMATION.

9. ALL VALVE BOXES, METER BOXES, VAULTS, CLEANOUTS, HOLE COVERS, FIRE HYDRANTS AND OTHER APPURTENANCES THAT ARE TO REMAIN IN SERVICE WITHIN THE PROJECT AREA SHALL BE ADJUSTED TO CONFORM TO FINISHED GRADE.

10. ALL UNDERGROUND UTILITIES MUST BE IN PLACE, TESTED AND INSPECTED AS REQUIRED PRIOR TO BASE AND SURFACE CONSTRUCTION.

11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES TO DISCONNECT OR REMOVE THEIR FACILITIES PRIOR TO REMOVING OR DEMOLISHING ANY EXISTING STRUCTURES FROM THE SITE.

    ALL UTILITIES INCLUDING, BUT NOT NECESSARILY LIMITED TO, THE FOLLOWING SHOULD BE CONTACTED BY THE CONTRACTOR:

    1. GAS
    2. TELEPHONE
    3. CABLE
    4. POWER
    5. CITY/COUNTY WATER AND SEWER
    6. CITY/COUNTY/STATE TRAFFIC SIGNAL UTILITY (FIBER, HARDWIRE TRAFFIC SIGNAL INTERCONNECT)

13. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED THE ENGINEER ASSUMES NO RESPONSIBILITY FOR FROM THE BEST INFORMATION AVAILABLE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS ACCURACY. UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATIONS UTILITIES WITH THE OWNER OF THE UTILITY. THE CONTRACTOR SHALL EXERCISE OF THESE CAUTION WHEN CROSSING ANY UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLANS OR LOCATED BY THE UTILITY COMPANY. ALL UTILITIES WHICH INTERFACE WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED BY THE RESPECTIVE UTILITY COMPANIES AND THE CONTRACTOR SHALL COOPERATE WITH THE UTILITY COMPANIES DURING RELOCATION OPERATIONS. ANY DELAY OR INCONVENIENCE CAUSED TO THE CONTRACTOR BY THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED.

14. COLOR CODE FOR MARKING UNDERGROUND UTILITY LINES

    WHITE - PROPOSED EXCAVACTION. PINK - TEMPORARY SURVEY MARKINGS.
    RED - ELECTRIC POWER LINES, CABLES, CONDUIT AND LIGHTING CABLES.
    YELLOW - GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS.
    ORANGE - COMMUNICATION, ALARM OR SIGNAL LINES, CABLES OR CONDUIT.
    BLUE - POTABLE WATER. PURPLE - RECLAIMED WATER, IRRIGATION AND SLURRY LINES.
    GREEN - SEWERS AND DRAIN LINES.

WATER SYSTEM NOTES

1. A VERTICAL CLEARANCE OF 18 INCHES SHALL BE MAINTAINED BETWEEN SANITARY SEWERS AND WATER MAINS. IF CLEARANCE CANNOT BE ACHIEVED BY ADJUSTING WATER MAINS THE SANITARY SEWER SHALL BE CONSTRUCTED PER SANITARY NOTE No. 1 BELOW.

2. A HORIZONTAL SEPARATION OF 10 FEET SHALL BE MAINTAINED BETWEEN WATER MAINS AND SANITARY SEWER.

3. ALL WATER MAINS SHALL HAVE A MINIMUM OF 36 INCHES OF COVER.

4. ALL WATER SYSTEM WORK SHALL CONFORM WITH LOCAL REGULATORY STANDARDS AND SPECIFICATIONS.

5. CONFLICTS BETWEEN WATER AND STORM OR SANITARY SEWER TO BE RESOLVED BY ADJUSTING THE WATER LINES AS NECESSARY.

6. ALL BURIED DUCTILE IRON PIPE SHALL BE CLASS 53 IN ACCORDANCE WITH ANSI A 21.50 (AWWA C150) AND ANSI A 21.51 (AWWA C151) AND PIPE SHALL RECEIVE EXTERIOR BITUMINOUS COATING IN ACCORDANCE WITH ANSI A 21.6, A 21.8 OR A 21.51 AND SHALL BE MORTAR LINED, STANDARD THICKNESS, AND BITUMINOUS SEALED IN ACCORDANCE WITH ANSI A (AWWA C 104-71).

7. ALL BURIED FITTINGS LARGER THAN 2" SHALL BE DUCTILE IRON CLASS 53 IN ACCORDANCE WITH AWWA C-110 WITH A PRESSURE RATING OF 350 PSI. JOINTS SHALL BE MECHANICAL JOINTS IN ACCORDANCE WITH AWWA C-111. FITTINGS SHALL BE CEMENT MORTAR LINED AND COATED IN ACCORDANCE WITH AWWA C-104.

8. CONTRACTOR TO INSTALL TEMPORARY BLOW-OFFS AT THE END OF WATER SERVICE LATERALS TO ASSURE ADEQUATE FLUSHING AND DISINFECTION.

9. THRUST BLOCKING AND/OR RESTRAINED JOINTS SHALL BE PROVIDED AT ALL FITTINGS AND HYDRANTS IN ACCORDANCE WITH AWWA STANDARDS.

10. ALL PVC WATER MAINS 4" THROUGH 12" SHALL BE IN ACCORDANCE WITH AWWA C-900. PIPE SHALL BE CLASS 150 AND MEET THE REQUIREMENTS OF SDR 18 IN ACCORDANCE WITH ASTM D-2241, AND COLOR CODED BLUE.
11. ALL FITTINGS 3" AND SMALLER SHALL BE CLASS 160 PVC WITH SOLVENT WELDED SLEEVE TYPE JOINTS.

12. ALL WATER MAINS AND WATER SERVICES TO BE INSTALLED UNDER ROAD UNDERDRAIN SHALL MAINTAIN 18" SEPARATION.

13. MATERIALS AND CONSTRUCTION METHODS FOR WATER DISTRIBUTION SYSTEM SHALL BE IN ACCORDANCE WITH THE LOCAL REGULATORY AGENCY CODES, PLANS, AND SPECIFICATIONS FOR CONSTRUCTION, LATEST REVISION THEREOF AND SUPPLEMENTAL SPECIFICATIONS THERETO. APPROVAL AND CONSTRUCTION OF ALL POTABLE WATER SERVICE MAIN EXTENSIONS AND CONNECTIONS MUST BE COORDINATED THROUGH THE LOCAL REGULATORY AGENCY DEPARTMENT OF PUBLIC UTILITIES.

14. ALL COMPONENTS OF THE WATER SYSTEM, INCLUDING FITTINGS, HYDRANTS, CONNECTIONS, AND VALVES SHALL REMAIN UNCOVERED UNTIL PROPERLY PRESSURE TESTED AND ACCEPTED BY THE OWNER'S ENGINEER. PRESSURE TESTS TO BE IN ACCORDANCE WITH WATER DEPARTMENT AND AWWA SPECIFICATIONS. CONTRACTOR TO NOTIFY OWNER'S ENGINEER AND WATER DEPARTMENT INSPECTORS 48 HOURS IN ADVANCE OF PERFORMING TESTS.

15. CONTRACTOR TO PERFORM CHLORINATION AND BACTERIOLOGICAL SAMPLING REQUIRED TO OBTAIN CLEARANCE OF DOMESTIC WATER SYSTEM THROUGH LOCAL REGULATORY AGENCIES. COPIES OF ALL BACTERIOLOGICAL TESTS TO BE SUBMITTED TO OWNER'S ENGINEER.

SANITARY SEWER NOTES

1. A HORIZONTAL SEPARATION OF 10 FEET SHALL BE MAINTAINED BETWEEN WATER MAINS AND SANITARY SEWER.

2. ALL SANITARY SEWER MAINS & SERVICE LATERALS SHALL BE CONSTRUCTED OF POLYVINYL CHLORIDE PIPE, SDR 26 AND COLOR CODED GREEN.

3. ALL SANITARY SEWER WORK SHALL CONFORM WITH LOCAL REGULATORY STANDARDS AND SPECIFICATIONS.

4. PRIOR TO COMMENCING WORK WHICH REQUIRES CONNECTING NEW WORK TO EXISTING LINES OR APPURTENANCES, THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING CONNECTION POINT AND NOTIFY OWNER'S ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.

5. PVC PIPE AND FITTINGS SHALL CONFORM WITH A.S.T.M. SPECIFICATIONS DESIGNATION D-3034-77C, MA SDR 26. INSTALLATION OF SDR PIPE SHALL BE IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. SPECIFICATION DESIGNATION D2321. ALL SANITARY SEWER PIPELINES SHALL BE SOLID GREEN IN COLOR.

6. ALL PVC FORCE MAINS WITHIN PUBLIC R/W SHALL BE CLASS 200, SDR 18, WITH MECHANICAL JOINTS, AND HAVE A GREEN MAGNETIC TAPE A MINIMUM OF 3" WIDE, PLACED 24" BELOW THE PROPOSED GRADE.THE PRINT ON THE MAGNETIC TAPE SHOULD READ "FORCE MAIN".

7. ALL SANITARY SEWER GRAVITY MAINS OR SANITARY SEWER FORCE MAINS THAT REQUIRE D.I.P. ARE TO BE POLYLINED OR EPOXY LINED.

8. ALL SANITARY SEWER COVERS SHALL BE TRAFFIC RATED FOR H-20 LOADING.

9. SANITARY SEWERS SHALL HAVE A MINIMUM COVER OF THREE (3) FEET AND SHALL BE INSTALLED ACCOMPANIED BY A METAL TAPE SIMILAR TO "TERRATAPE" COLORED GREEN AND LAID ONE FOOT ABOVE THE PIPE.

10. ALL GRAVITY SEWER PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER. CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION.

11. THE CONTRACTOR SHALL PERFORM AN INFILTRATION/EXFILTRATION TEST ON ALL GRAVITY SEWERS IN ACCORDANCE WITH THE REGULATORY AGENCY HAVING JURISDICTION. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. COORDINATION AND NOTIFICATION OF ALL PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.

12. ALL FORCE MAINS SHALL BE SUBJECT TO A HYDROSTATIC PRESSURE TEST IN ACCORDANCE WITH THE REGULATORY AGENCY HAVING JURISDICTION. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL COORDINATION AND NOTIFICATION OF ALL PARTIES IS CONTRACTOR'S RESPONSIBILITY.

GEOTECHNICAL NOTE

CONTRACTOR TO REVIEW AND FOLLOW CONSTRUCTION TECHNIQUES OUTLINED IN THE SITE GEOTECHNICAL REPORT.

STORM DRAINAGE

1. UNLESS OTHERWISE SHOWN ON PLANS, ALL PVC PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING:
   a. PVC SEWER PIPE AND FITTINGS, NPS 15-INCH AND SMALLER ASTM D 3034, SDR 35, WITH BELL-AND-SPIOT ENDS FOR GASKETED JOINTS USING ASTM F 477, ELASTOMERIC SEALS.
   b. PVC SEWER PIPE AND FITTINGS, NPS 18-INCH AND LARGER: ASTM F 679, T-1 WALL THICKNESS, WITH BELL-AND-SPIGOT ENDS FOR GASKETED JOINTS USING ASTM F 477, ELASTOMERIC SEALS.
   c. PIPE JOINTS SHALL BE WATER-TIGHT.

2. UNLESS OTHERWISE SHOWN ON THE PLANS, ALL REINFORCED CONCRETE PIPE (RCP) AND FITTINGS SHALL CONFORM TO THE FOLLOWING:
   a. ASTM C 76, WITH BELL-AND-SPIGOT OR GROOVE AND TONGUE ENDS AND GASKETED JOINTS WITH ASTM C 443 RUBBER GASKETS.
   b. RCP PIPE SHALL BE CLASS III, WALL B.
   c. WHEN LOCATED IN TRAFFIC AREAS WITH LESS THAN 2 FEET OF COVER, RCP PIPE SHALL BE CLASS IV, WALL B.
   d. WHEN LOCATED UNDER AIRCRAFT RAMPS OR RAILROAD OPERATIONS, RCP PIPE SHALL BE CLASS V, WALL B WITH O-RING JOINTS.
   e. PIPE CLASS SHALL BE CLEARLY "STAMPED" ON EACH SEGMENT OF RCP PIPE DELIVERED TO THE PROJECT.
   f. PIPE JOINTS SHALL BE WATER-TIGHT.

3. CONTRACTOR SHALL HANDLE AND STORE PIPE, FITTINGS, GASKETS, AND RELATED APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS.

4. CONTRACTOR SHALL HANDLE MANHOLES. DROP INLETS, CURB INLETS, PIPE END COMPONENTS AND RELATED APPURTENANCES ACCORDING TO MANUFACTURER'S WRITTEN RIGGING INSTRUCTIONS.

5. PVC PLASTIC PIPE AND FITTINGS SHALL NOT BE STORED IN DIRECT SUNLIGHT.

6. ALL PIPE. FITTINGS, GASKETS, AND SEALS SHALL BE PROTECTED FROM DIRT AND DAMAGE.

7. ALL STORM SEWER LINES SHALL BE TELEVISED AND THE VIDEO REPORTS SUBMITTED TO THE ENGINEER FOR REVIEW.
   a. VIDEO REPORTS ARE TO BE SUBMITTED ON CD-ROM OR DVD COMPACT DISKS.
   b. ALL LINES MUST BE FLUSHED AND CLEANED WITH POTABLE WATER PRIOR TO TELEVISING.
   c. FOR SUBMERGED SYSTEMS, POND WATER LEVELS SHALL BE LOWERED (PUMPED DOWN) BELOW THE LOWEST PIPE ENTRANCE INVERT.
   d. VIDEO REPORTS WILL BE USED TO VIEW THE CONDITION OF THE STORM SEWER PIPE PRIOR TO ACCEPTANCE. WORKMANSHIP AND CLEANLINESS OF THE INSTALLATION WILL BE CHECKED.

8. AS-BUILT SURVEY: THE CONTRACTOR SHALL VERIFY STORM SEWER IMPROVEMENTS ALIGNMENT BY PROVIDING AN "AS-BUILT" SURVEY OF CONSTRUCTED CONDITIONS FROM A LICENSED SURVEYOR REGISTERED IN THE STATE OF PROJECT LOCATION. THE "AS-BUILT" SURVEY SHALL INCLUDE VERTICAL AND HORIZONTAL INFORMATION PERTAINING TO THE INSTALLATION OF THE STORM SEWER SYSTEM PIPING AND STRUCTURES. DATUM ELEVATION AND BENCHMARK LOCATIONS SHALL BE INDICATED. INFORMATION TO BE INCLUDED IS AS FOLLOWS:
   a. PIPE TYPE, SIZE. AND INVERT ELEVATIONS.
   b. MANHOLE, DROP INLET, CURB INLET, YARD DRAIN, AND POND CONTROL STRUCTURE LOCATIONS WITH ELEVATIONS OF BOTTOM, RIM OR GRATE ELEVATION SHOWN.
   c. POND CONTROL STRUCTURES: SHOW INFORMATION ON ALL FLOW CONTROL APPURTENANCES AND OUTLET PIPING.

ASPHALT PAVING

1. THE CONTRACTOR IS TO PROVIDE BARRICADES, SIGNS, FLASHERS, AND FLAG PERSONNEL AS NECESSARY TO INSURE THE SAFETY OF WORKERS AND VISITORS. ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION IS TO CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES": LATEST EDITION.

2. ALL ASPHALT PAVING MATERIALS, WORKMANSHIP, AND INSTALLATION REQUIREMENTS SHALL COMPLY WITH THE STANDARD SPECIFICATIONS OF THE STATE DEPARTMENT OF TRANSPORTATION (D.O.T.) FOR THE STATE IN WHICH THE WORK OCCURS WITH SOME EXCLUSIONS. THE DOT PAYMENT PROCEDURES AND SAFETY REQUIREMENTS SHALL GENERALLY NOT APPLY.
   a. COARSE AGGREGATE. FINE AGGREGATE AND MINERAL FILLERS: IN ACCORDANCE WITH D.O.T. MATERIAL STANDARDS AND ASSOCIATED CONSTRUCTION SPECIFICATIONS.
   b. ASPHALT BINDER, ASPHALT CEMENT, PRIME COAT, AND TACK COAT: IN ACCORDANCE WITH D.O.T. MATERIAL STANDARDS AND ASSOCIATED CONSTRUCTION SPECIFICATIONS.
   c. JOINT SEALANT: ASTM 0 6690 OR AASHTO M 324. TYPE II OR III, HOT APPLIED, SINGLE COMPONENT, POLYMER-MODIFIED BITUMINOUS SEALANT.
   d. PAVEMENT-MARKING PAINT: IN ACCORDANCE WITH D.O.T. MATERIAL STANDARDS AND ASSOCIATED CONSTRUCTION SPECIFICATIONS. COLORS AS INDICATED.

3. DO NOT APPLY ASPHALT MATERIALS IF SUBGRADE IS FROZEN, WET, OR EXCESSIVELY DAMP; OR IF RAIN IS IMMINENT OR EXPECTED BEFORE TIME REQUIRED FOR ADEQUATE CURE. APPLY ONLY AT D.O.T. RECOMMENDED SURFACE TEMPERATURE.

4. INSTALLATION TOLERANCES:
   a. PAVEMENT THICKNESS: THE AVERAGE OF THE MEASURED THICKNESS OF THE PAVEMENT LAYERS SHALL MEET OR EXCEED THE REQUIRED THICKNESS FOR THOSE LAYERS, AND THE MINIMUM THICKNESS IN ANY ONE AREA SHALL NOT BE LESS THAN 0.25 INCHES BELOW THE REQUIRED THICKNESS.
   b. PAVEMENT SURFACE SMOOTHNESS: COMPACT EACH COURSE TO PRODUCE A SURFACE SMOOTHNESS WITHIN THE FOLLOWING TOLERANCES AS DETERMINED BY USING A 10-FOOT STRAIGHTEDGE APPLIED TRANSVERSELY OR LONGITUDINALLY TO PAVED AREAS:
      - BASE COURSE: 1/4 -INCH
      - SURFACE COURSE: 1/4 -INCH
   c. CROWNED SURFACES: TEST WITH CROWNED TEMPLATE CENTERED AND AT RIGHT ANGLE TO CROWN. MAXIMUM ALLOWABLE VARIANCE FROM TEMPLATE IS 1/4 -INCH.

5. PAVEMENT MARKINGS SHALL BE MADE WITH NON-THERMOPLASTIC ACRYLIC MARKING PAINT MEETING THE DOT MATERIAL REQUIREMENTS. ALLOW PAVING TO AGE FOR 30 DAYS BEFORE STARTING PAVEMENT MARKING. PROCEED WITH PAVEMENT MARKING ONLY ON CLEAN, DRY SURFACES. SWEEP AND CLEAN SURFACE TO ELIMINATE LOOSE MATERIAL AND DUST. APPLY PAINT WITH MECHANICAL EQUIPMENT TO PRODUCE PAVEMENT MARKINGS, OF DIMENSIONS AND COLORS INDICATED, WITH UNIFORM, STRAIGHT EDGES. APPLY AT MANUFACTURER'S RECOMMENDED RATES TO PROVIDE A MINIMUM WET FILM THICKNESS OF 15 MILS AND ONLY AT MANUFACTURER'S RECOMMENDED AMBIENT AND SURFACE TEMPERATURES.

AS-BUILT SURVEY

1. UPON COMPLETION OF THE WORK, THE SITEWORK SUB-CONTRACTOR SHALL RETAIN THE SERVICES OF A PROFESSIONAL LAND SURVEYOR TO PERFORM AN "AS-BUILT" SURVEY. THE "AS-BUILT" SURVEY SHALL INCLUDE LOCATION AND ELEVATION DATA FOR ALL CONSTRUCTED IMPROVEMENTS. SPECIFIC INFORMATION INCLUDED IN THE SURVEY SHALL BE AS FOLLOWS:
   a. ALL PAVEMENT SURFACES INCLUDING CURBS, WALKS, RAMPS, PADS, ETC.
   b. ALL SANITARY SEWER
   c. ALL STORM SEWER
   d. ALL STORM DETENTION, RETENTION, AND WATER QUALITY POND GRADING
   e. EMBANKMENT AND LAWN AREA GRADING
   f. BUILDING FINISH FLOOR ELEVATION
   g. BUILDING CORNER LOCATIONS
   h. OUT BUILDINGS, IF APPLICABLE
   i. WATER, GAS, BURIED ELECTRIC AND BURIED TELECOM LINES
   j. LIGHT POLE LOCATIONS
   k. STRIPING AND PAVEMENT MARKINGS
   l. TREE LOCATIONS WITH SIZE AND SPECIES

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ISSUE	BY	DATE	DESCRIPTION
	DR	05/15/25	ISSUE FOR PERMIT
△1	DR	10/03/25	RAI ROUND 1

PROJECT INFORMATION

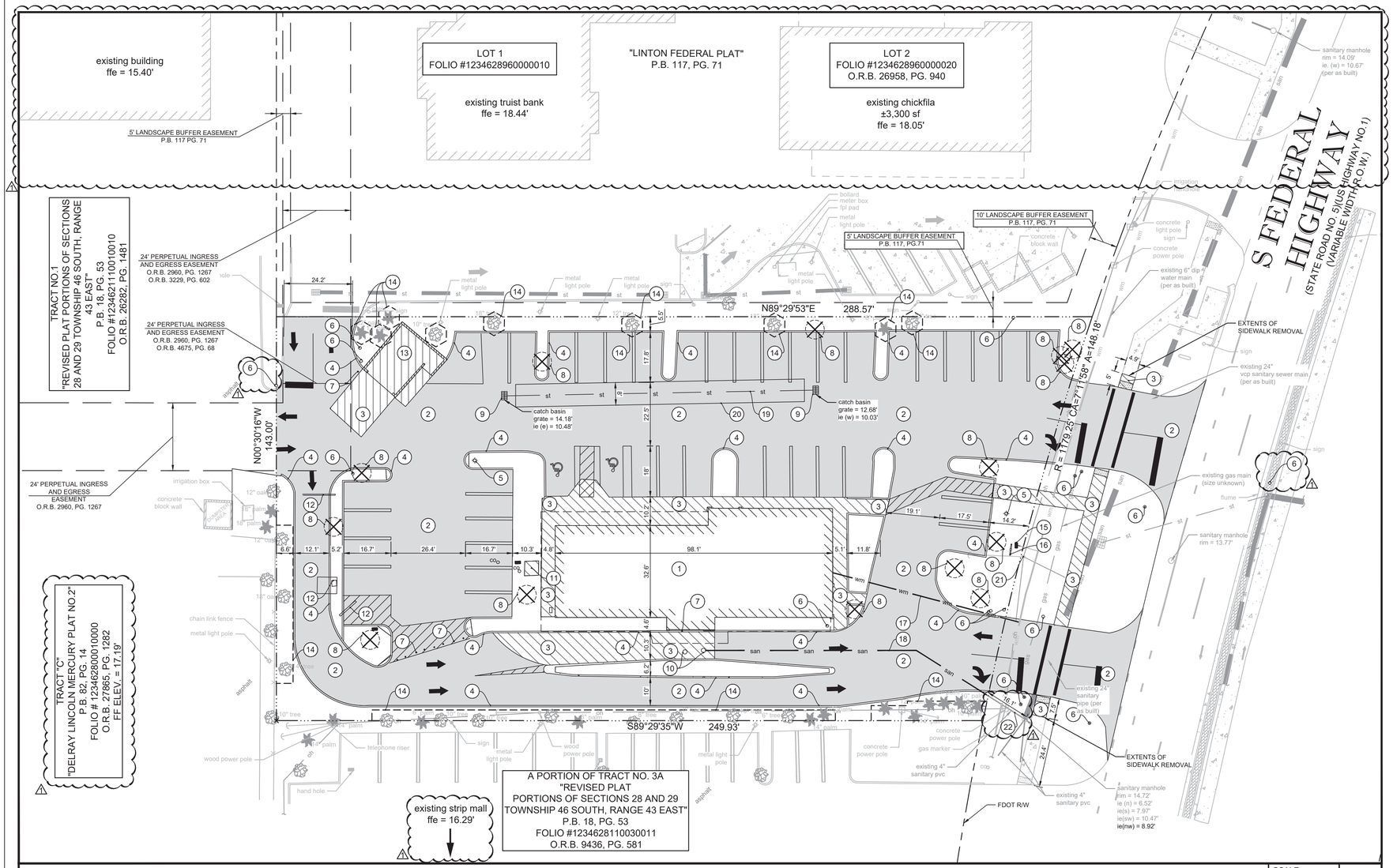
JOB #	240661
DATE:	12/31/24
DRAWN BY:	IEG
CHECKED BY:	SJ

SHEET TITLE

CIVIL SPECIFICATIONS

SHEET NUMBER

C00.01



PLAN VIEW | SCALE: AS NOTED | -

LEGEND

- PROPERTY LINE
- EXISTING CONCRETE TO REMAIN
- EXISTING TO REMAIN
- EXISTING ASPHALT/CONCRETE TO BE REMOVED
- EXISTING SIDEWALK/CONCRETE TO BE REMOVED
- EXISTING LANDSCAPE TO BE REMOVED
- EXISTING TO BE REMOVED
- EXISTING TREE TO BE REMOVED
- TREE BARRICADE
- TREE BARRICADE
- gas — EXISTING GAS
- san — EXISTING SANITARY
- tel — EXISTING TELEPHONE
- ue — EXISTING UNDERGROUND ELECTRIC
- oh — EXISTING OVERHEAD LINE
- wm — EXISTING WATER

KEYED NOTES

1	EXISTING BUILDING TO BE DEMOLISHED.
2	EXISTING ASPHALT PAVEMENT AND BASE TO BE SAWCUT AND REMOVED.
3	EXISTING CONCRETE SIDEWALK/PAVEMENT TO BE REMOVED.
4	EXISTING CURB TO BE REMOVED.
5	EXISTING LIGHT POLE TO BE REMOVED (TYPICAL OF 2).
6	EXISTING SIGN TO BE REMOVED (TYPICAL OF 14).
7	EXISTING BOLLARD TO BE REMOVED (TYPICAL OF 10).
8	EXISTING TREE TO BE REMOVED (TYPICAL OF 13).
9	EXISTING STORM STRUCTURE TO BE REMOVED
10	EXISTING GREASE TRAP TO BE CRACKED, FILLED WITH SAND AND ABANDONED IN PLACE.
11	EXISTING FPL PAD AND TRANSFORMER TO BE REMOVED.
12	EXISTING DRIVE THRU EQUIPMENT TO BE REMOVED (CLEARANCE POST, SPEAKER, CANOPY AND SIGN).
13	EXISTING DUMPSTER TO BE REMOVED (GATES, WALLS, CONCRETE AND BOLLARDS).
14	NEW TREE BARRICADE.

KEYED NOTES

15	EXISTING WATER METER TO BE REMOVED.
16	EXISTING BACKFLOW PREVENTER TO BE REMOVED.
17	EXISTING FIRE SERVICE LINE TO BE REMOVED AND CAPPED AT THE MAIN.
18	EXISTING SANITARY LINE TO BE REMOVED.
19	EXISTING STORM PIPE TO BE REMOVED.
20	EXISTING SEEPAGE PIT TO BE REMOVED.
21	EXISTING POWERPOLE TO REMAIN.
22	EXISTING SANITARY PIPE TO REMAIN. POINT OF CONNECTION ON EXISTING LATERAL SHALL BE 5' FROM MANHOLE TO 5' OUTSIDE OF MANHOLE. CONTRACTOR TO CONNECT TO EXISTING LATERAL.

DEMOLITION NOTES

1. CONTRACTOR TO ESTABLISH AND PROPERLY FLAG PROPERTY LINES PRIOR TO DEMOLITION.
2. ALL ABOVE AND BELOW GROUND HARDWARE, EQUIPMENT AND MATERIALS TO BE DISPOSED OF IN ACCORDANCE WITH LOCAL MUNICIPALITY REQUIREMENTS.
3. UTILITIES TO BE PLUGGED SHALL BE FILLED WITH A MINIMUM 1.0 CUBIC FT. OF NON SHRINK GROUT OR AS OTHERWISE APPROVED BY ENGINEER.
4. TREES SHOWN TO REMAIN SHALL MAINTAIN PROTECTIVE BARRIERS DURING DEMOLITION. THESE BARRIERS SHALL BE IN ACCORDANCE WITH CURRENT LOCAL MUNICIPALITY STANDARDS.
5. THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF EXISTING UTILITIES WITH THE OWNER OF SAID UTILITY. THIS SHALL INCLUDE BUT NOT BE LIMITED TO WATER, SEWER, GAS, CABLE TV, POWER AND TELEPHONE.
6. THE CONTRACTOR SHALL UTILIZE SUITABLE EROSION CONTROL DURING DEMOLITION, SEE "EROSION & SEDIMENT CONTROL DETAILS".
7. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO DEMOLITION AND WILL BE RESPONSIBLE FOR THE DAMAGE OF ANY ON-SITE OR OFF-SITE UTILITIES THAT ARE NOT A PART OF THIS PROJECT OR ARE NOT IDENTIFIED TO BE REMOVED.
8. ALL DISTURBED AREA WITH THE RIGHT OF WAY WILL BE RESTORED TO ORIGINAL OR BETTER CONDITION BY GRADING AND SODDING THE AREA DISTURBED.
9. ANY DAMAGE TO ANY ROADWAY PAVEMENT LIKE UTILITY CUTS OR EDGE REPAIR SHALL BE MILLED AND RESURFACED FOR 50' EACH WAY PAST THE LIMIT OF THE DAMAGE PER CITY OF DELRAY BEACH STANDARD DETAIL GU1.0.
10. ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER OR DRAINAGE EASEMENTS SHALL CONFORM TO THE CITY OF DELRAY BEACH STANDARD DETAILS; LD 1.0 & LD 2.0.

TREE NOTE:

CONTRACTOR TO INSTALL TREE BARRICADES SURROUNDING ALL TREES TO REMAIN. IRRIGATE ALL LANDSCAPING AS NEEDED.

Know what's **below.** Call **before you dig.** 811

SCALE

0 ' 20' 40 ' 60 '

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550 S. Caldwell Street
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FIFTH THIRD

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FL Cert. of Auth. No 27889

IEG JOB NO. 15-386.00

SEAL — NISIT SAPPARKHAO, P.E.
FL REG. NO. 64085

DATE

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ISSUE	BY	DATE	DESCRIPTION
	DR	05/15/25	ISSUE FOR PERMIT
1	DR	10/03/25	RAI ROUND 1

PROJECT INFORMATION

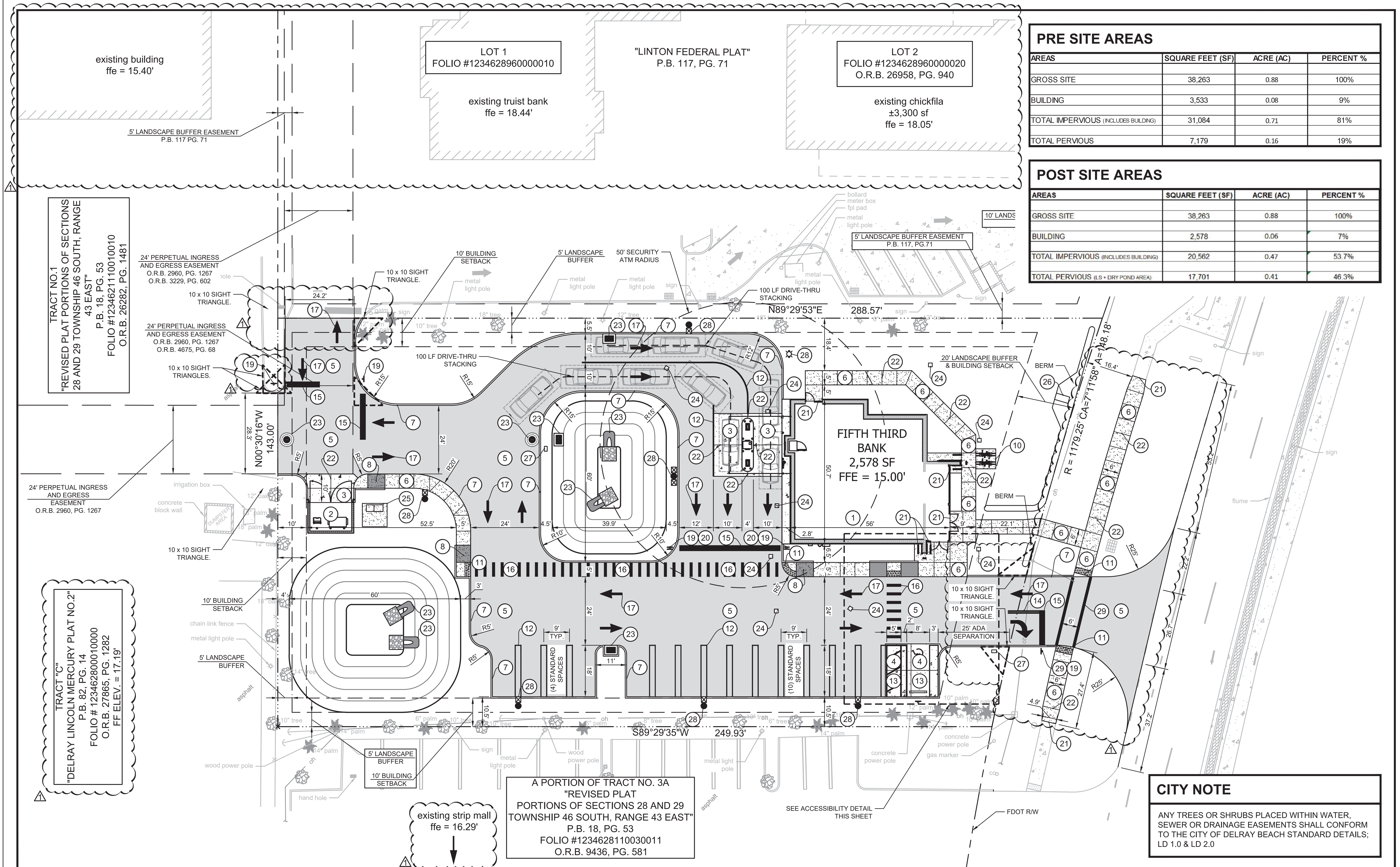
JOB #	240661
DATE:	12/31/24
DRAWN BY:	IEG
CHECKED BY:	SJ

SHEET TITLE

DEMOLITION PLAN

SHEET NUMBER

C01.01



PLAN VIEW

SCALE	AS NOTED

PRE SITE AREAS

AREAS	SQUARE FEET (SF)	ACRE (AC)	PERCENT %
GROSS SITE	38,263	0.88	100%
BUILDING	3,533	0.08	9%
TOTAL IMPERVIOUS (INCLUDES BUILDING)	31,084	0.71	81%
TOTAL PERVIOUS	7,179	0.16	19%

POST SITE AREAS

AREAS	SQUARE FEET (SF)	ACRE (AC)	PERCENT %
GROSS SITE	38,263	0.88	100%
BUILDING	2,578	0.06	7%
TOTAL IMPERVIOUS (INCLUDES BUILDING)	20,562	0.47	53.7%
TOTAL PERVIOUS (LS + DRY POND AREA)	17,701	0.41	46.3%

LEGEND

- PROPERTY LINE
- EXISTING TO REMAIN
- EXISTING CONCRETE TO REMAIN
- PROPOSED CONCRETE LESS THAN 6"
- PROPOSED CONCRETE 6" OR GREATER
- NEW ASPHALT PAVEMENT
- SETBACK/BUFFER
- PROPOSED CURB

SITE DATA

SITE ADDRESS: 1820 SOUTH FEDERAL HIGHWAY, DELRAY BEACH, FLORIDA 33483

PIN: 12-43-46-28-11-002-0020

BUILDING AREA: 2,578 SF BUILDING

ZONING: PC - PLANNED COMMERCIAL

SITE AREA: 38,263 SF / .88 AC

EXISTING USE: 2200 - RESTURANT, DRIVE IN

FUTURE USE: BANK WITH DRIVE THRU

OPEN SPACE OF SITE: 17,701 SF / 0.41 AC

PARKING DATA

BANK PARKING REQUIRED: 4.5 SPACE PER 1,000 SF OF G.F.A.
2,578 SF x (4.5 / 1000 SF) = 11 SPACES

TOTAL PARKING PROVIDED: STANDARD PARKING = 14 SPACES
ACCESSIBLE PARKING = 1 SPACE
TOTAL PARKING PROVIDED = 15 SPACES

PARKING SPACE SIZE: 9' x 18' MINIMUM

DRIVE-THRU STACKING: 100' CAR STACKING REQUIRED

BICYCLE PARKING

REQUIRED: 2 OR 1 PER 10,000 SF BUILDING

PROVIDED: 4 SPACES

LOADING ZONE: *NOTE-FINANCIAL INSTITUTIONS DO NOT USE LOADING ZONES FOR SECURITY PURPOSES DELIVERY TRUCK WILL PARK DIRECTLY IN FRONT OF MAIN ENTRANCE.

BUILDING COVERAGE: 4,000 SF MINIMUM / 2,578 SF PROPOSED

BUILDING HEIGHT: 48 FT MAXIMUM / 18'-8" PROPOSED

IMPERVIOUS ARE REQUIREMENTS:	MAXIMUM	PROVIDED
IMPERVIOUS AREA (75% MAX)	75%	54%

LANDSCAPE REQUIREMENTS:	REQUIRED	PROVIDED
LANDSCAPE BUFFER - FRONT (S. FEDERAL HGWAY)	= 20'	20'
LANDSCAPE BUFFER - SIDE (NORTH)	= 5'	5'
LANDSCAPE BUFFER - SIDE (SOUTH)	= 5'	10'
LANDSCAPE BUFFER - REAR (WEST)	= 5'	5'

BUILDING REQUIREMENTS:	REQUIRED	PROVIDED
BUILDING SETBACK - FRONT (S. FEDERAL HGWAY)	= 20'	24.5'
BUILDING SETBACK - SIDE (NORTH)	= 10'	25.3'
BUILDING SETBACK - SIDE (SOUTH)	= 10'	60.8'
BUILDING SETBACK - REAR (WEST)	= 10'	10.5'*
MAXIMUM BUILDING HEIGHT	= 48'	18'-8"
*TRASH ENCLOSURE		

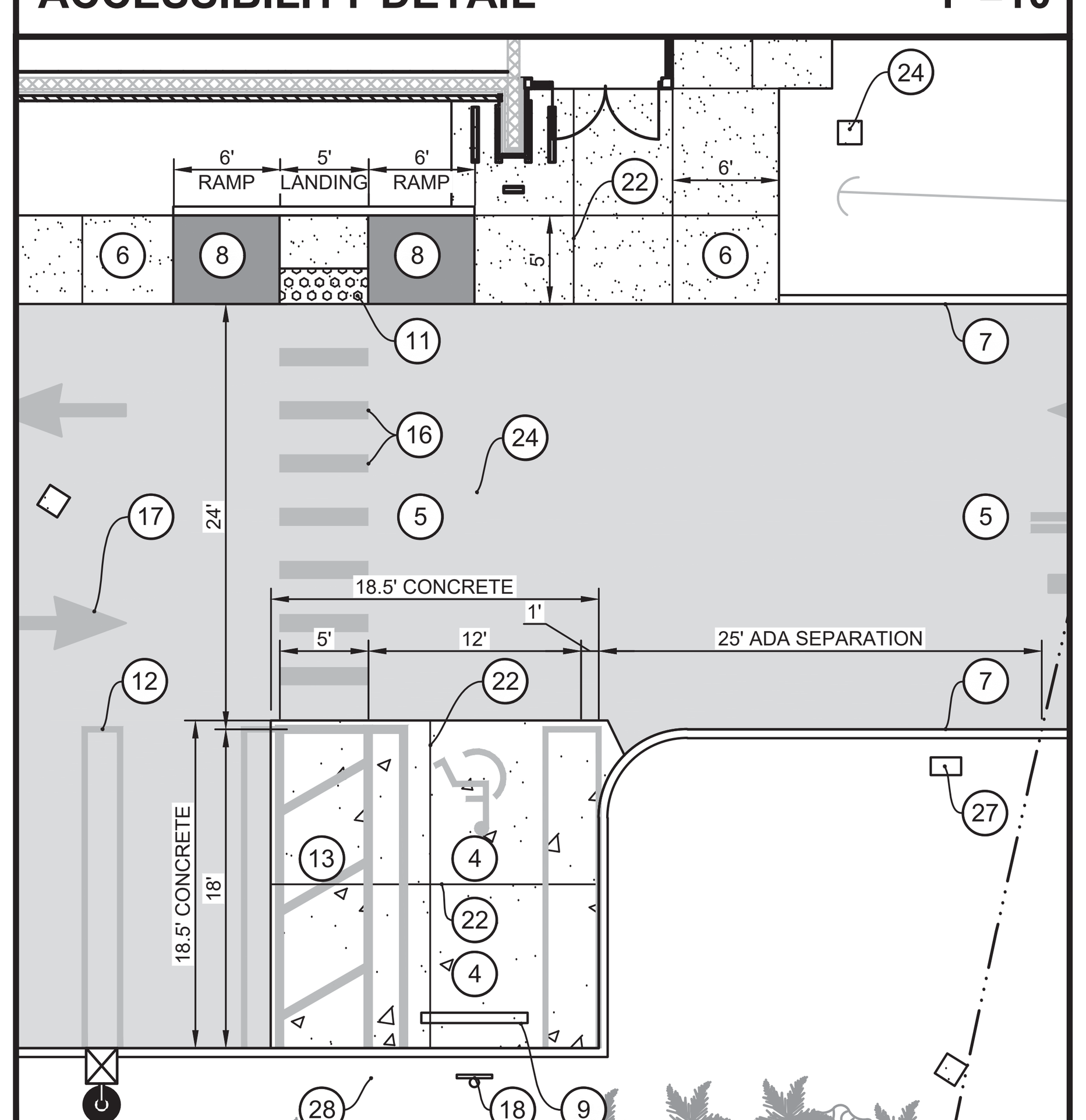
FLOOD ZONE:

FLOOD ZONE: X; BASE FLOOD ELEVATION: NONE; PANEL #12099C0979G; COMMUNITY #125102; MAP DATE: 12/20/24.

CITY NOTE

ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER OR DRAINAGE EASEMENTS SHALL CONFORM TO THE CITY OF DELRAY BEACH STANDARD DETAILS; LD 1.0 & LD 2.0

ACCESSIBILITY DETAIL 1"=10'



KEYED NOTES

1	NEW BUILDING (SEE ARCHITECTURAL DRAWINGS)
2	NEW DOUBLE TRASH ENCLOSURE (SEE ARCHITECTURAL DRAWING)
3	NEW 6" CONCRETE PAVEMENT. SEE DETAILS, SHEET C05.01.
4	NEW 6" BLACKTINT CONCRETE PAVEMENT. SEE DETAILS, SHEET C05.01.
5	NEW ASPHALT PAVEMENT. SEE DETAILS, SHEET C05.01.
6	NEW 4" CONCRETE SIDEWALK, SEE PLAN FOR WIDTH. SEE DETAILS, SHEET 05.01.
7	NEW 6" X 18" VERTICAL CURB, 3-FOOT CURB TRANSITION AT PATHWAYS. SEE DETAILS, SHEET C05.01.
8	NEW ADA RAMP. SEE DETAILS, SHEET C05.01.
9	NEW WHEEL STOP. SEE DETAILS, SHEET C05.01.
10	NEW FIFTH THIRD STANDARD BICYCLE RACK. SEE DETAILS, SHEET C05.01.
11	NEW DETECTABLE WARNING. SEE DETAILS, SHEET C05.01.
12	NEW 4-INCH "WHITE" PARKING/AISLE STRIPE (CONTINUOUS PAINT) PER CITY STANDARD RT 16.00. SEE DETAILS, SHEET C05.04.
13	NEW ACCESSIBLE PARKING SPACE AND ACCESS AISLE PER CITY DETAIL RT 16.0. SEE DETAILS, SHEET C05.04
14	NEW 6-INCH "DOUBLE YELLOW" LANE STRIPE (THERMOPLASTIC).

KEYED NOTES

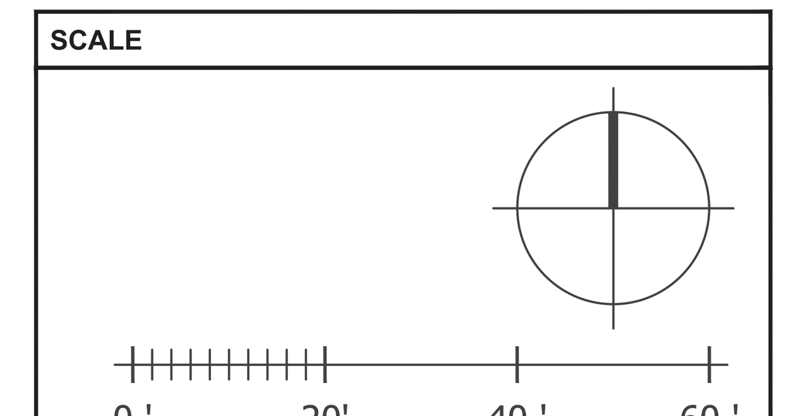
15	NEW 24-INCH "WHITE" STOP BAR (CONTINUOUS PAINT ON PROPERTY, THERMOPLASTIC IN ROW).
16	5-FOOT WIDE CROSSWALK, 12-INCH "WHITE" STRIPE @ 36" O.C. (CONTINUOUS PAINT).
17	NEW "WHITE" DIRECTIONAL ARROW (CONTINUOUS PAINT ON PROPERTY, THERMOPLASTIC IN ROW). SEE DETAILS, SHEET C05.01.
18	NEW ACCESSIBLE PARKING SIGN. SEE DETAILS, SHEET C05.02. (PROVIDED AND INSTALLED BY FIFTH THIRD SIGN VENDOR).
19	NEW 30" R1-1 "STOP" SIGN (TYPICAL OF 4). SEE DETAILS, SHEET C05.02. (PROVIDED AND INSTALLED BY FIFTH THIRD SIGN VENDOR).
20	NEW 30" R5-1 "DO NOT ENTER" SIGN (TYPICAL OF 2). SEE DETAILS, SHEET C05.02. (PROVIDED AND INSTALLED BY FIFTH THIRD SIGN VENDOR).
21	NEW EXPANSION JOINT. SEE DETAILS, SHEET C05.01.
22	NEW CONTROL JOINT. SEE DETAILS, SHEET C05.01.
23	STORMWATER STRUCTURE. SEE STORM PIPING PLAN, SHEET C03.02.
24	NEW CONCRETE CLEANOUT PAD.
25	NEW CONCRETE TRANSFORMER PAD.
26	NEW FIFTH THIRD BANK ID SIGN (BY OTHERS).
27	NEW FIFTH THIRD BANK DIRECTIONAL SIGN (BY OTHERS).

KEYED NOTES

28	NEW AREA LIGHT POLE. SEE ELECTRICAL SITE PLANS.
29	NEW 30" R3-5 "RIGHT TURN ONLY" SIGN (TYPICAL OF 1). SEE DETAILS, SHEET C05.02. (PROVIDED AND INSTALLED BY FIFTH THIRD SIGN VENDOR).
29	NEW 12" WHITE THERMOPLASTIC STRIPING.

Know what's **below**. **Call** before you dig.

SCALE



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1	DR	10/03/25	RAI ROUND 1

PROJECT INFORMATION

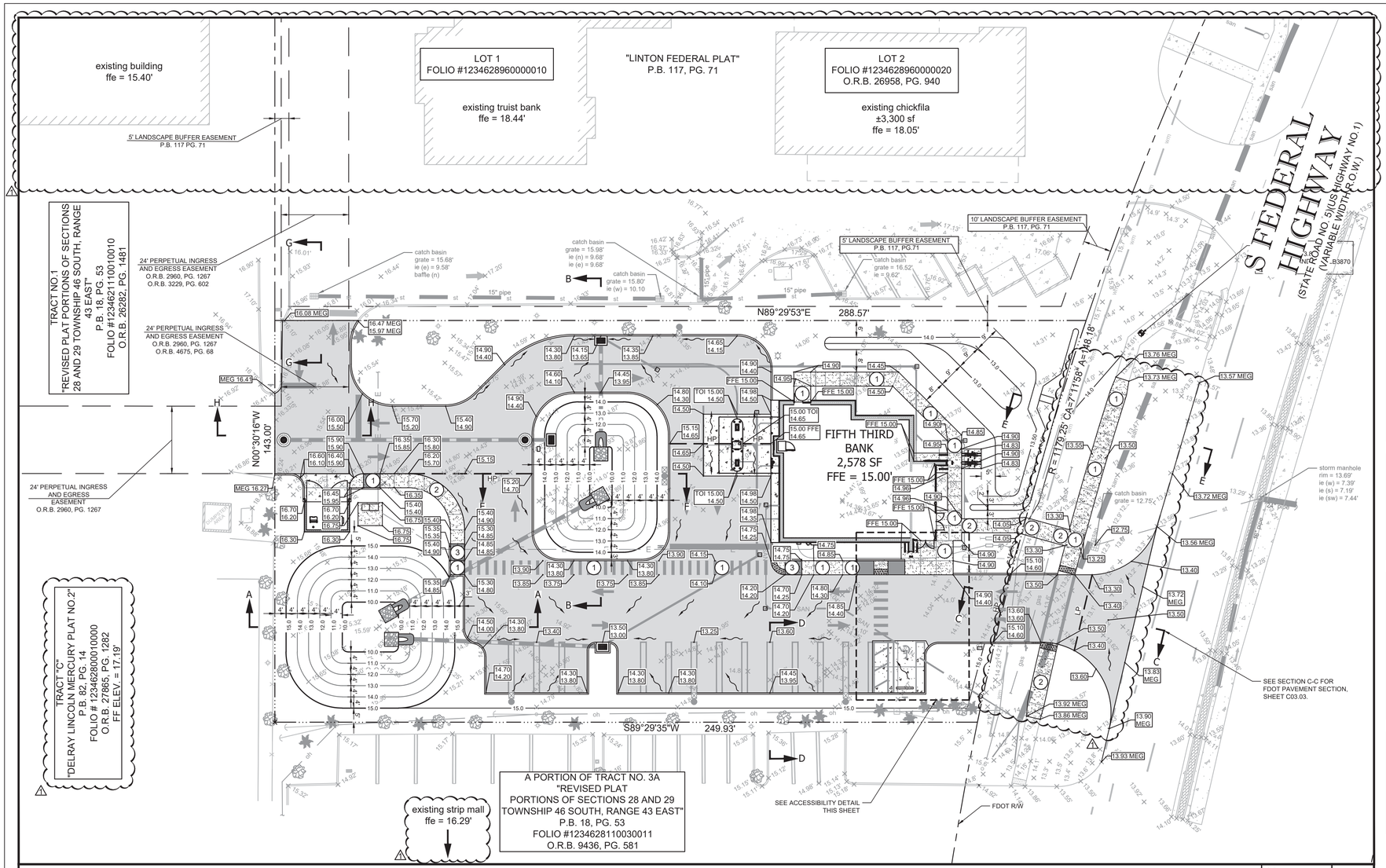
JOB #	240661
DATE:	12/31/24
DRAWN BY:	IEG
CHECKED BY:	SJ

SHEET TITLE

SITE PLAN

SHEET NUMBER

C02.01



PLAN VIEW | SCALE: AS NOTED | -

LEGEND

EL	ELEVATION
TYP	TYPICAL
CO	CLEANOUT
IE	INVERT ELEVATION
SE	SUMP ELEVATION
×49.58	EXISTING ELEVATION
0.00	PROPOSED PAVEMENT ELEVATION
0.00 / 0.00	TOP OF SIDEWALK/CURB / EDGE OF PAVEMENT
	DITCH BOTTOM INLET
	CURB INLET
FFE	FINISH FLOOR ELEVATION
RCP	REINFORCED CONCRETE PIPE
HP	HIGH POINT
MEG	MATCH EXISTING GRADE
TOI	TOP OF ISLAND
DS	BUILDING DOWN SPOUT
	12" OR GREATER STORMWATER PIPE
	LESS THAN 12" STORMWATER PIPE
	PROPOSED SURFACE STORMWATER FLOW
	PROPOSED SWALE STORMWATER FLOW
-29-	EXISTING CONTOUR
29	PROPOSED CONTOUR

KEYED NOTES:

1	SURFACE SLOPES NOT TO EXCEED 1:48 IN ALL DIRECTIONS.
2	SURFACE SLOPES NOT TO EXCEED 1:48 CROSS SLOPES AND 1:20 RUNNING.
3	SURFACE SLOPES NOT TO EXCEED 1:48 CROSS SLOPES AND 1:12 RUNNING.

CONTROL BENCHMARKS

ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988.
PALM BEACH COUNTY BENCHMARK TOTAL VICTORY ELEVATION: 18.968 FEET.

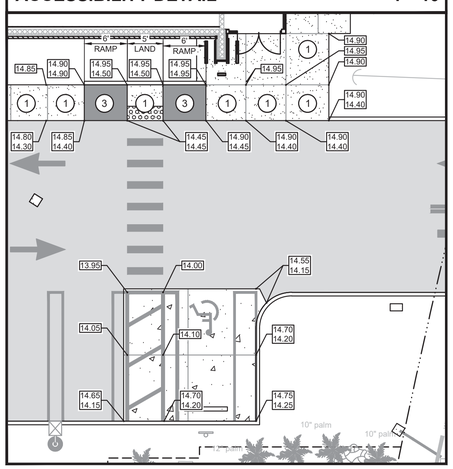
BENCHMARK
ELEVATION = 13.87'
FOUND NAIL & DISK LB3870 TP110

NOTE:
CONTRACTOR TO ESTABLISH CONTROL BENCHMARKS BEYOND LIMITS OF DEMOLITION PRIOR TO CONSTRUCTION.

EROSION CONTROL MEASURE NOTE

REQUIRED EROSION CONTROL MEASURES SHALL BE INSTALLED AS NEEDED AND MUST REMAIN INTACT THROUGHOUT CONSTRUCTION. FAILURE TO INSTALL OR PROPERLY MAINTAIN THESE BARRICADES WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS, AND INITIATION OF CIVIL PENALTY PROCEDURES.

ACCESSIBILITY DETAIL 1"=10'



ACCESSIBILITY NOTES

1. THE DRAWINGS ARE DESIGNED TO MEET ACCESSIBILITY STANDARDS AT MINIMUM. LOCAL AND STATE REQUIREMENTS OR CODES MAY HAVE ADDITIONAL STANDARDS.
2. ACCESSIBLE PARKING SPACES, SIGNAGE, LOGOS, WHEEL STOPS AND ACCESSIBLE AISLES TO MEET ALL OF THE 2010 ADA STANDARDS REQUIREMENTS - PROVIDE SPACES IN SIZE, QUANTITY AND LOCATIONS REQUIRED BY THE ADA STANDARDS AND APPLICABLE CODES AS DETERMINED BY LOCAL JURISDICTION. PROVIDE A MAXIMUM SLOPE IN EITHER DIRECTION OF 1:48 (1:64 RECOMMENDED).
3. ACCESSIBLE PARKING SIGNAGE ON POST. BOTTOM OF SIGNAGE TO BE MINIMUM 60" ABOVE GRADE. VERIFY ALL REQUIREMENTS WITH ACCESSIBILITY REQUIREMENTS AND LOCAL CODE.
4. CONCRETE WHEEL STOP. ALL ACCESSIBLE SPACES- LOCATE FIXED WHEEL STOP SO AS NOT TO REDUCE THE WIDTH OF THE ADJOINING ACCESSIBLE ROUTE.
5. ACCESSIBLE ROUTE TO PUBLIC RIGHT OF WAY (1 REQUIRED). MAXIMUM RUNNING SLOPE OF 1:20 AND MAXIMUM CROSS SLOPE OF 1:48 (1:64 RECOMMENDED). ALL PAVED SURFACES, CURB RAMPS AND TRANSITIONS ALONG PATH TO MEET ACCESSIBILITY REQUIREMENTS.
6. ACCESSIBLE PATH/WALKWAY TO BE 5'-0" MINIMUM, RUNNING SLOPE 1:20 MAXIMUM, CROSS SLOPE 1:48 MAXIMUM, SLOPE AWAY FROM BUILDING - BROOM FINISH CONCRETE.
7. CURB RAMP TO MEET ALL ACCESSIBILITY REQUIREMENTS, MAXIMUM SLOPE OF RUN 1:12 (1:14 RECOMMENDED), MAXIMUM CRISS SLOPE 1:48 (1:64 RECOMMENDED). REFER TO SITE DETAILS SHEET FOR ADDITIONAL INFORMATION. PROVIDE 36" LONG MINIMUM LANDING AT TOP AND 60; MINIMUM LANDING AT BOTTOM OF RAMP WITH MAXIMUM SLOPE IN EITHER DIRECTION OF LANDING TO BE 1:48 (1:64 RECOMMENDED)
8. SURFACE CONDITIONS AT ACCESSIBLE WALKWAYS AND ACCESSIBLE AREAS (PAVERS SYSTEMS AND/OR CONCRETE SURFACES) SHALL NOT INCLUDE GAPS GREATER THAT 1/2" OR VERTICAL CHANGES AT JOINTS OR BETWEEN UNITS GREATER THAN 1/4" - UNLESS THE OVERALL LEVEL CHANGE DOES NOT EXCEED 1/2" AND THE LEVEL CHANGE IS BEVELED AT 1:2.
9. IT WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ENSURE THAT THE HANDICAP PARKING SPACES, ACCESSIBLE ROUTES, AND SIDEWALK/CROSSWALKS ARE CONSTRUCTED TO MEET ADA REQUIREMENTS.
10. ANY REQUIREMENTS LISTED ABOVE THAT CAN NOT BE MET SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY. ANYTHING NOT BUILT TO THE ABOVE STANDARDS WILL REQUIRE REMOVAL AND REPLACEMENT OF THE NON COMPLIANT AREAS AT THE GENERAL CONTRACTORS COST.

PAVING AND GRADING GENERAL NOTES

1. SEE GENERAL NOTES SHEET FOR EROSION AND SILTATION CONTROL ALONG WITH GENERAL NOTES.
2. SEE SITE PLAN SHEET FOR SITE DATA.
3. SEE SURVEY FOR TEMPORARY BENCH MARK (TBM) LOCATIONS.
4. THE CONTRACTOR SHALL MEET ALL REQUIREMENTS FOR LOCAL MUNICIPALITY AND THE DEPARTMENT OF TRANSPORTATION WITH REGARD TO IMPROVEMENTS WITHIN THEIR RESPECTIVE RIGHTS-OF-WAY.
5. ALL DISTURBED AREAS WITHIN RIGHT-OF-WAY TO BE RETURNED TO MATCH EXISTING CONDITION.
6. ALL CLEANOUT TOP ELEVATION SHALL MATCH FINISH GRADE ELEVATIONS.
7. CONTRACTOR SHALL INSTALL EROSION CONTROL SILT FENCE AROUND THE PERIMETER OF THE SITE AND MUST MAINTAIN THE SILT FENCE IN GOOD REPAIR UNTIL ALL CONSTRUCTION IS COMPLETE AND THE AREA IS STABILIZED.
8. THE CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO ANY CONSTRUCTION IF ANY PROBLEMS OR DISCREPANCIES EXIST.

811 Know what's below. Call before you dig.

SCALE
0 ' 20' 40 ' 60 '

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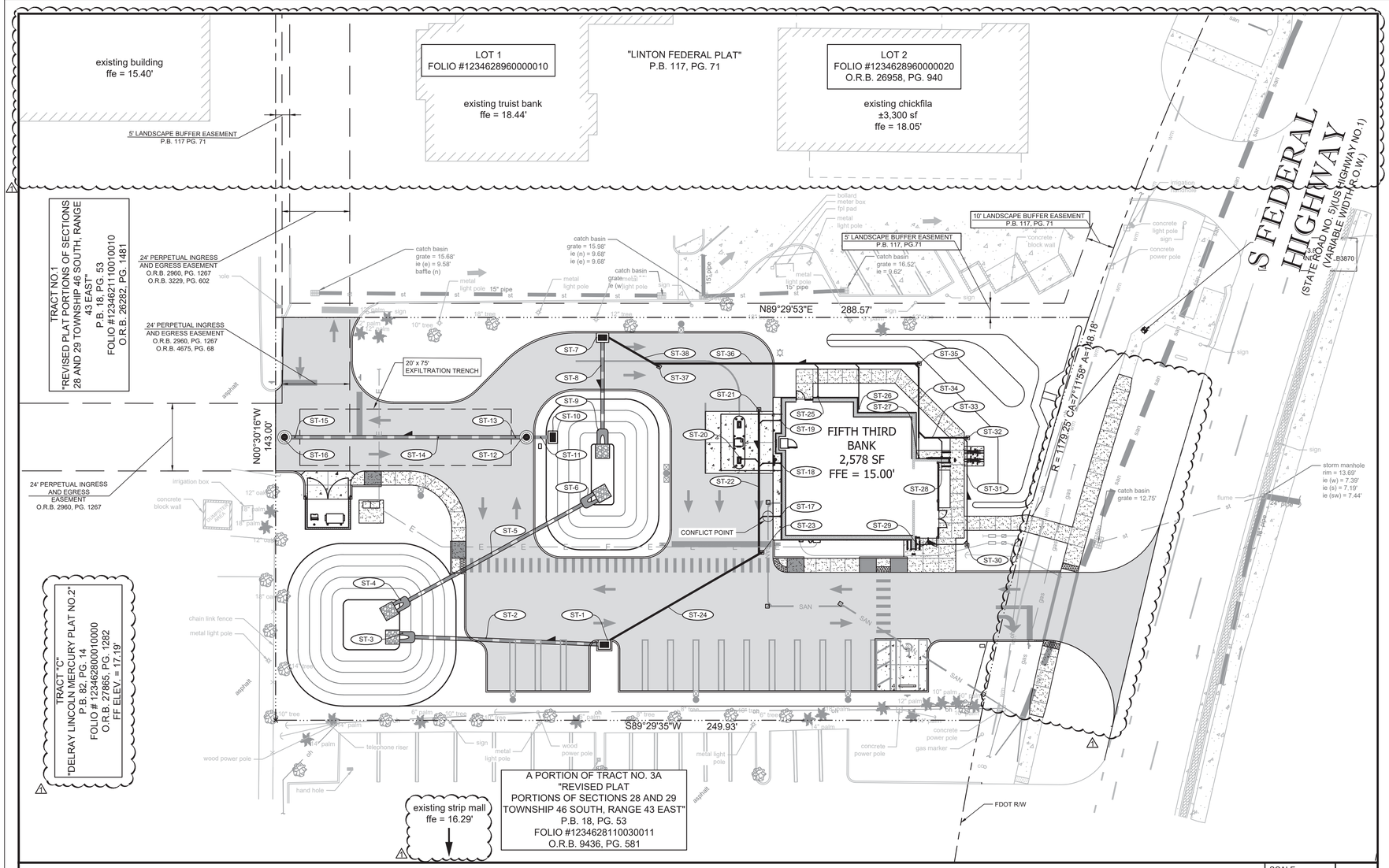
PROJECT INFORMATION	
JOB #	240661
DATE:	12/31/24
DRAWN BY:	IEG
CHECKED BY:	SJ

SHEET TITLE
GRADING PLAN

SHEET NUMBER
C03.01

FIFTH THIRD BANK
DELRAY BEACH
1820 SOUTH FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA 33483



PLAN VIEW | SCALE: AS NOTED | -

LEGEND

EL	ELEVATION
TYP	TYPICAL
CO	CLEANOUT
IE	INVERT ELEVATION
SE	SUMP ELEVATION
×49.58	EXISTING ELEVATION
	DITCH BOTTOM INLET
	CURB INLET
FFE	FINISH FLOOR ELEVATION
RCP	REINFORCED CONCRETE PIPE
ST-23	STORM SEWER STRUCTURE NUMBER
DS	BUILDING DOWN SPOUT
	12" OR GREATER STORMWATER PIPE
	LESS THAN 12" STORMWATER PIPE
	DIRECTION OF PIPE FLOW
29	EXISTING CONTOUR
29	PROPOSED CONTOUR

CONTROL BENCHMARKS

ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988.
PALM BEACH COUNTY BENCHMARK TOTAL VICTORY ELEVATION: 18.968 FEET.

BENCHMARK
ELEVATION = 13.87'
FOUND NAIL & DISK LB3870 TP110

NOTE:
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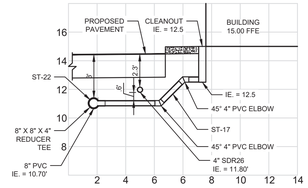
CONFLICT POINT — SCALE:1"=5'



STORM STRUCTURE/PIPING DATA

ST-1
TYPE "C" INLET
CITY OF DELRAY BEACH PUBLIC WORKS DEPARTMENT DETAIL D9.0.
SEE DETAILS SHEET C05.03.
GRATE = 13.00'
IE (W) = 10.20'
IE (NE) = 10.20'

ST-2
70 LF OF 15" HDPE
@ 0.28% SLOPE

ST-3
MITERED END SECTION
FDOT DETAIL 430-021
SEE DETAILS, PAGE C05.06.
IE = 10.0'

ST-4
MITERED END SECTION
FDOT DETAIL 430-021
SEE DETAILS, PAGE C05.06.
IE = 10.0'

ST-5
80 LF OF 15" HDPE
@ 0.00% SLOPE

ST-6
MITERED END SECTION
FDOT DETAIL 430-021
SEE DETAILS, PAGE C05.06.
IE = 10.0'

ST-7
TYPE "C" INLET
CITY OF DELRAY BEACH PUBLIC WORKS DEPARTMENT DETAIL D9.0.
SEE DETAILS SHEET C05.03.
GRATE = 13.65'
IE (S) = 10.40' (15" HDPE)
IE (E) = 10.40' (8" PVC)

ST-8
38 LF OF 15" HDPE
@ 1.06% SLOPE

ST-9
MITERED END SECTION
FDOT DETAIL 430-021
SEE DETAILS, PAGE C05.06.
IE = 10.0'

ST-10
OUTFALL CONTROL STRUCTURE
RIM = 12.75'
IE(W) = 10.30'

ST-11
6 LF OF 15" HDPE
@ 1.67% SLOPE

ST-12
TYPE J JUNCTION BOX
FDOT STANDARD DETAIL 425-010
SEE DETAILS, PAGE C05.04.
RIM = 14.50'
IE(E) = 10.20'
IE(W) = 10.20'

ST-13
3 LF OF 15" HDPE
@ 0.00% SLOPE

ST-14
75 LF OF 15" PERFORATED PIPE
@ 0.00% SLOPE
WITHIN A 70' X 25' EXFILTRATION TRENCH

ST-15
3 LF OF 15" HDPE
@ 0.00% SLOPE

ST-16
TYPE J JUNCTION BOX
FDOT STANDARD DETAIL 425-010
SEE DETAILS, PAGE C05.04.
RIM = 16.35'
IE. = 10.20'

ST-17
BUILDING DOWNSPOUT AND CLEANOUT
TOP TO BE SET AT GRADE
(SEE CONFLICT POINT DETAIL FOR MORE INFORMATION ON HOW TO CONSTRUCT THIS DOWNSPOUT)
8 LF OF 4" PVC @ 1.00% MIN. SLOPE
IE = 12.50'

ST-18
BUILDING DOWNSPOUT AND CLEANOUT
TOP TO BE SET AT GRADE
8 LF OF 4" PVC @ 1.00% MIN. SLOPE
IE = 12.50'

ST-19
BUILDING DOWNSPOUT AND CLEANOUT
TOP TO BE SET AT GRADE
8 LF OF 4" PVC @ 1.00% MIN. SLOPE
IE = 12.50'

ST-20
BUILDING DOWNSPOUT AND CLEANOUT
TOP TO BE SET AT GRADE
7 LF OF 4" PVC @ 1.00% MIN. SLOPE
IE = 12.50'

ST-21
CONSTRUCT CLEANOUT
TOP TO BE SET AT GRADE
IE = 11.90'

ST-22
52 LF OF 8" PVC
@ 3.91% SLOPE

ST-23
CONSTRUCT CLEANOUT
TOP TO BE SET AT GRADE
IE = 10.35'

ST-24
63 LF OF 8" PVC
@ 0.25% SLOPE

ST-25
BUILDING DOWNSPOUT AND CLEANOUT
TOP TO BE SET AT GRADE
13 LF OF 3" PVC @ 1.00% MIN. SLOPE
IE = 12.50'

ST-26
BUILDING DOWNSPOUT AND CLEANOUT
TOP TO BE SET AT GRADE
17 LF OF 3" PVC @ 1.00% MIN. SLOPE
IE = 12.50'

ST-27
BUILDING DOWNSPOUT AND CLEANOUT
TOP TO BE SET AT GRADE
7 LF OF 3" PVC @ 1.00% MIN. SLOPE
IE = 12.50'

ST-28
BUILDING DOWNSPOUT AND CLEANOUT
TOP TO BE SET AT GRADE
7 LF OF 3" PVC @ 1.00% MIN. SLOPE
IE = 12.50'

ST-29
BUILDING DOWNSPOUT AND CLEANOUT
TOP TO BE SET AT GRADE
19 LF OF 3" PVC @ 1.00% MIN. SLOPE
IE = 12.50'

ST-30
CONSTRUCT CLEANOUT
TOP TO BE SET AT GRADE
IE = 12.30'

ST-31
39 LF OF 3" PVC
@ 1.01% SLOPE

ST-32
CONSTRUCT CLEANOUT
TOP TO BE SET AT GRADE
IE = 11.90'

ST-33
19 LF OF 6" PVC
@ 1.01% SLOPE

ST-34
27 LF OF 6" PVC
@ 1.01% SLOPE

ST-35
CONSTRUCT CLEANOUT
TOP TO BE SET AT GRADE
IE = 11.45'

ST-36
95 LF OF 8" PVC
@ 1.01% SLOPE

ST-37
CONSTRUCT CLEANOUT
TOP TO BE SET AT GRADE
IE = 10.50'

ST-38
21 LF OF 8" PVC
@ 0.49% SLOPE

PAVING AND GRADING GENERAL NOTES

1. SEE GENERAL NOTES SHEET FOR EROSION AND SILTATION CONTROL ALONG WITH GENERAL NOTES.
2. SEE SITE PLAN SHEET FOR SITE DATA.
3. SEE SURVEY FOR TEMPORARY BENCH MARK (TBM) LOCATIONS.
4. THE CONTRACTOR SHALL MEET ALL REQUIREMENTS FOR LOCAL MUNICIPALITY AND THE DEPARTMENT OF TRANSPORTATION WITH REGARD TO IMPROVEMENTS WITHIN THEIR RESPECTIVE RIGHTS-OF-WAY.
5. ALL DISTURBED AREAS WITHIN RIGHTS-OF-WAY TO BE RETURNED TO MATCH EXISTING CONDITION.
6. ALL CLEANOUT TOP ELEVATION SHALL MATCH FINISH GRADE ELEVATIONS.
7. CONTRACTOR SHALL INSTALL EROSION CONTROL SILT FENCE AROUND THE PERIMETER OF THE SITE AND MUST MAINTAIN THE SILT FENCE IN GOOD REPAIR UNTIL ALL CONSTRUCTION IS COMPLETE AND THE AREA IS STABILIZED.
8. THE CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO ANY CONSTRUCTION IF ANY PROBLEMS OR DISCREPANCIES EXIST.

811 Know what's below. Call before you dig.

SCALE
0 ' 20' 40 ' 60 '

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FL Cert. of Auth. No 27889

IEG JOB NO. 15-386.00

SEAL NISIT SAPPARKHAO, P.E.
FL REG. NO. 64085

DATE

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ISSUE	BY	DATE	DESCRIPTION
	DR	05/15/25	ISSUE FOR PERMIT
1	DR	10/03/25	RAI ROUND 1

PROJECT INFORMATION

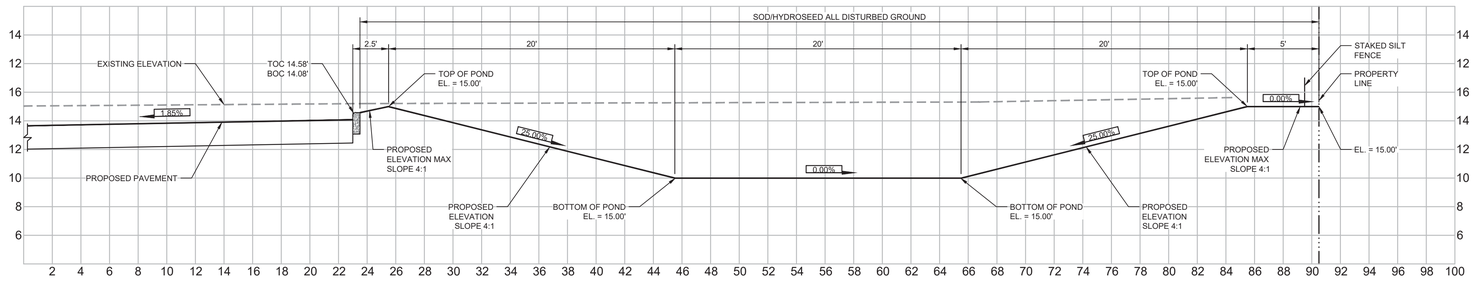
JOB #	240661
DATE:	12/31/24
DRAWN BY:	IEG
CHECKED BY:	SJ

SHEET TITLE

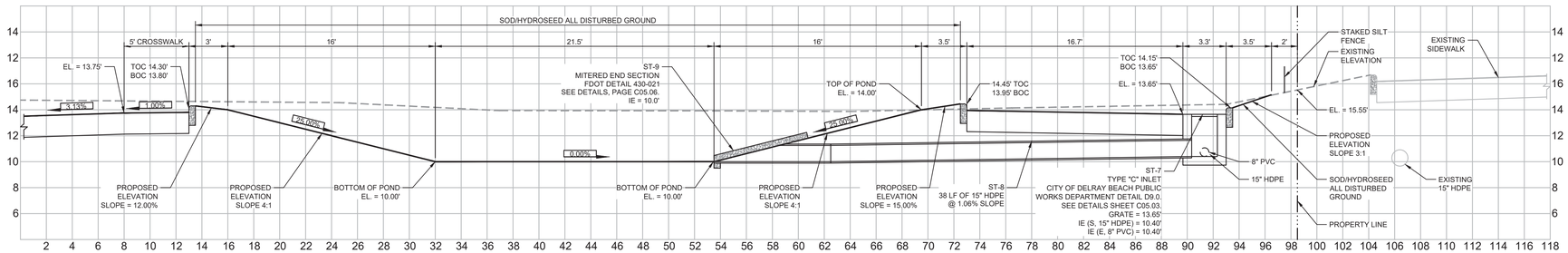
STORM PIPING PLAN

SHEET NUMBER

C03.02



SECTION A-A
SCALE 1" = 5'



SECTION B-B
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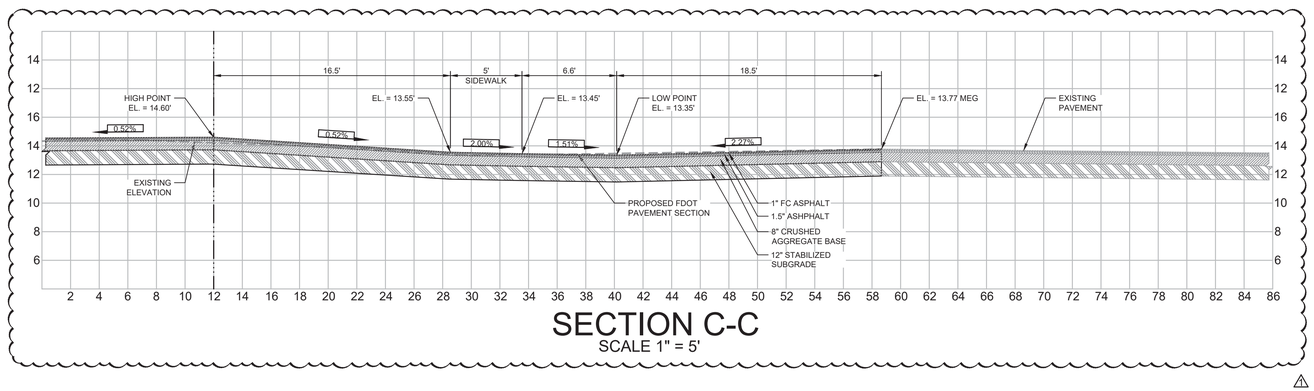

SECTION C-C
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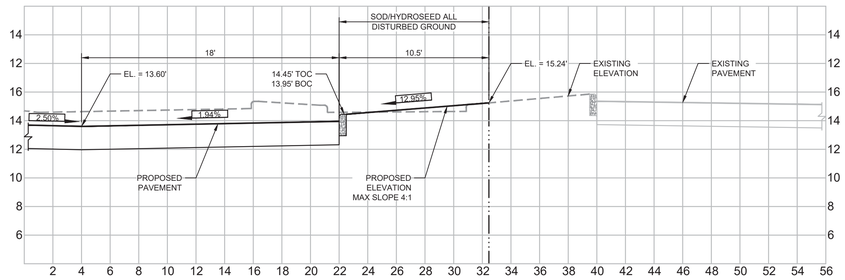

SECTION D-D
SCALE 1" = 5'

CROSS SECTIONS | SCALE 1" = 5' | -

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DRAWN BY:	IEG
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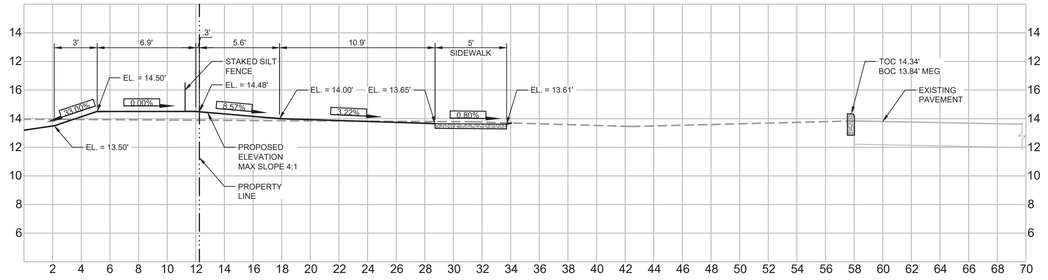
SHEET TITLE

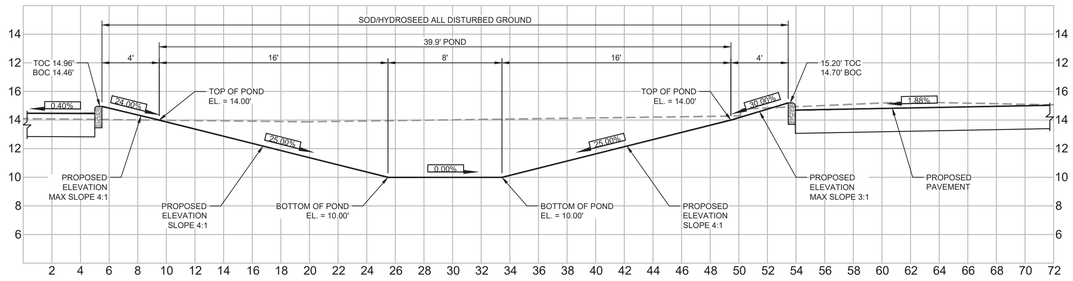
CROSS SECTIONS

SHEET NUMBER

C03.03



SECTION E-E
SCALE 1" = 5'



SECTION F-F
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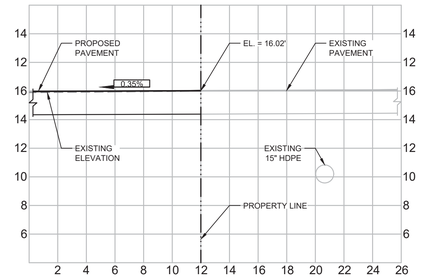
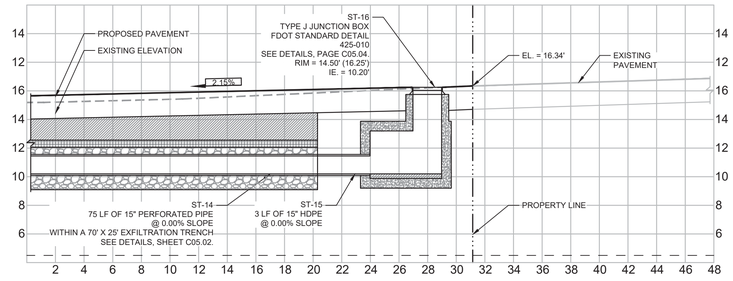


SECTION G-G
SCALE 1" = 5'



SECTION H-H
SCALE 1" = 5'

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CHECKED BY:	SJ

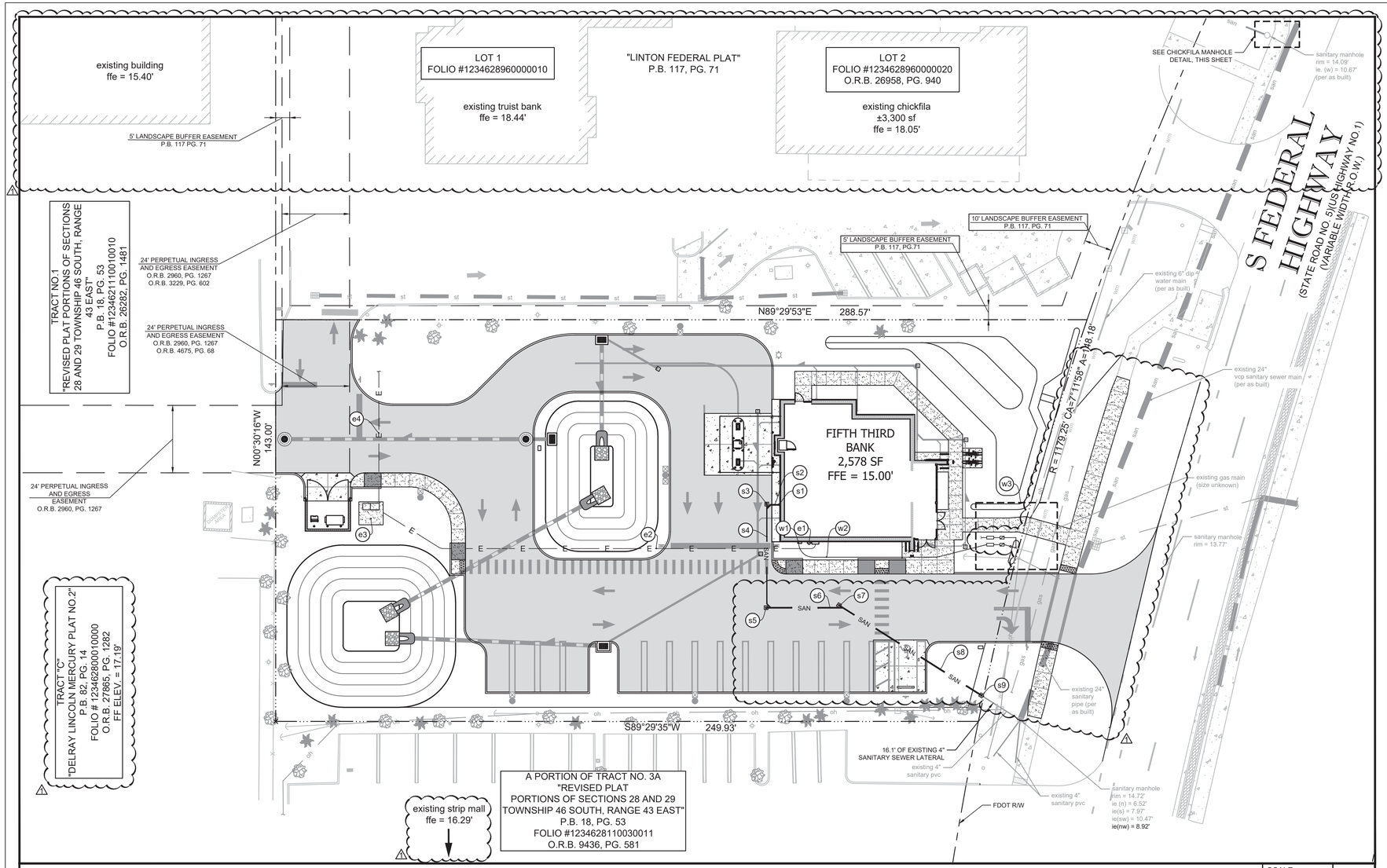
SHEET TITLE

CROSS SECTIONS

SHEET NUMBER

C03.04

CROSS SECTIONS | SCALE 1" = 5' | -



PLAN VIEW | SCALE: AS NOTED | -

LEGEND

TYP	TYPICAL
H/C	HANDICAP
R	RADIUS
R/W	RIGHT-OF-WAY
	PROPOSED CONCRETE 6" OR LESS
	PROPOSED CONCRETE GREATER THAN 6"
	PROPERTY LINE
SAN	PROPOSED SANITARY SERVICE
GW	PROPOSED GREASE WASTE
FM	PROPOSED FORCE MAIN
W	PROPOSED WATER MAIN
FIRE	PROPOSED FIRE MAIN
E	PROPOSED ELECTRIC SERVICE
GAS	PROPOSED GAS SERVICE
TEL	PROPOSED TELEPHONE SERVICE
san	EXISTING SANITARY PIPE
wm	EXISTING WATER PIPE
rw	EXISTING RECLAIM WATER PIPE
ue	EXISTING UNDERGROUND POWER
oh	EXISTING OVERHEAD WIRE
gas	EXISTING GAS LINE
tel	EXISTING TELEPHONE LINE

UTILITY NOTES

1. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES WITHIN THE LIMITS OF CONSTRUCTION AND ADVISE THE ENGINEER OF RECORD OF ANY CONFLICTS IMMEDIATELY.
2. CONTRACTOR SHALL NOTIFY AND COORDINATE WATER SERVICE WITH LOCAL MUNICIPALITIES UTILITIES DEPARTMENT.
3. CONTRACTOR SHALL NOTIFY AND COORDINATE SEWER SERVICE WITH LOCAL MUNICIPALITIES UTILITIES DEPARTMENT.
4. CONTRACTOR TO COORDINATE INSTALLATION OF ELECTRICAL POWER SERVICE WITH LOCAL ELECTRIC COMPANY.
5. CONTRACTOR TO INSTALL PVC CONDUIT FOR TELEPHONE SERVICE (TO PROPERTY LINE) AND COORDINATE INSTALLATION OF SERVICE WITH TELEPHONE OPERATIONS.
6. SEE SURVEY FOR LOCATION OF OTHER EXISTING UTILITIES.
7. SEE CIVIL SPECIFICATIONS AND REFERENCE DRAWING SHEETS FOR ADDITIONAL UTILITY NOTES.
8. ALL ON-SITE PVC WATER SERVICE AFTER METER SHALL BE SCHEDULE 80 OR PRESSURE RATED HDPE (POLY PIPE).
9. ALL CROSSINGS OF WATER AND SEWER LINES MUST MAINTAIN PROPER CLEARANCE (SEE CIVIL SPECIFICATIONS AND REFERENCE DRAWING SHEETS).
10. CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE CITY/TOWNS STANDARD CONSTRUCTION AND UTILITY REQUIREMENTS.
11. TREES SHALL NOT BE PLANTED WITHIN 10 FEET FROM THE WATER MAIN.
12. ALL CLEANOUT TOP ELEVATION SHALL MATCH FINISH GRADE ELEVATIONS.
13. ALL EXISTING WATER AND SEWER PIPING ARE REQUIRED TO BE INSPECTED PRIOR TO MAKING ANY CONNECTIONS TO VERIFY THE CONDITION. PROVIDE A PRE-CONSTRUCTION VIDEO INSPECTION OF EXISTING SANITARY SEWER PIPELINES WHICH NEW SEWER LINES ARE PROPOSED TO BE CONNECTED TOO. THE CITY WILL REVIEW THE SUBMITTED SEWER INSPECTION VIDEO AND DETERMINE AT THAT TIME WHETHER THE EXISTING PIPE WILL REQUIRE TO BE LINED OR REPLACED.
14. ALL TREES SHALL BE LOCATED NO LESS THAN 10 FET FROM CITY FACILITIES (MAINS, SERVICES, LATERALS, ETC.) UNLESS ROOT BARRIERS ARE INSTALLED. ALL ROOT BARRIERS SHALL BE INSTALLED NO LESS THAN 4 FEET FROM CITY FACILITIES. SEE DETAILS LD1.0 AND LD2.0 ON SHEET C05.04.
15. PRE AND POST TV INSPECTIONS OF SANITARY CONNECTION ARE REQUIRED.

CLEANOUT NOTES

ALL PRIVATE CLEANOUTS SHALL BE HAVE AN "S" LID AND BE 6".THE LATERAL MUST ALSO BE 6". SEE CITY OF DELRAY BEACH DETAILS, WW10.0 - TYPICAL CLEANOUT.

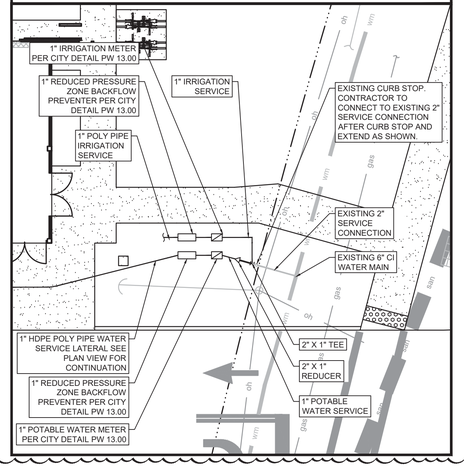
UTILITY SYSTEM DATA

	WATER
w1	POINT OF CONNECTION TO THE BUILDING. SEE PLUMBING PLAN.
w2	72 LF - 1" HDPE POLY PIPE WATER SERVICE LATERAL.
w3	SEE WATER CONNECTION DETAIL , THIS SHEET.
	ELECTRIC
e1	MAIN ELECTRIC SERVICE ENTRANCE & DISCONNECT (SEE ARCHITECTURAL PLANS.)
e2	UNDERGROUND SECONDARY ELECTRICAL SERVICE. (GC SHALL COORDINATE WITH UTILITY PROVIDER FOR RESPONSIBILITY AND CONSTRUCTION REQUIREMENTS.)
e3	NEW ELECTRICAL PAD MOUNTED TRANSFORMER. SEE ELECTRICAL PLANS. (GC SHALL COORDINATE WITH POWER PROVIDER FOR RESPONSIBILITY AND CONSTRUCTION REQUIREMENTS.)
e4	UNDERGROUND PRIMARY ELECTRICAL SERVICE. SEE ELECTRICAL PLANS FOR CONTINUATION. (GC SHALL COORDINATE WITH UTILITY PROVIDER FOR RESPONSIBILITY AND CONSTRUCTION REQUIREMENTS.)

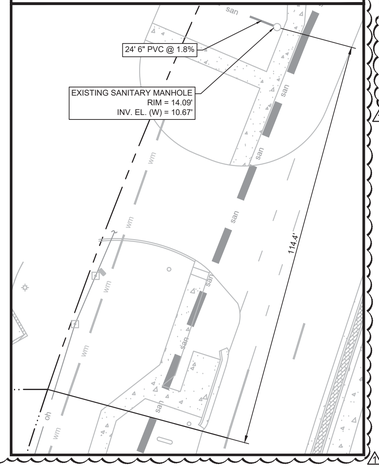
UTILITY SYSTEM DATA

	SANITARY
s1	6-INCH SEWER STUBOUT FROM BUILDING (BY PLUMBING CONTRACTOR). REFER TO BUILDING PLUMBING PLAN FOR EXACT LOCATION. CONSTRUCT 6" SEWER CLEANOUT. CLEANOUT TOP ELEVATION SHALL MATCH PROPOSED GRADE ELEVATION. RIM = 15.00' IE. = 12.00'
s2	5 LF - 6" SDR26 @ 2.10% SLOPE
s3	CONSTRUCT 6" SEWER CLEAN OUT RIM = 14.05' IE. = 11.90'
s4	38 LF - 6" SDR26 @ 2.10% SLOPE
s5	CONSTRUCT 6" SEWER CLEAN OUT RIM = 13.86' IE. = 11.15'
s6	28 LF - 6" SDR26 @ 5.25% SLOPE
s7	CONSTRUCT 6" SEWER CLEAN OUT RIM = 14.20' IE. = 9.68'
s8	60 LF - 6" SDR26 @ 1.00% SLOPE
s9	CONTRACTOR TO TIE INTO EXISTING SANITARY LINE CONSTRUCT 6" SEWER CLEANOUT LABELED "POW CLEANOUT" (NOT TO EXCEED 18" FROM PROPERTY LINE, END OF CITY RESPONSIBILITY) RIM = 14.50' IE. = 9.08'

SERVICE CONNECTION DETAIL 1" =10'

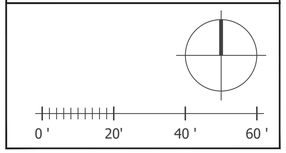


CHICKFILA MANHOLE DETAIL 1"= 20'



Know what's **below**. **Call** before you dig.

SCALE



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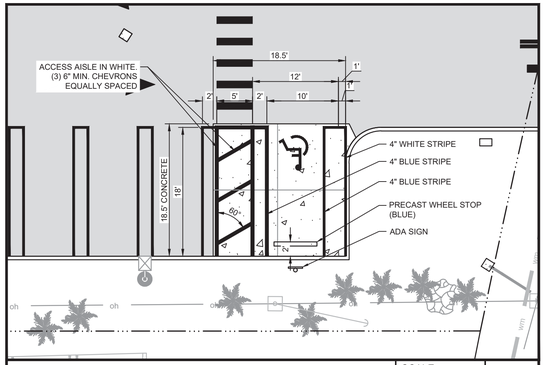
DRAWN BY:	IEG
CHECKED BY:	SJ

SHEET TITLE

UTILITY PLAN

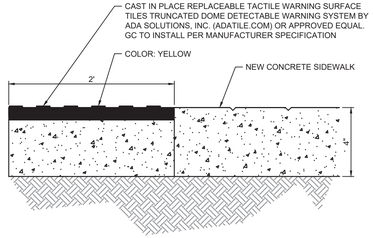
SHEET NUMBER

C04.01



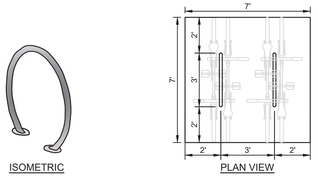
ACCESSIBLE PARKING STRIPING

SCALE	
NTS	1



DETECTABLE WARNING

SCALE	
NTS	2

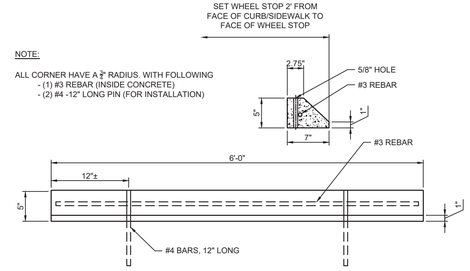


NOTES:

MANUFACTURE:	WAUSAU TILE INC. BRAND
PRODUCT #:	MF9024
SIZE:	36" x 32.5" H
WEIGHT:	81 LB
FINISH:	ALUMINUM
FEATURES:	CIRCLE BIKE RACK
MOUNTING:	SURFACE MOUNT (ASSEMBLY REQUIRED)

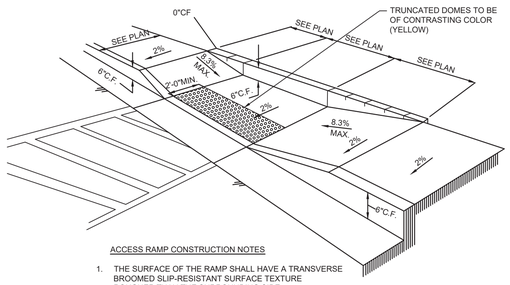
FIFTH THIRD STANDARD BICYCLE RACK

SCALE	
NTS	3



WHEEL STOP DETAIL

SCALE	
NTS	4



ACCESS RAMP CONSTRUCTION NOTES

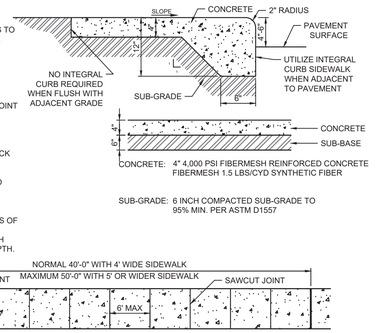
1. THE SURFACE OF THE RAMP SHALL HAVE A TRANSVERSE BROOMED SLIP-RESISTANT SURFACE TEXTURE ROUGHER THAN THE SURROUNDING SIDE
2. RAMP CONSTRUCTION SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL CODES AND REGULATIONS.

TYPICAL ADA RAMP

SCALE	
NTS	5

NOTES:

1. SIDEWALK EXPANSION JOINTS TO BE AT ALL TIES TO CONCRETE OTHER THAN DRIVEWAYS. MAXIMUM SPACING SHALL BE 50-FOOT.
2. EXPANSION JOINT MATERIAL SHALL BE ASPHALT FIBER IMPREGNATED PREFORMED JOINT FILLER, TO FULL DEPTH OF CONCRETE.
3. ALL SIDE WALKS SHALL BE CONSTRUCTED OF 4 INCH THICK 4,000 PSI PORT LAND CEMENT CONCRETE AND SHALL BE INSTALLED OVER COMPACTED SUB-GRADE.
4. CONTROL JOINT MUST BE PERFORMED WITHIN 12 HOURS OF CONCRETE PLACEMENT DO A DEPTH NO LESS THAN 1/4-INCH THE OVERALL CONCRETE DEPTH.



CONCRETE: 4" 4,000 PSI FIBERMESH REINFORCED CONCRETE FIBERMESH 1.5 LBS/CYD SYNTHETIC FIBER

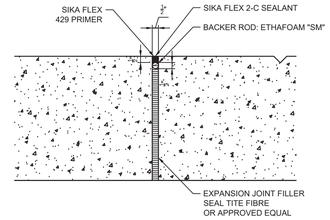
SUB-GRADE: 6 INCH COMPACTED SUB-GRADE TO 95% MIN. PER ASTM D1557

SIDEWALK

SCALE	
NTS	6

NOTES:

1. SIDEWALK EXPANSION JOINTS TO BE AT ALL TIES TO CONCRETE OTHER THAN DRIVEWAYS. MAXIMUM SPACING SHALL BE 50-FOOT.
2. EXPANSION JOINT MATERIAL SHALL BE ASPHALT FIBER IMPREGNATED PREFORMED JOINT FILLER, TO FULL DEPTH OF CONCRETE.

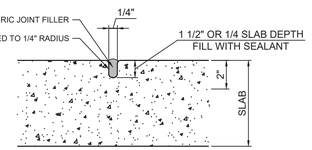


EXPANSION JOINT

SCALE	
NTS	7

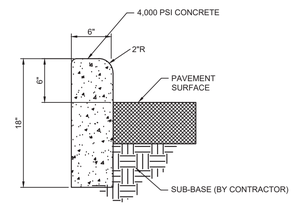
NOTES:

1. CONTROL JOINT MUST BE PERFORMED WITHIN 12 HOURS OF CONCRETE PLACEMENT DO A DEPTH NO LESS THAN 1/4-INCH THE OVERALL CONCRETE DEPTH.



SAWCUT CONTROL JOINT

SCALE	
NTS	8

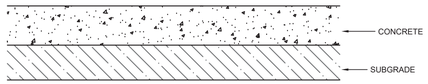


NOTE:

TRANSVERSE JOINTS SHALL BE 1/2" FULL DEPTH ASPHALT IMPREGNATED FIBER EXP. JOINT RECESSED 1/4" IN FROM THE FRONT FACE AND TOP OF THE CURB @ 20'-0" MAXIMUM.

6"x18" CURB

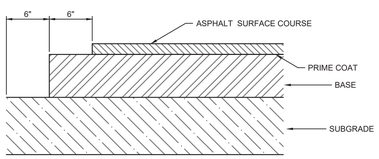
SCALE	
NTS	9



CONCRETE	6-INCH THICKNESS 4,000 PSI 6"X6" W 1.4XW 1.4 WWF OR FIBERMESH 1.5 LBS/CYD SYNTHETIC FIBER
SUB-GRADE	12-INCH COMPACTED SUB-GRADE LBR 40 COMPACTED TO 98% AASHTO T-180
BLACK TINT	BLACK TINT NOTE: ACCESSIBLE PARKING AREAS ARE TO RECEIVE BLACK TINT ADDITIVE SIKA COLOR - 120G GRANULAR INTEGRAL COLORS - C34 DARK GRAY OR APPROVED EQUAL CONTRACTOR TO COORDINATE PRICING WITH CLIENT FOR BLACK TINT OPTION SIKA COLOR - 120G GRANULAR INTEGRAL COLORS - C34 DARK GRAY OR APPROVED EQUAL

CONCRETE PAVEMENT

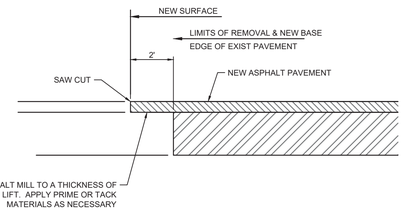
SCALE	
NTS	10



ASPHALT	2-INCH FDOT SUPERPAVE SP-9.5 STRUCTURAL BASE COURSE
BASE	8-INCH LIMEROCK LBR 100 COMPACTED TO 98% OF AASHTO T-180
SUB-GRADE	12-INCH COMPACTED SUB-GRADE LBR 40 COMPACTED TO 98% AASHTO T-180

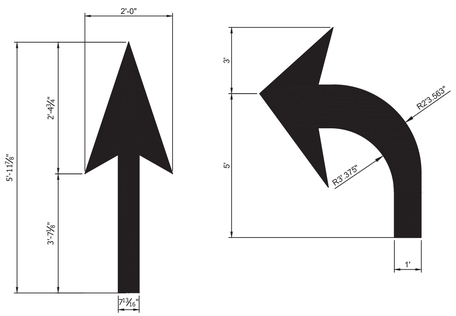
ASPHALT PAVEMENT

SCALE	
NTS	11



EXISTING ASPHALT PAVEMENT CONNECTION

SCALE	
NTS	12



NOTE: STRIPES TO BE "WHITE" PAINTED

DIRECTIONAL LOT ARROW DETAIL

SCALE	
NTS	13

bdg architects
550 S. Caldwell Street
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1820 SOUTH FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA 33483

INFINITY
INFINITY ENGINEERING GROUP, LLC
1208 East Kennedy Boulevard
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www.iegroup.net
FL Cert. of Auth. No 27889
IEG JOB NO. 15-386.00
SEAL NISIT SAPPARKHAO, P.E.
FL REG. NO. 64085
DATE

ISSUE	BY	DATE	DESCRIPTION
	DR	05/15/25	ISSUE FOR PERMIT
1	DR	10/03/25	RAI ROUND 1

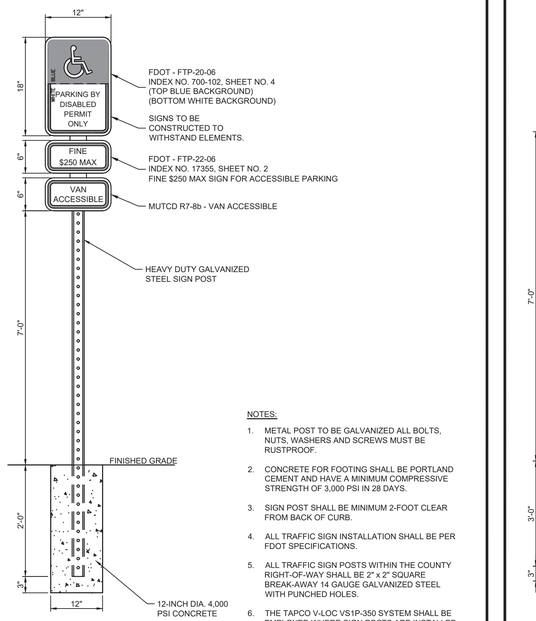
PROJECT INFORMATION	
JOB #	240661
DATE:	12/31/24
DRAWN BY:	IEG
CHECKED BY:	SJ

SHEET TITLE

DETAILS

SHEET NUMBER

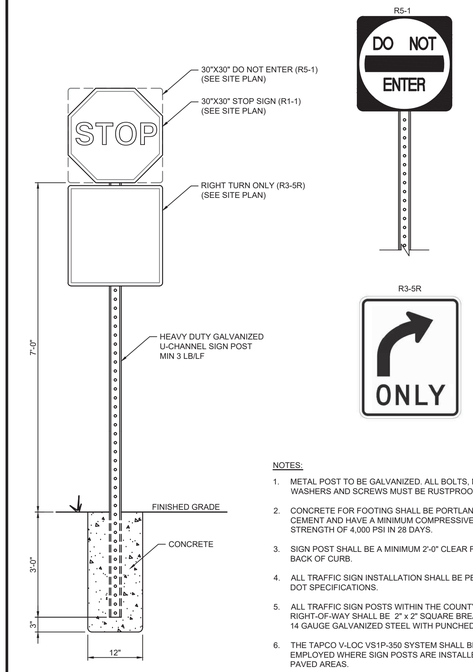
C05.01



NOTES:

1. METAL POST TO BE GALVANIZED ALL BOLTS, NUTS, WASHERS AND SCREWS MUST BE RUSTPROOF.
2. CONCRETE FOR FOOTING SHALL BE PORTLAND CEMENT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS.
3. SIGN POST SHALL BE MINIMUM 2-FOOT CLEAR FROM BACK OF CURB.
4. ALL TRAFFIC SIGN INSTALLATION SHALL BE PER FDOT SPECIFICATIONS.
5. ALL TRAFFIC SIGN POSTS WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE 2" x 2" SQUARE BREAK-AWAY 14 GAUGE GALVANIZED STEEL WITH PUNCHED HOLES.
6. THE TAPCO V-LOC VS1P-350 SYSTEM SHALL BE EMPLOYED WHERE SIGN POSTS ARE INSTALLED IN PAVED AREAS.

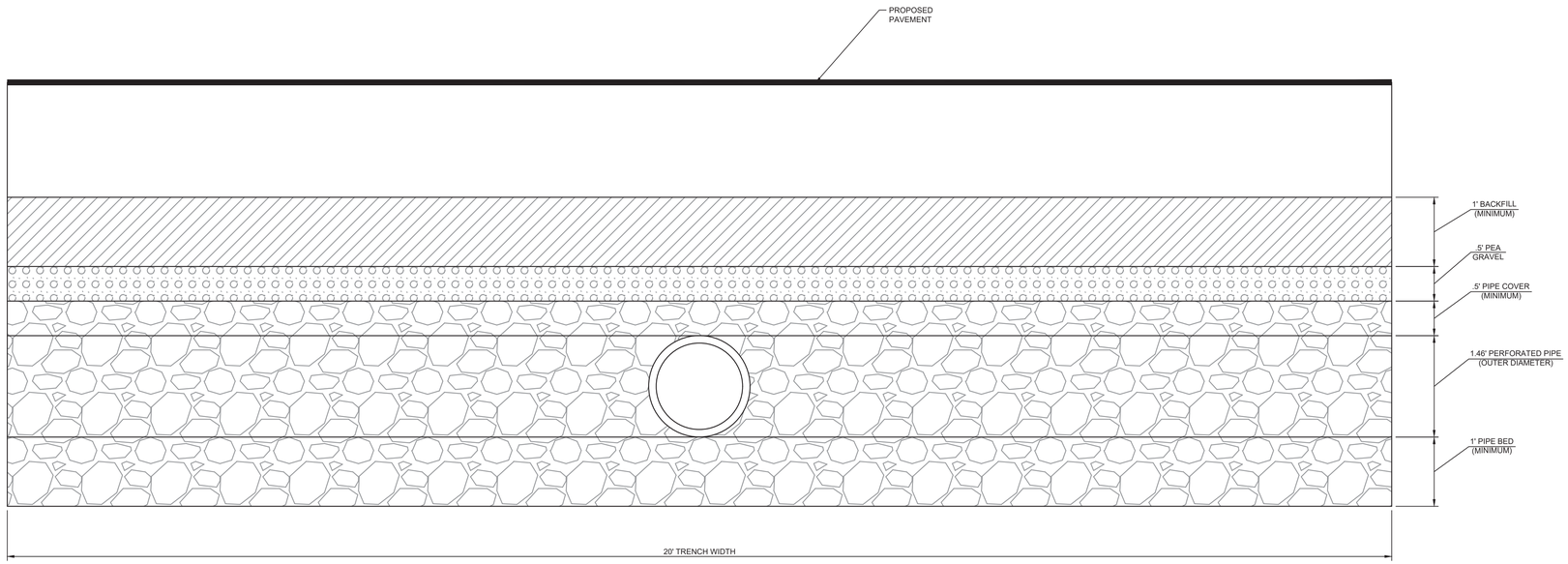
ACCESSIBLE PARKING SIGN | SCALE: NTS | 1



NOTES:

1. METAL POST TO BE GALVANIZED. ALL BOLTS, NUTS, WASHERS AND SCREWS MUST BE RUSTPROOF.
2. CONCRETE FOR FOOTING SHALL BE PORTLAND CEMENT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI IN 28 DAYS.
3. SIGN POST SHALL BE A MINIMUM 2'-0" CLEAR FROM BACK OF CURB.
4. ALL TRAFFIC SIGN INSTALLATION SHALL BE PER STATE DOT SPECIFICATIONS.
5. ALL TRAFFIC SIGN POSTS WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE 2" x 2" SQUARE BREAK-AWAY 14 GAUGE GALVANIZED STEEL WITH PUNCHED HOLES.
6. THE TAPCO V-LOC VS1P-350 SYSTEM SHALL BE EMPLOYED WHERE SIGN POSTS ARE INSTALLED IN PAVED AREAS.

MUTCD SIGN (S) | SCALE: NTS | 2



EXFILTRATION TRENCH DETAIL | SCALE: NTS | 3

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IEG JOB NO. 15-386.00

SEAL NISIT SAPPARKHAO, P.E.
FL REG. NO. 64085

DATE

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ISSUE	BY	DATE	DESCRIPTION
	DR	05/15/25	ISSUE FOR PERMIT
1	DR	10/03/25	RAI ROUND 1

PROJECT INFORMATION

JOB #	240661
DATE:	12/31/24
DRAWN BY:	IEG
CHECKED BY:	SJ

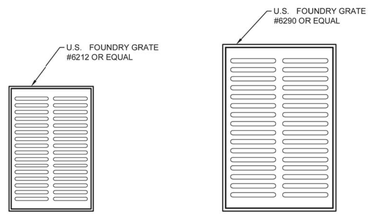
SHEET TITLE

DETAILS

SHEET NUMBER

C05.02

INLET TYPE	DIMENSIONS		GRATE TYPE	MAX. PIPE SIZE	
	A	B		WALL A	WALL B
'C'	2'-0"	3'-1"	U.S. FOUNDRY No. 6212	15" R.C.P.	24" R.C.P.
'E'	3'-0"	4'-5"	U.S. FOUNDRY No. 6290	24" R.C.P.	36" R.C.P.



TYPE "C"

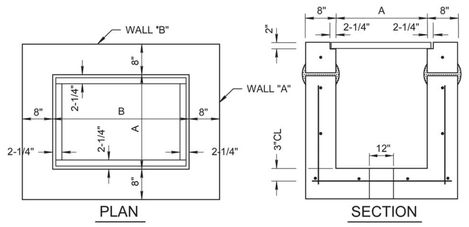
TYPE "E"

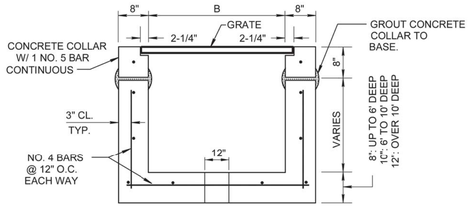
NOTES:

1. ALL GRATES SHALL BE SUITABLE FOR H-20 LOADING (HIGHWAY TRAFFIC LOADS)
2. WHEN INSTALLED IN PAVEMENT OR WITHIN 6' OF PAVEMENT USE U.S.F. 4160-6210

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPE C & E INLET GRATE DETAIL | DATE: 10-04-2024 | D8.0





* SEE TYPICAL BACKFILL DETAIL GU 2.0

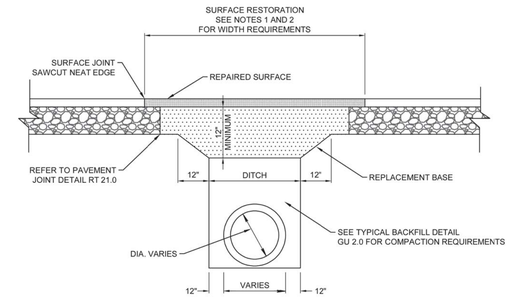
INLET TYPE	DIMENSIONS		GRATE TYPE	MAX. PIPE SIZE	
	A	B		WALL A	WALL B
'C'	2'O"	3'1"	U.S. FOUNDRY NO. 6212	15" R.C.P.	24" R.C.P.
'E'	3'O"	4'6"	U.S. FOUNDRY NO. 6290	24" R.C.P.	36" R.C.P.

NOTES:

1. INLET TO BE PRECAST WITH CLASS 'A' 4000 P.S.I. CONCRETE.
2. ALL EXPOSED CORNERS AND EDGES TO BE CHAMFERED 3/4".
3. 12" DIAMETER WEEP HOLE REQUIRED ON ALL STRUCTURES WHICH HAVE A BOTTOM ELEVATION ABOVE THE WATER TABLE EXCEPT IN WELLFIELDS.
4. 18" SUMP REQUIRED IN ALL DRAINAGE STRUCTURES.
5. SEE BEDDING DETAIL D 3.0
6. ALL STRUCTURES TO BE 4 SIDED ANGLE SHOULDERS.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPE C & E INLET DETAIL | DATE: 10-04-2024 | D9.0



SECTION - WHERE APPLICABLE

NOTES:

1. FOR COMMERCIAL PROJECTS THAT DAMAGE THE ROADWAY SURFACE THE ROADWAY SHALL BE MILLED AND RESURFACED 50' IN EACH DIRECTION FROM THE DAMAGED AREA. MILLING AND RESURFACING SHALL BE FOR THE FULL LANE WIDTH OF ANY DAMAGED LANE.
2. FOR RESIDENTIAL PROJECTS THAT DAMAGE THE ROADWAY SURFACE THE ROADWAY SHALL BE MILLED AND RESURFACED FOR THE WIDTH OF THE RESIDENTIAL PROPERTY (MIN. 50' REPAIR LENGTH). MILLING AND RESURFACING SHALL BE FOR THE FULL LANE WIDTH OF ANY DAMAGED LANE.
3. MILLING DEPTH SHALL BE 1" AND RESURFACING SHALL BE 1" TYPE S-III ASPHALTIC CONCRETE.
4. BASE MATERIAL SHALL BE PLACED IN TWO LIFTS AND EACH LIFT COMPACTED TO 98% MAXIMUM DENSITY PER AASHTO T-180. MAX LIFT THICKNESS SHALL BE 6".
5. 24" EXCAVATEABLE FLOWABLE FILL MIN. 100 P.S.I. MAY BE USED IN LIEU OF 12" BASE.
6. ASPHALTIC CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
7. ALL DISTURBED PAVEMENT MARKINGS SHALL BE RESTORED IN ACCORDANCE WITH CITY STANDARDS.
8. SURFACE MATERIAL SHALL BE S-III ASPHALTIC CONCRETE (FOR TRENCH REPAIR, THICKNESS SHOULD BE TWICE THE THICKNESS OF THE ADJACENT EXISTING ASPHALT).
9. ANY PAVEMENT CUTS SHALL BE COLD PATCHED AT THE END OF EACH WORKING DAY TO FACILITATE UNHINDERED TRAFFIC FLOW.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
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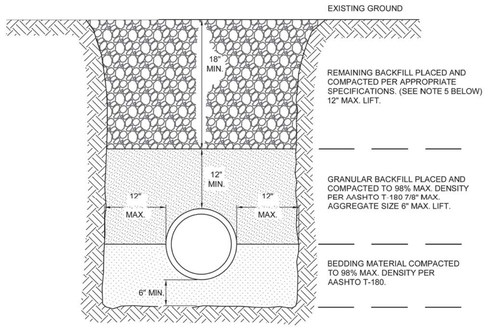
PAVEMENT REPAIR DETAIL | DATE: 10-04-2024 | GU 1.0

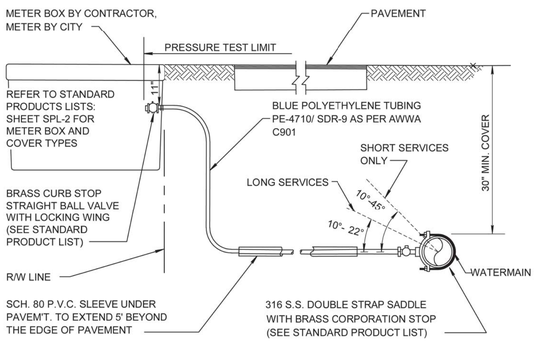


NOTES:

1. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGE ROCKS SHALL BE REMOVED OFF SITE AND DISPOSED IN A PROPER LANDFILL; BEDDING MATERIAL AND BACKFILL CONSISTING OF WASHED AND GRADED LIMEROCK 3/8" -7/8" SIZING.
2. THE PIPE AND/OR STRUCTURE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH WITH
3. APPROPRIATE COMPACTION UNDER THE PIPE HAUNCHES.
4. THE PIPE AND/OR STRUCTURE SHALL BE PLACED IN A DRY TRENCH.
5. BACKFILL SHALL BE FREE OF UNSUITABLE MATERIAL SUCH AS LARGE ROCK, MUCK, AND DEBRIS.
6. COMPACT BACKFILL TO 98% DENSITY UNDER PAVEMENT AND TO 95% DENSITY ELSEWHERE PER (AASHTO T-180)
7. COMPACTION AND DENSITY TESTS SHALL BE COMPLETED DURING BACKFILL OPERATIONS, CONTRACTORS NOT FOLLOWING THIS PROCEDURE, FOR WHATEVER REASONS, SHALL BE REQUIRED TO RE-EXCAVATE THE AREA IN QUESTION, DOWN TO THE BEDDING MATERIAL, THEN BACKFILL FOLLOWING THE ABOVE PROCEDURES.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL BACKFILL DETAIL | DATE: 10-04-2024 | GU 2.0

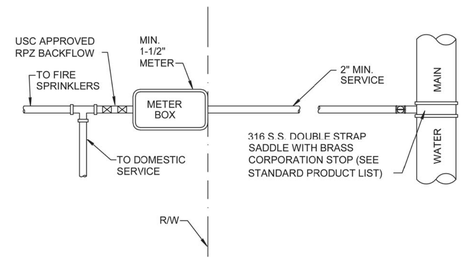


NOTES:

1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" ON CENTER.
2. SERVICE LINES SHALL NOT BE PLACED UNDER DRIVEWAYS.
3. ALL METERS REQUIRE A LOCKING BRASS CURB STOP WITH LOCK WING (1"MIN.).
4. NO FITTINGS BETWEEN CORPORATION STOP AND BRANCH ASSEMBLY.
5. MAXIMUM SERVICE LENGTH IS 100' TO METER.
6. CASING PIPE I.D. SHALL BE SERVICE O.D. PLUS 1" MINIMUM.
7. MINIMUM BEND RADIUS ON SERVICES SHALL BE 14" ON ALL SERVICES BEHIND METER.
8. METER SIZE WILL BE DETERMINED BY PUBLIC UTILITIES DEPT. UPON APPLICATION FOR SERVICE.
9. ALL VALVES TO BE BALL VALVES.
10. METER BOX SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR.
11. ALL SERVICES UNDER ROADWAYS ARE TO BE INSTALLED BY TRENCHLESS METHOD, UNLESS OTHERWISE APPROVED.
12. ALL EXISTING SERVICES TO BE FIELD VERIFIED BY BUILDER/CONTRACTOR/ DEVELOPER; IF EXISTING SERVICE IS GALVANIZED, BUILDER/CONTRACTOR/ DEVELOPER SHALL REPLACE WITH POLYETHYLENE PIPING FROM MAIN TO THE METER.
13. ALL WATER SERVICE SHALL BE A MINIMUM OF 2".
14. WATER METERS SHALL BE LOCATED OUTSIDE ANY DRIVEWAYS BY 2'

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL URBAN/REDEVELOPMENT AREA SERVICE CONNECTION | DATE: 10-04-2024 | PW 12.0

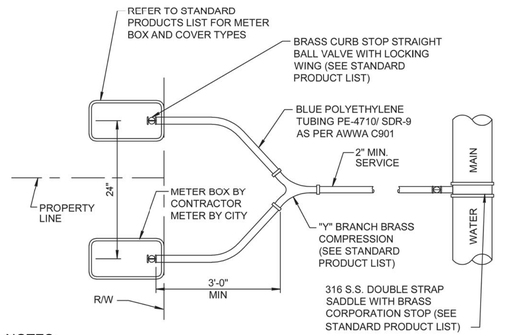


NOTES:

1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" ON CENTER.
2. SERVICE LINES SHALL NOT BE PLACED UNDER DRIVEWAYS.
3. ALL SERVICE LINES REQUIRE A LOCKING BRASS CURB STOP WITH LOCK WING (1"MIN.).
4. NO FITTINGS BETWEEN CORPORATION STOP AND BRANCH ASSEMBLY.
5. MAXIMUM SERVICE LENGTH IS 100' TO METER.
6. CASING PIPE I.D. SHALL BE SERVICE O.D. PLUS 1" MINIMUM.
7. MINIMUM BEND RADIUS ON SERVICES SHALL BE 14" ON ALL SERVICES BEHIND METER.
8. ALL VALVES TO BE BALL VALVES.
9. METER BOX SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR.
10. ALL EXISTING SERVICES TO BE FIELD VERIFIED BY BUILDER/ CONTRACTOR/DEVELOPER; IF EXISTING SERVICE IS GALVANIZED, BUILDER/CONTRACTOR/DEVELOPER SHALL REPLACE WITH POLYETHYLENE PIPING FROM MAIN TO METER.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL FIRE SERVICE CONNECTION | DATE: 10-04-2024 | PW 13.0



NOTES:

1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" ON CENTER.
2. SERVICE LINES SHALL NOT BE PLACED UNDER DRIVEWAYS.
3. ALL METERS REQUIRE A LOCKING BRASS CU RB STOP WITH LOCK WING (1" MIN.).
4. NO FITTINGS BETWEEN CORPORATION STOP AND BRANCH ASSEMBLY.
5. MAXIMUM SERVICE LENGTH IS 100' TO METER.
6. CASING PIPE I.D. SHALL BE SERVICE O.D. PLUS 1" MINIMUM.
7. MINIMUM BEND RADIUS ON SERVICES SHALL BE 14" ON ALL SERVICES BEHIND METER.
8. METER SIZE WILL BE DETERMINED BY PUBLIC UTILITIES DEPT. UPON APPLICATION FOR SERVICE.
9. ALL VALVES TO BE BALL VALVES.
10. METER BOX SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR.
11. ABOVE CONFIGURATION APPLIES TO PLACEMENT AT SINGLE FAMILY RESIDENCES. FOR DOUBLE SERVICES PLACED AT MULTI-FAMILY RESIDENCES THE TWO SERVICES SHALL BE PLACED WITHIN A DOUBLE METER BOX.
12. ALL EXISTING SERVICES TO BE FIELD VERIFIED BY BUILDER/CONTRACTOR/DEVELOPER; IF EXISTING SERVICE IS GALVANIZED, BUILDER/CONTRACTOR/DEVELOPER SHALL REPLACE WITH POLYETHYLENE PIPING FROM MAIN TO METER.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
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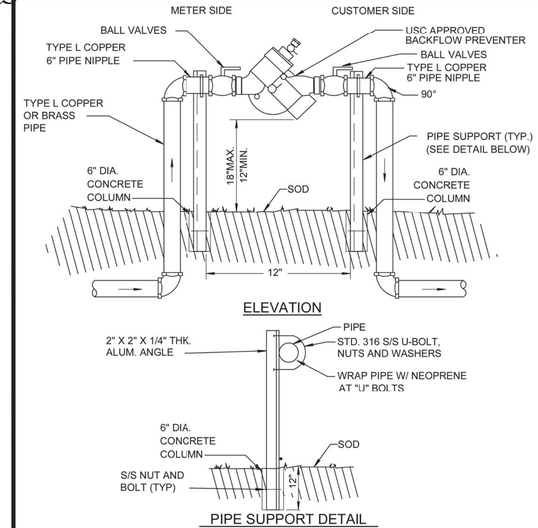
TYPICAL DOUBLE SERVICE CONNECTION | DATE: 10-04-2024 | PW 14.0



NOTES:

1. FOR ALL SERVICES LESS THAN OR EQUAL TO 2" DIA.
2. ABOVE GRADE PIPING SHALL BE BRASS OR TYPE "L" COPPER OR BRASS TUBING.
3. ALL COPPER JOINTS SHALL BE MADE WITH 95/5 SOLDER.
4. USC APPROVED RPZ BACKFLOW PREVENTER IS REQUIRED IN ACCORDANCE WITH CITY OF DELRAY BEACH CODE OF ORDINANCES TITLE V, CHAPTER 52.83.
5. USC APPROVED RPZ BACKFLOW PREVENTER IS REQUIRED FOR ALL COMMERCIAL PROPERTIES AND ALL RESIDENTIAL PROPERTIES WITH FIRE SPRINKLER SYSTEMS.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

REDUCED PRESSURE ZONE BACKFLOW PREVENTER | DATE: 10-04-2024 | PW 16.0

bdg architects
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IEG JOB NO. 15-386.00

SEAL
NISIT SAPPARKHAO, P.E.
FL REG. NO. 64085

DATE

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ISSUE	BY	DATE	DESCRIPTION
	DR	05/15/25	ISSUE FOR PERMIT
1	DR	10/03/25	RAI ROUND 1

PROJECT INFORMATION

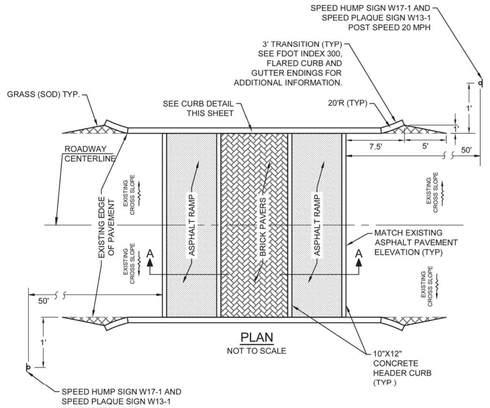
JOB #	240661
DATE:	12/31/24
DRAWN BY:	IEG
CHECKED BY:	SJ

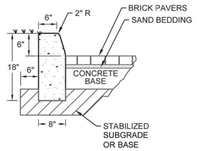
SHEET TITLE

DETAILS (CITY OF DELRAY BEACH)

SHEET NUMBER

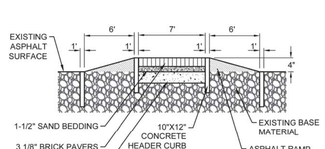
C05.03





CURB PER CITY DETAIL RT 19.0

CONCRETE CURB
NOT TO SCALE



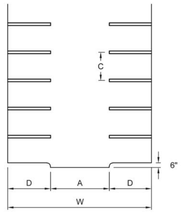
SECTION A-A
NOT TO SCALE
*IF NEW ROADWAY CONSTRUCTION SEE DETAIL RT 26.0 FOR SECTION SPECIFICATIONS

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

SPEED HUMP / TABLE DETAIL

DATE: 10-04-2024
RT 12.0

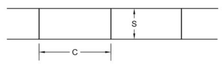
90° PARKING



A	AISLE	24.0'
S	STALL WIDTH	9.0' *
D	STALL DEPTH	18.0'
W	MODULE WIDTH	60.0'

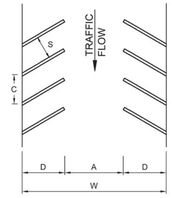
* COMPACT CAR SPACES -8.0' ACCESSIBLE SPACES -12.0' SEE RT 16 THROUGH RT 16.2

PARALLEL



C	STALL LENTH	22.0'
S	STALL WIDTH	8.0' *

60° AND 45° PARKING



	STANDARD	60°	45°
A	AISLE *	17.0'	15.0'
C	STALL LENGTH	10.5'	12.5'
S	STALL WIDTH	9.0'	9.0'
D	STALL DEPTH	20.0'	19.0'
W	MODULE WIDTH	57.0'	53.0'
ACCESIBLE SPACES	C	14.0'	17.0'
	D	21.5'	21.0'
	S	12.0'	12.0'

* FOR TWO WAY FLOW A=24.0'

NOTE:

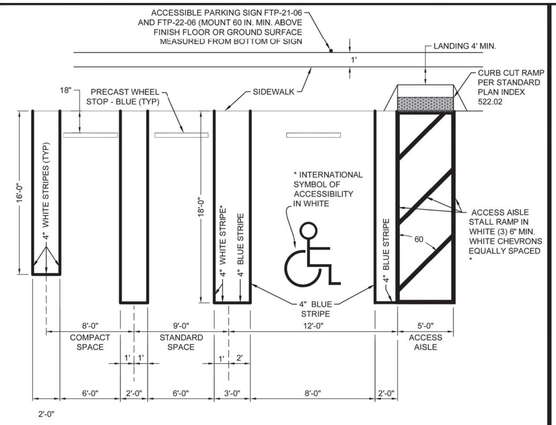
REFER TO TYPICAL PARKING SPACE DETAIL RT 16.0 THROUGH RT 16.2 FOR STRIPING INFORMATION AND ACCESSIBLE PARKING DIMENSIONS.

STOP BAR BETWEEN PARKING LOT & PUBLIC R/W MUST BE THERMOPLASTIC.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PARKING LOTS

DATE: 10-04-2024
RT 15.0



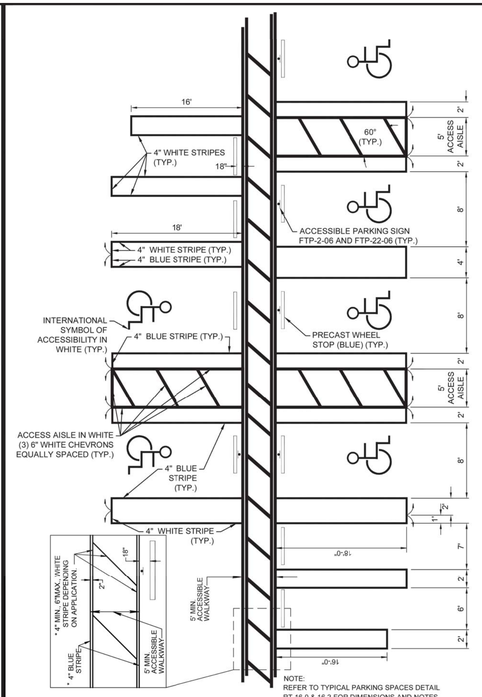
PARKING STALL DIMENSIONS:
STANDARD 9'x 18'
COMPACT 8'x 16'
ACCESSIBLE 12'x 18' PLUS 5' ACCESS AISLE

* NOTES:
1. ON LIGHT COLORED SURFACE I.E. CONCRETE ALL ACCESSIBLE MARKINGS SHALL BE BLUE AND STANDARD PARKING STRIPING SHALL BE 3" WHITE WITH 1" BLACK BORDER.
2. ALL STRIPING WITHIN PUBLIC RIGHT-OF-WAY SHALL BE 6 INCHES.
3. ALL MEASUREMENTS ARE FROM CENTER LINE.
4. ALL COMPACT SPACES MUST HAVE "COMPACT" STENCILED WITH BLACK PAINT ON WHEEL STOP.
5. BLUE STRIPE & INTERNATIONAL, SYMBOL OF ACCESSIBILITY AND WALKWAY ON CONCRETE.
6. 24" STOP BAR BETWEEN ALL PARKING LOTS AND PUBLIC R/W SHALL BE THERMOPLASTIC AND PER FDOT SPECIFICATIONS AND STOP SIGN R1-1 THERMOPLASTIC AND PER FDOT SPECIFICATIONS AND STOP SIGN R1-1
7. CHANGES IN LEVEL ARE NOT PERMITTED IN ACCESSIBLE PARKING STALLS AND ACCESS AISLES SERVING THE STALLS. SLOPES NOT STEEPER THAN 1:48 SHALL BE PERMITTED.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL PARKING SPACES (1 OF 3)

DATE: 10-04-2024
RT 16.0



NOTE:
REFER TO TYPICAL PARKING SPACES DETAIL RT 16.0 & 16.2 FOR DIMENSIONS AND NOTES.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL PARKING SPACES (2 OF 3)

DATE: 10-04-2024
RT 16.1

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FIFTH THIRD

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DELRAY BEACH

1820 SOUTH FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA 33483

ALL PAVEMENT MARKINGS

All paved surfaces shall be properly marked prior to the hours of darkness.

RAISED PAVEMENT MARKERS

- R.P.M.s shall be installed on all lane lines and centerlines, spaced at 20' or 40'.
- R.P.M.s shall be a 4 x 4 type class "B" marker meeting F.D.O.T. specifications and shall be approved by the City prior to use.
- R.P.M.'s shall be installed using alkyd thermoplastic on asphalt and epoxy on concrete.

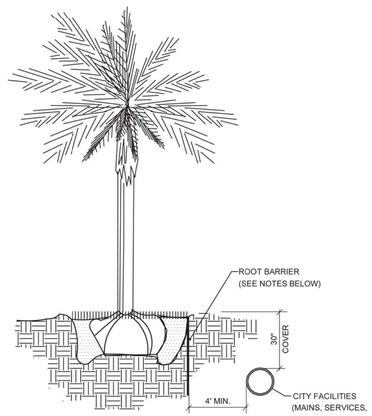
OTHER NOTES

- All Materials within right-of-way shall be thermoplastic and per F.D.O.T. specifications.
- Pavement marking within private parking lots may be painted according to F.D.O.T. specifications, except for all stop bars adjacent to public right-of-way.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PAVEMENT MARKING SPECIFICATIONS (SHEET 2 OF 2)

DATE: 10-04-2024
RT 22.1



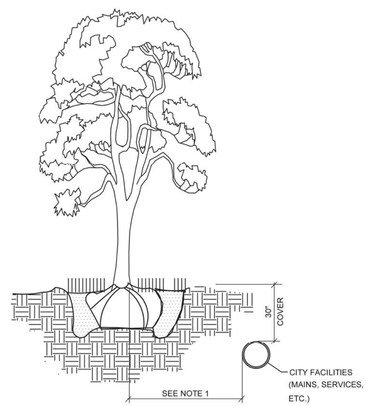
NOTES:

1. ALL ROOT BARRIERS SHALL BE 4' MINIMUM FROM ALL CITY FACILITIES.
2. THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH CITY AND INSPECTED BY CITY PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE.
3. ROOT BARRIERS SHALL BE MINIMUM 36" DEEP. APPROVED PRODUCTS INCLUDE "DEEP ROOT" AND "ROOT SOLUTIONS". FLEXIBLE BARRIERS SHALL BE 36" PANELS MANUFACTURED BY BIOBARRIER.
4. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL TREE WITH ROOT BARRIER

DATE: 10-04-2024
LD 1.0



NOTES:
1. THIS DISTANCE SHALL BE 10' MINIMUM FROM ALL CITY FACILITIES IF NO ROOT BARRIER IS USED.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL TREE WITHOUT ROOT BARRIER

DATE: 10-04-2024
LD 2.0

GRAVITY SEWER NOTES

1. MANHOLES SHALL BE INSPECTED BY THE ENGINEER BEFORE PLACEMENT AND SURFACE TREATMENT.
2. ALL OPENINGS IN PRECAST MANHOLES SHALL BE CAST AT TIME OF MANUFACTURE. CONNECTIONS TO EXISTING MANHOLES SHALL BE CORE ENTRY ONLY.
3. ALL MANHOLES SHALL BE SET PLUMB TO LINE AND GRADE.
4. (PVC) GRAVITY SEWER PIPE SHALL CONFORM TO ASTM D 3034, SDR 26, LATEST REVISIONS, WITH PUSH ON RUBBER GASKET JOINTS.
5. (DIP) GRAVITY SEWER PIPE SHALL BE CLASS 350, 401 EPOXY LINED OR AS OTHERWISE APPROVED BY UTILITIES DEPARTMENT.
6. NO SERVICE CONNECTIONS, WYES, SERVICES OR VALVES WILL BE PERMITTED IN RESIDENTIAL DRIVEWAYS.
7. MANHOLE FRAMES SHALL BE ATTACHED TO THE PRECAST STRUCTURE WITH A MINIMUM OF TWO 3/4" 316 STAINLESS STEEL BOLTS, NUTS AND WASHERS. FRAMES SHALL BE SEALED WITH A MINIMUM OF TWO 1/2" BEADS OF RAM-NEK CAULKING.
8. TRENCHES SHALL BE DE-WATERED TO ENABLE PIPE AND APPURTENANCES TO BE INSTALLED FREE OF WATER ON UNDISTURBED SOIL. IF UNSUITABLE SUBSURFACE MATERIAL IS ENCOUNTERED, EXCAVATE EXTRA 6" AND BACKFILL WITH 3/4" GRAVEL.
9. PVC SHALL BE LAID IN STRICT CONFORMANCE TO MANUFACTURER'S SPEC (JOHNS MANVILLE RING TITE PVC PIPE INSTALLATION GUIDE OR EQUAL). BACKFILLING OF UTILITY TRENCHES WILL NOT BE ALLOWED UNTIL INSPECTED BY THE ENGINEER.
10. BACKFILL MATERIAL FOR SEWER MAIN AND LINES SHALL BE NON-COHESIVE, NON PLASTIC MATERIAL FREE OF ALL DEBRIS , LUMPS AND ORGANIC MATTER. BACKFILL MATERIAL PLACED WITHIN ONE (1) FOOT OF PIPING AND APPURTENANCES SHALL NOT CONTAIN ANY STONES LARGER THAN TWO (2) INCHES IN DIAMETER (1" FOR PVC PIPE) AND NO STONES LARGER THAN SIX (6) INCHES IN DIAMETER WILL BE PERMITTED IN ANY BACKFILL.
11. ALL EXCAVATION IN EXISTING RIGHT OF WAY SHALL BE BACKFILLED AND STABILIZED AT THE END OF EACH DAY TO PERMIT PEDESTRIAN AND VEHICULAR TRAFFIC PRIOR TO THE CONTRACTOR LEAVING THE SITE.
12. WHERE SEWER IS NOT WITHIN PUBLIC R/W, IT IS TO BE LOCATED IN A 12' UTILITY EASEMENT. CITY MAINTENANCE RESPONSIBILITY IS MANHOLE TO MANHOLE ONLY.
13. UPON COMPLETION OF THE WORK AND PRIOR TO PLACEMENT OF ASPHALT A VISUAL INSPECTION BY THE ENGINEER SHALL BE MADE OF THE COMPLETED SYSTEM ALONG WITH A LOW PRESSURE AIR TEST, AFTER ROCK BASE FINISHED & PRIMED, OR 1ST LIFT OF ASPHALT PLACED. AFTER ALL OTHER TESTING HAS BEEN COMPLETED, A CD VIDEO RECORDING SHALL BE MADE BY THE CONTRACTOR AND APPROVED BY THE ENGINEER, BEFORE THE LENGTHS ARE ACCEPTED FOR MAINTENANCE.
14. EACH LINE SEGMENT SHALL BE LAMPED TO DETERMINE PROPER ROUNDNESS.
15. COMPLETE "AS BUILT" INFORMATION RELATIVE TO MANHOLES, VALVES, SERVICES FITTINGS, PIPE LENGTHS, INVERTS AND SLOPES SHALL BE ACCURATELY RECORDED & SUBMITTED TO THE ENGINEER CITY SIGNED AND SEALED BY A REGISTERED LAND SURVEYOR.
16. AT THE END OF THE ONE (1) YEAR WARRANTY PERIOD THE DEVELOPER/CONTRACTOR WILL T.V. INSPECT, AIR TEST EVERY JOINT, AND CHECK MANHOLE JOINTS AND CONNECTIONS TO DETERMINE IF REPAIRS ARE NECESSARY BEFORE THE WARRANTY BOND IS RELEASED.
17. NO PROPOSED STRUCTURES SHALL BE INSTALLED WITHIN A HORIZONTAL DISTANCE OF 10-FEET FROM ANY EXISTING OR PROPOSED SANITARY SEWER FACILITY.
18. ANY PIPE INTRODUCED INTO AN EXISTING MANHOLE MUST HAVE CARBOLINE BITUMASTIC 300M OR APPROVED EQUAL APPLIED EXTERNALLY WITHIN A MINIMUM 2-FOOT RADIUS OF OPENING AND THE ENTIRE MANHOLE MUST HAVE SEWPER COAT OR APPROVED EQUAL APPLIED INTERNALLY.
19. ANY REHABILITATION TO AN EXISTING MANHOLE MUST BE INTERNALLY STRIPPED AND LINED WITH SEWPER COAT OR APPROVED EQUAL.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

GRAVITY SEWER NOTES

DATE: 10-04-2024
WW 1.0

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FL Cert. of Auth. No 27889

IEG JOB NO. 15-386.00

SEAL
NISIT SAPPARKHAO, P.E.
FL REG. NO. 64085

DATE

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ISSUE	BY	DATE	DESCRIPTION
	DR	05/15/25	ISSUE FOR PERMIT
1	DR	10/03/25	RAI ROUND 1

PROJECT INFORMATION

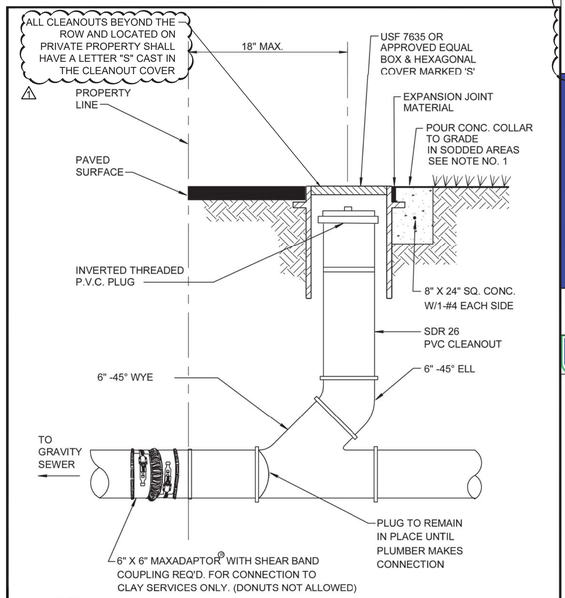
JOB #	240661
DATE:	12/31/24
DRAWN BY:	IEG
CHECKED BY:	SJ

SHEET TITLE

DETAILS (CITY OF DELRAY BEACH)

SHEET NUMBER

C05.04



NOTE:

1. ALL SANITARY SEWER LATERALS AND CLEANOUT TO BE MINIMUM 6" DIAMETER IN SIZE UNLESS OTHERWISE PREVIOUSLY APPROVED BY THE DEPARTMENT.
2. MINIMUM DEPTH OF SERVICE LATERAL SHALL BE 3 FEET.

CITY of DELRAY BEACH PUBLIC WORKS DEPARTMENT 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444	TYPICAL CLEANOUT	DATE: 10-04-2024 WW 10.0

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CHECKED BY:	SJ

SHEET TITLE

DETAILS
(CITY OF DELRAY BEACH)

SHEET NUMBER

C05.05

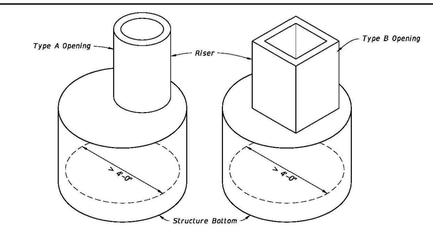
GENERAL NOTES:

1. Work this Index with Specification 425 and Index 425-001.
2. Type P standard structure bottoms are 4'-0"diameter and smaller (Alt. A) and 3'-6" square (Alt. B) . Larger standard structure bottoms are designated Type J. Risers are permitted for all structures.
3. Walls of circular structures (Alt. A) constructed in place may be of brick or reinforced concrete. Construct precast and rectangular structures (Alt. B) with reinforced concrete only.
4. Wall thickness and reinforcement are for either reinforced cast-in-place or precast concrete units except that precast circular units may be furnished with walls in accordance with ASTM C478 (See Table 1).
5. Top and bottom slab thickness and reinforcement are for precast and cast-in-place construction. Use Class II concrete, except when Class IV concrete is shown in the Plans.
6. Alt. A or Alt. B structure bottoms may be used in conjunction with curb inlet tops Types 1, 2, 3, 4, 5, 6, 9, and 10, and any manhole or junction box. Alt. B structure bottoms may be used in conjunction with curb inlet Types 7 & 8, or any ditch bottom inlet.
7. Rectangular structures may be rotated as directed by the Engineer in order to facilitate connections between the structure walls and pipes.
8. Use straight embedment reinforcement in top and bottom slabs ,except when ACI hooks are specifically required.
9. Construct corner fillets as shown for rectangular structures used with circular risers and inlet throats, and when used on skew with rectangular risers, inlets, and inlet throats. Construct fillets in the top slab of the Alt. A structure bottoms when used with the Type B risers. Reinforce each fillet with two #5 bars.
10. Units larger than specified standards may be substituted at the contractor's option when these units will not cause or increase the severity of utility conflicts. Furnish such larger units at no additional cost to the Department. Larger Alt. A units cannot replace Alt. B units without approval of the Engineer. This Note applies to this Index only.

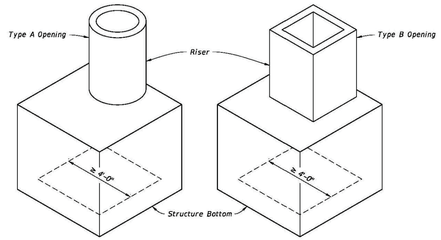
REINFORCEMENT NOTES:

1. Locate wall reinforcement in rectangular structures as shown in the WALL REINFORCEMENT SPLICE DETAILS in Index 425-001.
2. Provide a minimum 2"clear cover for all reinforcement unless otherwise noted and except for 36"diameter ASTM C478 units.
3. Additional bars used to restrain hole formers for precast structures with grouted pipe connections may be left flush with the hole surface.
4. Cut or bend reinforcement at pipe openings to maintain cover.
5. Remove exposed ends of reinforcing at precast pipe openings and grouted joints to 1" below the concrete surface and seal with a Type F Epoxy meeting the requirements of Specification 926.
6. Equivalent area smooth or deformed welded wire reinforcement may be substituted in accordance with Index 425-001.

TABLE OF CONTENTS:

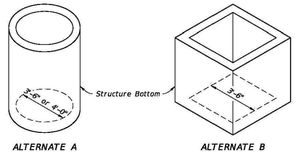


ALTERNATE A



ALTERNATE B

TYPE J



ALTERNATE A ALTERNATE B

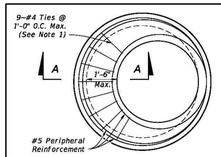
TYPE P

LAST REVISION	DESCRIPTION:
11/01/20	

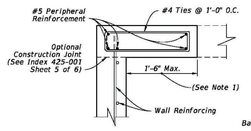
FDOT FY 2024-25 STANDARD PLANS

STRUCTURE BOTTOMS TYPE J AND P

INDEX 425-010 SHEET 1 of 4

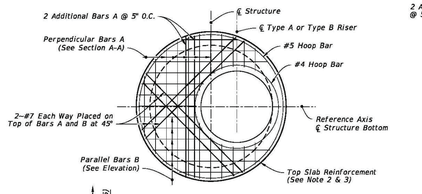


PLAN



SECTION A–A

SPECIAL TOP SLAB



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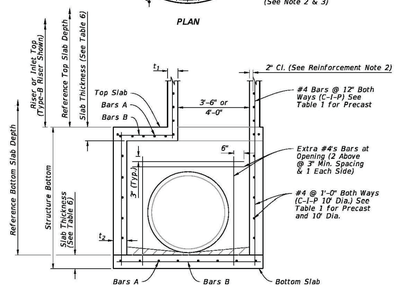
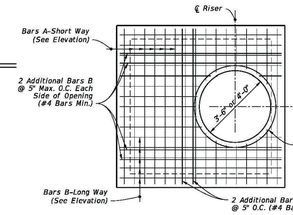


ELEVATION

TYPE J BOTTOM - ALTERNATE A

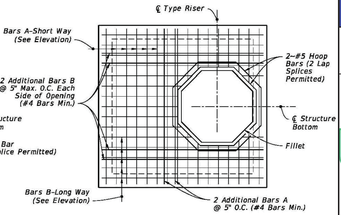
ALTERNATE A NOTES:

1. Rotate #4 Bars as required to maintain cover.
2. Construct the top or riser of the structure according the top slab to the "Special Top Slab" details, when the inside diameter of a round structure is not more than 1'-6" larger than the opening in the riser or top slab.
3. Alternate A slab reinforcing not applicable for Type A, B, C, D & E Ditch Bottom Inlets or Type S & V Gutter Inlets. See Indexes 425-040, 425-041, 425-050, 425-051, and 425-052.



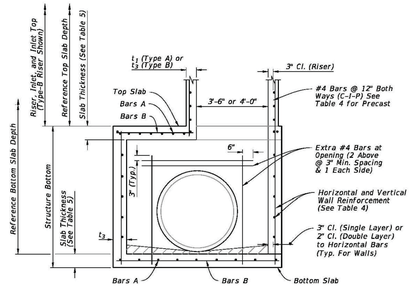
TYPE A - ROUND RISER OPENING

PLAN



TYPE B - SQUARE RISER OPENING

PLAN



ELEVATION

TYPE J BOTTOM - ALTERNATE B

DIMENSIONAL AND REINFORCING DETAILS

LAST REVISION	DESCRIPTION:
11/01/20	

FDOT FY 2024-25 STANDARD PLANS

STRUCTURE BOTTOMS TYPE J AND P

INDEX 425-010 SHEET 2 of 4

TABLE 1 - ALTERNATE A - STRUCTURES

TYPE	STRUCTURE/RISER DIAMETER (ft)	CAST-IN-PLACE ITEMS CLASS II CONCRETE			PRECAST ITEMS				
					CLASS II CONCRETE			ASTM C478	
		t_1 RISER (in.)	t_2 BOTTOM (in.)	A_S (in^2/ft.)	t_1 RISER (in.)	t_2 BOTTOM (in.)	A_S (in^2/ft.)	t_1 or t_2 (in.)	A_s*** (in^2/ft.)
P	3'-6"	6	8	0.20	6	8	0.20	4**	0.105
P	4'-0"	6	8	0.20	6	8	0.20	5**	0.120
J	3'-0"	–	8	0.20	–	8	0.20	6**	0.150
J	6'-0"	–	8	0.20	–	8	0.20	6	0.180
J	7'-0"	–	8	0.20	–	8	0.20	7	0.210
J	8'-0"	–	8	0.20	–	8	0.20	8	0.240
J	10'-0"	–	10	0.40##	–	10	0.40##	10	0.300
J	12'-0"	–	10	0.40##	–	12	0.40##	12	0.360

t_1 and t_2= Wall Thickness.

A_S= Vertical and horizontal areas of reinforcement.

##Provide 0.20 eq. in.²/ft. at each face, 12" max. bar spacing.

**Modified minimum wall thickness.

***Min. total circumferential reinforcement for continuous steel hoops:

A2 = 0.40 sq. in. for riser section height equal or less than 2'-0" (2 hoop min.)

A_s = 0.60 sq. in. for riser section height more than 2'-0" up to 4'-0" (3 hoop min.)

Areas of reinforcing for precast items are based on Grade 60 reinforcing.

No reduction in the area of reinforcement is allowed for welded wire fabric in Table 1.

Area of vertical reinforcing may be reduced in accordance with ASTM C478.

TABLE 2 - ALTERNATE B SQUARE AND RECTANGULAR STRUCTURES

TYPE	WALL LENGTH (FT)	MAX. DEPTH (FT)	WALL THICKNESS (t_3) C-i-P (in.)	PRECAST (in.)
P	≤3'-6"	40	6 Riser 8 Bottom	6
J	4'-0"	40	8	6
J	5'-0"	22	–	6
J	6'-0"	15	–	6
J	5'-0"to9'-0"	40	8	8
J	10'-0"	26	8	8
J	10'-0"to12'-0"	40	10	9
J	16'-0"	35	–	9
J	16'-0"	40	10	10
J	20'-0"	25	–	9
J	20'-0"	30	10	10

See Table 4 for Reinforcing Schedule.

TABLE 3 - REINFORCING SCHEDULE

SCHEDULE	GRADE 60 AREA (in^2/ft.)	GRADE 60 AND 65 KSI & 70 KSI WELDED WIRE REINFORCING MAXIMUM SPACING: GR 60 BARS (in.)	WWR EQUIV. AREA: 65 KSI (in.)	70 KSI (in.)
A12	0.20	12	8	8
A6	0.20	6	5	4½
B10	0.24	10	8	7½
B5.5	0.24	5½	5	4
C6.5	0.37	6½	6	5
C3.5	0.37	3½	3	2½
D7	0.53	7	6	5
D4.5	0.53	4½	4	3½
E5	0.73	5	4	4
E3	0.73	3	3	3
F5	1.06	5	4	4
F3.5	1.06	3½	3	3
G5	1.45	5	4	4
G3.5	1.45	3½	3	3
H4	1.75	4	3	3

TABLE 4 - WALL DESIGNS - RECTANGULAR STRUCTURES

VERTICAL REINFORCING WALL DEPTH	VERTICAL REINFORCING SCHEDULE	HORIZONTAL REINFORCING WALL DEPTH	HORIZONTAL REINFORCING SCHEDULE	WALL THICKNESS
SIZE: 3'-6" & RISER				
≥1.17' – 40'	A12	≥1.17' < 10'	B10	6"/8"
		10' < 18'	B5.5	6"/8"
		18' < 29'	C6.5	6"/8"
		29' – 40'	C3.5	6"/8"
SIZE: 4'-0"				
≥1.17' – 40'	A12	≥1.17' < 6'	B10	6"/8"
		6' < 10'	B5.5	6"/8"
		10' < 20'	C6.5	6"/8"
		20' < 28'	C3.5	6"/8"
		28' – 40'	D4.5	6"/8"
SIZE: 5'-0"				
≥1.17' – 40'	A12	≥1.17' < 5'	B5.5	6"/8"
		5' < 9'	C6.5	6"/8"
		9' < 15'	C3.5	6"/8"
		15' < 22'	D4.5	6"/8"
		22' – 40'	E3	8"
SIZE: 6'-0"				
≥1.17' < 26'	A12	≥1.17' < 9'	C3.5	6"/8"
		9' < 15'	D4.5	6"/8"
		15' < 26'	E3	8"
	Inside/Outside		Inside/Outside	
26' – 40'	A12 / A12	26' – 40'	D7 / D7	8"
SIZE: 7'-0"				
	Inside/Outside		Inside/Outside	
≥1.17' < 25'	A12 / A12	≥1.17' < 7'	B10 / B10	8"
26' – 40'	B10 / B10	7' < 10'	B5.5 / B5.5	8"
		10' < 20'	C6.5 / C6.5	8"
		20' < 30'	D7 / D7	8"
		30' – 40'	E5 / E5	8"
SIZE: 8'-0"				
	Inside/Outside		Inside/Outside	
≥1.17' < 20'	A12 / A12	≥1.17' < 6'	B5.5 / B5.5	8"
20' – 40'	C6.5 / C6.5	6' < 13'	C6.5 / C6.5	8"
		13' < 22'	D7 / D7	8"
		22' < 31'	E5 / E5	8"
		31' – 40'	F5 / F5	8"
SIZE: 9'-0"				
	Inside/Outside		Inside/Outside	
≥1.17' < 12'	A12 / A12	≥1.17' < 8'	C6.5 / C6.5	8"
12' < 28'	C6.5 / C6.5	8' < 15'	D7 / D7	8"
28' – 40'	D7 / D7	15' < 23'	E5 / E5	8"
		23' – 40'	F5 / F5	8"
SIZE: 10'-0"				
	Inside/Outside		Inside/Outside	
≥1.17' < 10'	B10 / B10	≥1.17' < 10'	D7 / D7	8"
10' < 21'	C6.5 / C6.5	10' < 17'	E5 / E5	8"
21' < 26'	D7 / D7	17' < 26'	F5 / F5	8"
26' – 40'	C6.5 / C6.5	26' – 40'	F5 / F5	10"

VERTICAL REINFORCING WALL DEPTH	VERTICAL REINFORCING SCHEDULE	HORIZONTAL REINFORCING WALL DEPTH	HORIZONTAL REINFORCING SCHEDULE	WALL THICKNESS
SIZE: 10'-0" (Precast Only)				
	Inside/Outside		Inside/Outside	
26' – 40'	D7 / D7	26' – 40'	F5 / F5	9"
SIZE: 12'-0"				
	Inside/Outside		Inside/Outside	
≥1.17' < 14'	B10 / B10	≥1.17' < 10'	C6.5 / C6.5	10"
14' < 25'	C6.5 / C6.5	10' < 17'	D7 / D7	10"
25' – 40'	D7 / D7	17' < 24'	E5 / E5	10"
		24' – 40'	F5 / F5	10"
SIZE: 12'-0" (Precast Only)				
	Inside/Outside		Inside/Outside	
≥1.17' < 12'	B10 / B10	≥1.17' < 10'	D7 / D7	9"
12' < 24'	C6.5 / C6.5	10' < 17'	D4.5 / D4.5	9"
24' – 40'	D7 / D7	17' < 23'	E5 / E5	9"
		23' < 32'	F5 / F5	9"
		32' – 40'	G5 / G5	9"
SIZE: 16'-0"				
	Inside/Outside		Inside/Outside	
≥1.17' < 11'	C6.5 / C6.5	≥1.17' < 13'	D7 / D7	10"
11' < 20'	D7 / D7	13' < 20'	E5 / E5	10"
20' < 28'	E5 / E5	20' < 28'	F5 / F5	10"
28' – 40'	F5 / F5	28' – 40'	G5 / G5	10"
SIZE: 16'-0" (Precast Only)				
	Inside/Outside		Inside/Outside	
≥1.17' < 10'	C6.5 / C6.5	≥1.17' < 9'	D7 / D7	9"
10' < 18'	D7 / D7	9' < 13'	D4.5 / D4.5	9"
18' < 25'	E5 / E5	13' < 19'	E5 / E5	9"
25' – 35'	F5 / F5	19' < 27'	F5 / F5	9"
		27' – 35'	G5 / G5	9"
SIZE: 20'-0"				
	Inside/Outside		Inside/Outside	
≥1.17' < 10'	C6.5 / C6.5	≥1.17' < 8'	D7 / D7	10"
10' < 17'	D7 / D7	8' < 12'	E5 / E5	10"
17' – 30'	E5 / E5	12' < 20'	F5 / F5	10"
		20' – 30'	G5 / G5	10"
SIZE: 20'-0" (Precast Only)				
	Inside/Outside		Inside/Outside	
≥1.17' < 8'	C6.5 / C6.5	≥1.17' < 8'	D4.5 / D4.5	9"
8' < 13'	D7 / D7	8' < 12'	E5 / E5	9"
13' – 25'	E5 / E5	12' < 19'	F5 / F5	9"
		19' – 25'	G5 / G5	9"

TABLE 4 NOTES:

1. Wall depth is measured to the top of the bottom slab for boxes and to the top of the intermediate slab for risers.
2. Wall height is the distance between top of lower slab to bottom of upper slab. Maximum wall height is 12' for wall lengths exceeding 9', or 10' for wall lengths exceeding 12'.
3. Wall lengths exceeding 6'-0" require two layers of reinforcing (See Table 4) with 2" of cover from the horizontal bars to the inside and outside faces for each layer.
4. Wall lengths exceeding the dimensions or depths shown in Table 4, or 12'-0" diameter require a special design.
5. Wall thickness and reinforcing for rectangular structures is based on the longer wall length.

TABLES 1, 2, 3, AND 4

LAST REVISION	DESCRIPTION:
11/01/20	

FDOT FY 2024-25 STANDARD PLANS

STRUCTURE BOTTOMS TYPE J AND P

INDEX 425-010 SHEET 3 of 4

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ISSUE	BY	DATE	DESCRIPTION
	DR	05/15/25	ISSUE FOR PERMIT

PROJECT INFORMATION BLOCK

JOB #	240661
DATE:	12/31/24
DRAWN BY:	IEG
CHECKED BY:	SJ

SHEET TITLE

FDOT DETAILS

SHEET NUMBER

C05.05

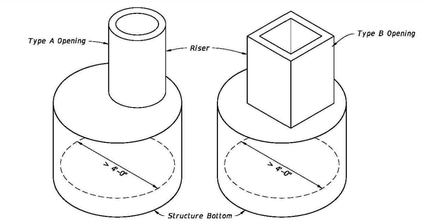
GENERAL NOTES:

1. Work this Index with Specification 425 and Index 425-001.
2. Type P standard structure bottoms are 4'-0"diameter and smaller (Alt. A) and 3'-6" square (Alt. B) . Larger standard structure bottoms are designated Type J. Risers are permitted for all structures.
3. Walls of circular structures (Alt. A) constructed in place may be of brick or reinforced concrete. Construct precast and rectangular structures (Alt. B) with reinforced concrete only.
4. Wall thickness and reinforcement are for either reinforced cast-in-place or precast concrete units except that precast circular units may be furnished with walls in accordance with ASTM C478 (See Table 1).
5. Top and bottom slab thickness and reinforcement are for precast and cast-in-place construction. Use Class II concrete, except when Class IV concrete is shown in the Plans.
6. Alt. A or Alt. B structure bottoms may be used in conjunction with curb inlet tops Types 1, 2, 3, 4, 5, 6, 9, and 10, and any manhole or junction box. Alt. B structure bottoms may be used in conjunction with curb inlet Types 7 & 8, or any ditch bottom inlet.
7. Rectangular structures may be rotated as directed by the Engineer in order to facilitate connections between the structure walls and pipes.
8. Use straight embedment reinforcement in top and bottom slabs ,except when ACI hooks are specifically required.
9. Construct corner fillets as shown for rectangular structures used with circular risers and inlet throats, and when used on skew with rectangular risers, inlets, and inlet throats. Construct fillets in the top slab of the Alt. A structure bottoms when used with the Type B risers. Reinforce each fillet with two #5 bars.
10. Units larger than specified standards may be substituted at the contractor's option when these units will not cause or increase the severity of utility conflicts. Furnish such larger units at no additional cost to the Department. Larger Alt. A units cannot replace Alt. B units without approval of the Engineer. This Note applies to this Index only.

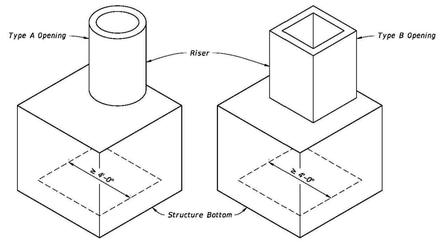
REINFORCEMENT NOTES:

1. Locate wall reinforcement in rectangular structures as shown in the WALL REINFORCEMENT SPLICE DETAILS in Index 425-001.
2. Provide a minimum 2"clear cover for all reinforcement unless otherwise noted and except for 36"diameter ASTM C478 units.
3. Additional bars used to restrain hole formers for precast structures with grouted pipe connections may be left flush with the hole surface.
4. Cut or bend reinforcement at pipe openings to maintain cover.
5. Remove exposed ends of reinforcing at precast pipe openings and grouted joints to 1" below the concrete surface and seal with a Type F Epoxy meeting the requirements of Specification 926.
6. Equivalent area smooth or deformed welded wire reinforcement may be substituted in accordance with Index 425-001.

TABLE OF CONTENTS:

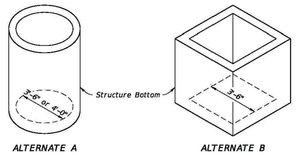


ALTERNATE A



ALTERNATE B

TYPE J



ALTERNATE A ALTERNATE B

TYPE P

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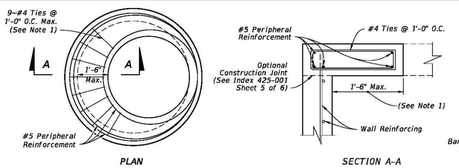
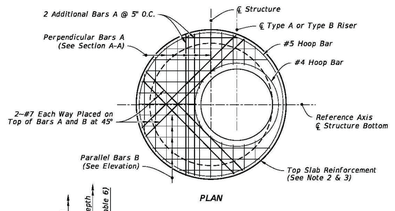
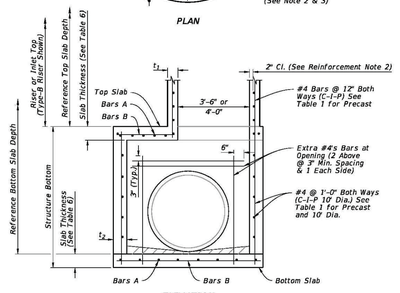


PLAN SECTION A–A

SPECIAL TOP SLAB



PLAN

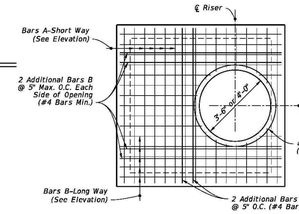


ELEVATION

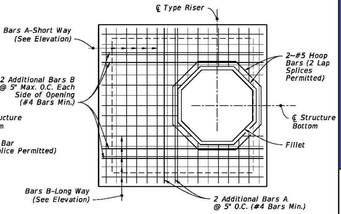
TYPE J BOTTOM - ALTERNATE A

ALTERNATE A NOTES:

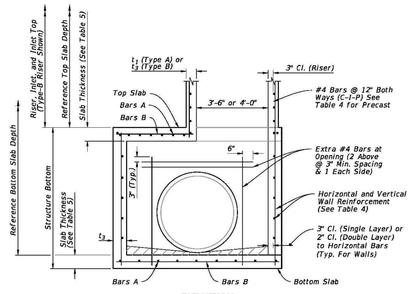
1. Rotate #4 Bars as required to maintain cover.
2. Construct the top or riser of the structure according the top slab to the "Special Top Slab" details, when the inside diameter of a round structure is not more than 1'-6" larger than the opening in the riser or top slab.
3. Alternate A slab reinforcing not applicable for Type A, B, C, D & E Ditch Bottom Inlets or Type S & V Gutter Inlets. See Indexes 425-040, 425-041, 425-050, 425-051, and 425-052.



TYPE A - ROUND RISER OPENING PLAN



TYPE B - SQUARE RISER OPENING PLAN



ELEVATION

TYPE J BOTTOM - ALTERNATE B

DIMENSIONAL AND REINFORCING DETAILS

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TABLE 1 - ALTERNATE A - STRUCTURES

TYPE	STRUCTURE/RISER DIAMETER (ft)	CAST-IN-PLACE ITEMS CLASS II CONCRETE			PRECAST ITEMS				
					CLASS II CONCRETE			ASTM C478	
		t_1 RISER (in.)	t_2 BOTTOM (in.)	A_S (in^2/ft.)	t_1 RISER (in.)	t_2 BOTTOM (in.)	A_S (in^2/ft.)	t_1 or t_2 (in.)	A_S*** (in^2/ft.)
P	3'-6"	6	8	0.20	6	8	0.20	4**	0.105
P	4'-0"	6	8	0.20	6	8	0.20	5**	0.120
J	5'-0"	–	8	0.20	–	8	0.20	6**	0.150
J	6'-0"	–	8	0.20	–	8	0.20	6	0.180
J	7'-0"	–	8	0.20	–	8	0.20	7	0.210
J	8'-0"	–	8	0.20	–	8	0.20	8	0.240
J	10'-0"	–	10	0.40##	–	10	0.40##	10	0.300
J	12'-0"	–	10	0.40##	–	12	0.40##	12	0.360

t_1 and t_2– Wall Thickness.
A_S– Vertical and horizontal areas of reinforcement.
##Provide 0.20 eq. in^2/ft. at each face, 12" max. bar spacing.
**Modified minimum wall thickness.
***Min. total circumferential reinforcement for continuous steel hoops:
A2 = 0.40 sq. in. for riser section height equal or less than 2'-0" (2 hoop min.)
A_S = 0.60 sq. in. for riser section height more than 2'-0" up to 4'-0" (3 hoop min.)
Areas of reinforcing for precast items are based on Grade 60 reinforcing.
No reduction in the area of reinforcement is allowed for welded wire fabric in Table 1.
Area of vertical reinforcing may be reduced in accordance with ASTM C478.

TABLE 2 - ALTERNATE B SQUARE AND RECTANGULAR STRUCTURES

TYPE	WALL LENGTH (FT)	MAX. DEPTH (FT)	WALL THICKNESS (t_3)	
			C-I-P (in.)	PRECAST (in.)
P	≤ 3'-6"	40	6 Riser 8 Bottom	6
J	4'–0"	40	8	6
J	5'–0"	22	–	6
J	6'–0"	15	–	6
J	5'–0"to9'–0"	40	8	8
J	10'–0"	26	8	8
J	10'–0"to12'–0"	40	10	9
J	16'–0"	35	–	9
J	16'–0"	40	10	10
J	20'–0"	25	–	9
J	20'–0"	30	10	10

See Table 4 for Reinforcing Schedule.

TABLE 3 - REINFORCING SCHEDULE

SCHEDULE	GRADE 60 BARS OR 65 KSI & 70 KSI WELDED WIRE REINFORCING			
	GRADE 60 AREA (in^2 /ft)	MAXIMUM SPACING		
		GR 60 BARS (in.)	WWR EQUIV. AREA	
			65 KSI (in.)	70 KSI (in.)
A12	0.20	12	8	8
A6	0.20	6	5	4½
B10	0.24	10	8	7½
B5.5	0.24	5½	5	4
C6.5	0.37	6½	6	5
C3.5	0.37	3½	3	2½
D7	0.53	7	6	5
D4.5	0.53	4½	4	3½
E5	0.73	5	4	4
E3	0.73	3	3	3
F5	1.06	5	4	4
F3.5	1.06	3½	3	3
G5	1.45	5	4	4
G3.5	1.45	3½	3	3
H4	1.75	4	3	3

TABLE 4 - WALL DESIGNS - RECTANGULAR STRUCTURES

VERTICAL REINFORCING		HORIZONTAL REINFORCING		WALL THICKNESS
WALL DEPTH	SCHEDULE	WALL DEPTH	SCHEDULE	
SIZE: 3'-6" & RISER				
≥1.17' – 40'	A12	≥1.17' < 10'	B10	6"/8"
		10' < 18'	B5.5	6"/8"
		18' < 29'	C6.5	6"/8"
		29' – 40'	C3.5	6"/8"
SIZE: 4'-0"				
≥1.17' – 40'	A12	≥1.17' < 6'	B10	6"/8"
		6' < 10'	B5.5	6"/8"
		10' < 20'	C6.5	6"/8"
		20' < 28'	C3.5	6"/8"
		28' – 40'	D4.5	6"/8"
SIZE: 5'-0"				
≥1.17' – 40'	A12	≥1.17' < 5'	B5.5	6"/8"
		5' < 9'	C6.5	6"/8"
		9' < 15'	C3.5	6"/8"
		15' < 22'	D4.5	6"/8"
		22' – 40'	E3	8"
SIZE: 6'-0"				
≥1.17' < 26'	A12	≥1.17' < 9'	C3.5	6"/8"
		9' < 15'	D4.5	6"/8"
		15' < 26'	E3	8"
	Inside/Outside		Inside/Outside	
26' – 40'	A12 / A12	26' – 40'	D7 / D7	8"
SIZE: 7'-0"				
	Inside/Outside		Inside/Outside	
≥1.17' < 25'	A12 / A12	≥1.17' < 7'	B10 / B10	8"
26' – 40'	B10 / B10	7' < 10'	B5.5 / B5.5	8"
		10' < 20'	C6.5 / C6.5	8"
		20' < 30'	D7 / D7	8"
		30' – 40'	E5 / E5	8"
SIZE: 8'-0"				
	Inside/Outside		Inside/Outside	
≥1.17' < 20'	A12 / A12	≥1.17' < 6'	B5.5 / B5.5	8"
20' – 40'	C6.5 / C6.5	6' < 13'	C6.5 / C6.5	8"
		13' < 22'	D7 / D7	8"
		22' < 31'	E5 / E5	8"
		31' – 40'	F5 / F5	8"
SIZE: 9'-0"				
	Inside/Outside		Inside/Outside	
≥1.17' < 12'	A12 / A12	≥1.17' < 8'	C6.5 / C6.5	8"
12' < 28'	C6.5 / C6.5	8' < 15'	D7 / D7	8"
28' – 40'	D7 / D7	15' < 23'	E5 / E5	8"
		23' – 40'	F5 / F5	8"
SIZE: 10'-0"				
	Inside/Outside		Inside/Outside	
≥1.17' < 10'	B10 / B10	≥1.17' < 10'	D7 / D7	8"
10' < 21'	C6.5 / C6.5	10' < 17'	E5 / E5	8"
21' < 26'	D7 / D7	17' < 26'	F5 / F5	8"
26' – 40'	C6.5 / C6.5	26' – 40'	F5 / F5	10"

VERTICAL REINFORCING		HORIZONTAL REINFORCING		WALL THICKNESS
WALL DEPTH	SCHEDULE	WALL DEPTH	SCHEDULE	
SIZE: 10'-0" (Precast Only)				
	Inside/Outside		Inside/Outside	
26' – 40'	D7 / D7	26' – 40'	F5 / F5	9"
SIZE: 12'-0"				
	Inside/Outside		Inside/Outside	
≥1.17' < 14'	B10 / B10	≥1.17' < 10'	C6.5 / C6.5	10"
14' < 25'	C6.5 / C6.5	10' < 17'	D7 / D7	10"
25' – 40'	D7 / D7	17' < 24'	E5 / E5	10"
		24' – 40'	F5 / F5	10"
SIZE: 12'-0" (Precast Only)				
	Inside/Outside		Inside/Outside	
≥1.17' < 12'	B10 / B10	≥1.17' < 10'	D7 / D7	9"
12' < 24'	C6.5 / C6.5	10' < 17'	D4.5 / D4.5	9"
24' – 40'	D7 / D7	17' < 23'	E5 / E5	9"
		23' < 32'	F5 / F5	9"
		32' – 40'	G5 / G5	9"
SIZE: 16'-0"				
	Inside/Outside		Inside/Outside	
≥1.17' < 11'	C6.5 / C6.5	≥1.17' < 13'	D7 / D7	10"
11' < 20'	D7 / D7	13' < 20'	E5 / E5	10"
20' < 28'	E5 / E5	20' < 28'	F5 / F5	10"
28' – 40'	F5 / F5	28' – 40'	G5 / G5	10"
SIZE: 16'-0" (Precast Only)				
	Inside/Outside		Inside/Outside	
≥1.17' < 10'	C6.5 / C6.5	≥1.17' < 9'	D7 / D7	9"
10' < 18'	D7 / D7	9' < 13'	D4.5 / D4.5	9"
18' < 25'	E5 / E5	13' < 19'	E5 / E5	9"
25' – 35'	F5 / F5	19' < 27'	F5 / F5	9"
		27' – 35'	G5 / G5	9"
SIZE: 20'-0"				
	Inside/Outside		Inside/Outside	
≥1.17' < 10'	C6.5 / C6.5	≥1.17' < 8'	D7 / D7	10"
10' < 17'	D7 / D7	8' < 12'	E5 / E5	10"
17' – 30'	E5 / E5	12' < 20'	F5 / F5	10"
		20' – 30'	G5 / G5	10"
SIZE: 20'-0" (Precast Only)				
	Inside/Outside		Inside/Outside	
≥1.17' < 8'	C6.5 / C6.5	≥1.17' < 8'	D4.5 / D4.5	9"
8' < 13'	D7 / D7	8' < 12'	E5 / E5	9"
13' – 25'	E5 / E5	12' < 19'	F5 / F5	9"
		19' – 25'	G5 / G5	9"

TABLE 4 NOTES:

1. Wall depth is measured to the top of the bottom slab for boxes and to the top of the intermediate slab for risers.
2. Wall height is the distance between top of lower slab to bottom of upper slab. Maximum wall height is 12' for wall lengths exceeding 5', or 10' for wall lengths exceeding 12.
3. Wall lengths exceeding 6'-0" require two layers of reinforcing (See Table 4) with 2" of cover from the horizontal bars to the inside and outside faces for each layer.
4. Wall lengths exceeding the dimensions or depths shown in Table 4, or 12'-0" diameter require a special design.
5. Wall thickness and reinforcing for rectangular structures is based on the longer wall length.

TABLES 1, 2, 3, AND 4

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SEAL NISIT SAPPARKHAO, P.E.
FL REG. NO. 64085

DATE

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ISSUE	BY	DATE	DESCRIPTION
	DR	05/15/25	ISSUE FOR PERMIT
1	DR	10/03/25	RAI ROUND 1

PROJECT INFORMATION

JOB #	240661
DATE:	12/31/24
DRAWN BY:	IEG
CHECKED BY:	SJ

SHEET TITLE

FDOT DETAILS

SHEET NUMBER

C05.06

GENERAL NOTES:

1. Unless otherwise designated in the plans, concrete pipe mitered end sections may be used with any type of cross drain pipe; corrugated steel pipe mitered end sections may be used with any type of cross drain pipe except aluminum pipe; and, corrugated aluminum mitered end sections may be used with any type of cross drain pipe except steel pipe. When bituminous coated metal pipe is specified for cross drain pipe, construct the mitered end sections with like pipe or concrete pipe. When the mitered end section pipe is dissimilar to the cross drain pipe, construct a concrete jacket in accordance with Index 430-001.

2. Use either corrugated metal or concrete mitered end sections for corrugated polyethylene pipe (HDPE), polyvinyl-chloride pipe (PVC), steel reinforced polyethylene pipe (SRPE), and polypropylene pipe (PP). When used in conjunction with corrugated mitered end sections, make connection using either a formed metal band specifically designated to join HDPE, PVC, SRPE, or PP pipe, with metal pipe. When used in conjunction with a concrete mitered end sections, construct concrete jacket in accordance with Index 430-001.

3. Class NS concrete cast-in-place reinforced slabs are required for all sizes of cross drain pipes. Construct slabs at 5½" thick, unless 3" thickness is called for in the Plans.

4. Select lengths of concrete pipe that avoid excessive connections in the assembly of the mitered end section.

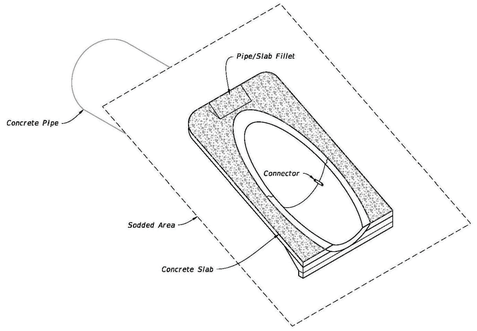
5. Repair corrugated metal pipe galvanizing that is damaged during beveling and perforating.

6. When existing multiple cross drain pipes are spaced other than the dimensions shown in this Index, have nonparallel axes, or non-uniform sections, either construct the mitered end sections separately as single pipe or collectively as multiple pipe end sections as directed by the Engineer.

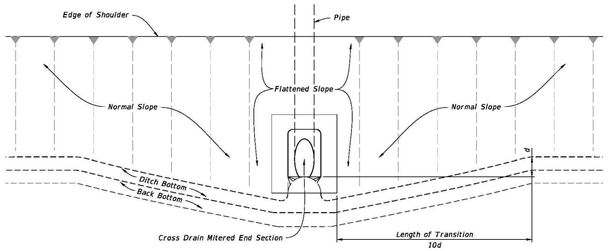
7. Saddle Slope:
   1:4 Miter – Slope to ℄ of pipe for round pipes less than or equal to 18" diameter and 1:1 for round pipes greater than or equal to 24" diameter.
   Slope to the major axis for elliptical pipes 24"x38" or smaller and 1:2 for pipes 29"x45" or larger.
   Slope to the span line for pipe arch 28"x20" or smaller and 1:2 for pipe arch 35"x24" or larger.

   1:2 Miter – Slope to ℄ of pipe for round pipes less than or equal to 18"diameter and 1:2 for round pipes greater than or equal to 24" diameter.
   Slope to the major axis for elliptical pipes 29"x45" or smaller and 1:1 for pipes 34"x53" or larger.
   Slope 1:1 for all pipe arch sizes.

8. Quantities shown are for estimating purposes only.



CROSS DRAIN MITERED END SECTION
(Concrete Pipe Shown, Corrugated Metal Pipe Similar)



SLOPE AND DITCH TRANSITIONS

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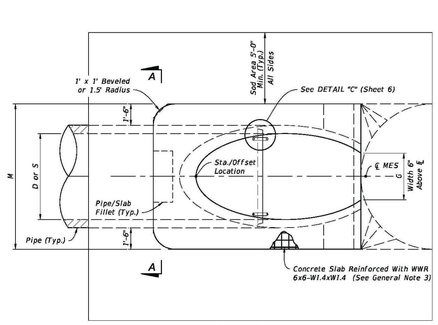
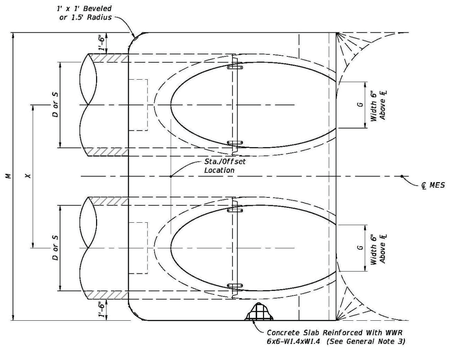
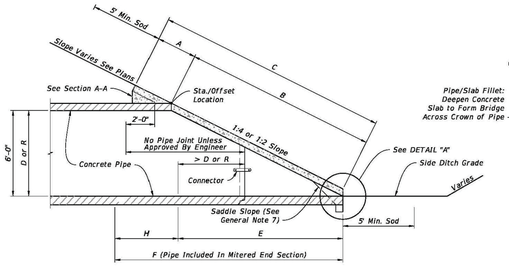


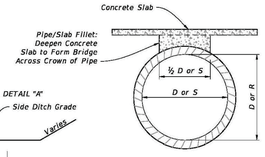
PLAN - SINGLE PIPE



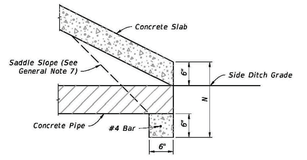
PLAN - MULTIPLE PIPE



ELEVATION



SECTION A-A
(Pipe/Slab Fillet)



DETAIL "A"

ROUND CONCRETE PIPE
(Elliptical Pipe Similar)

NOTE: See Table 1 on Sheet 3 for Dimensions and Quantities.

SINGLE AND MULTIPLE CONCRETE PIPE

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2024-25 STANDARD PLANS	CROSS DRAIN MITERED END SECTION	INDEX	SHEET
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TABLE 1
SINGLE AND MULTIPLE CONCRETE PIPE DIMENSIONS AND QUANTITIES

		Dia. D	Rise R	Span S	X	A	B	C	E	F	G	H	M				N	5½" CONC. SLAB (CY) (See General Note 3)				3" CONC. SLAB (CY) (See General Note 3)				SODDING (SY)			
													Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe		Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
Round Concrete Pipe	1:2 Slope	15"	—	—	2'-7"	1.92'	2.18'	4.10'	2.06'	5'	1.22'	2.9'	4.63'	7.23'	9.79'	12.37'	1.19'	0.38	0.58	0.77	0.96	0.27	0.40	0.54	0.67	21	24	27	30
		18"	—	—	2'-10"	1.97'	2.74'	4.71'	2.56'	6'	1.41'	3.4'	4.92'	7.75'	10.58'	13.42'	1.21'	0.44	0.65	0.87	1.09	0.31	0.45	0.60	0.75	22	25	28	31
		24"	—	—	3'-5"	2.06'	3.85'	5.91'	3.56'	7'	1.73'	3.4'	5.50'	8.92'	12.33'	15.75'	1.25'	0.54	0.83	112	1.42	0.39	0.59	0.79	1.00	24	28	32	35
		30"	—	—	4'-3"	2.15'	4.95'	7.10'	4.56'	8'	2.00'	3.4'	6.08'	10.33'	14.58'	18.83'	1.29'	0.66	1.09	1.50	1.91	0.46	0.76	1.04	1.32	26	31	35	40
		36"	—	—	5'-1"	2.25'	6.08'	8.33'	5.56'	9'	2.24'	3.4'	6.67'	11.75'	16.83'	21.92'	1.33'	0.81	1.38	1.95	2.51	0.55	0.94	1.33	1.71	28	34	39	45
		42"	—	—	6'-0"	2.34'	7.21'	9.55'	6.56'	10'	2.45'	3.4'	7.25'	13.25'	19.25'	25.25'	1.38'	0.97	1.70	2.45	3.19	0.66	1.15	1.66	2.15	30	37	43	50
		48"	—	—	6'-9"	2.43'	8.33'	10.76'	7.56'	11'	2.65'	3.4'	7.83'	14.58'	21.33'	28.08'	1.42'	1.13	2.04	2.93	3.84	0.76	1.37	1.96	2.57	32	39	47	54
		54"	—	—	7'-8"	2.52'	9.44'	11.96'	8.56'	12'	2.83'	3.4'	8.42'	16.08'	23.75'	31.42'	1.46'	1.31	2.44	3.58	4.72	0.87	1.62	2.38	3.14	34	42	51	59
		60"	—	—	8'-6"	2.62'	10.56'	13.18'	9.56'	13'	3.00'	4.4'	9.00'	17.50'	26.00'	34.50'	1.50'	1.51	2.89	4.28	5.68	0.99	1.90	2.81	3.73	36	45	55	64
		66"	—	—	9'-2"	2.71'	11.68'	14.39'	10.56'	15'	3.18'	4.4'	9.58'	18.75'	27.92'	37.08'	1.54'	1.68	3.25	4.84	6.43	1.11	2.15	3.21	4.27	38	48	58	68
		72"	—	—	10'-0"	2.80'	12.80'	15.60'	11.56'	16'	3.30'	4.4'	10.16'	20.16'	30.16'	40.16'	1.58'	1.89	3.74	5.59	7.45	1.24	2.46	3.68	4.90	40	51	62	73
	1:4 Slope	15"	—	—	2'-7"	2.27'	4.09'	6.36'	4.03'	8'	1.22'	4.0'	4.63'	7.23'	9.79'	12.37'	1.19'	0.57	0.87	1.15	1.44	0.40	0.61	0.80	1.00	23	26	29	32
		18"	—	—	2'-10"	2.36'	5.12'	7.48'	5.03'	9'	1.41'	4.0'	4.92'	7.75'	10.58'	13.42'	1.21'	0.66	0.99	1.31	1.65	0.47	0.69	0.91	1.14	25	28	31	35
		24"	—	—	3'-5"	2.53'	7.18' △	9.71'	7.03' △	11'	1.73'	4.0'	5.50'	8.92'	12.33'	15.75'	1.25'	0.85	1.30	1.75	2.20	0.60	0.90	1.21	1.52	28	32	36	40
		30"	—	—	4'-3"	2.70'	9.25'	11.95'	9.03'	13'	2.00'	4.0'	6.08'	10.33'	14.58'	18.83'	1.29'	110	1.74	2.39	3.05	0.76	1.19	1.63	2.07	31	36	41	46
		36"	—	—	5'-1"	2.87'	11.31' ◇	14.18'	11.03' ◇	15'	2.24'	4.0'	6.67'	11.75'	16.83'	21.92'	1.33'	1.32	2.21	3.08	3.96	0.89	1.48	2.05	2.63	34	40	46	52
		42"	—	—	6'-0"	3.05'	13.37'	16.42'	13.03'	17'	2.45'	4.0'	7.25'	13.25'	19.25'	25.25'	1.38'	1.58	2.76	3.91	5.09	1.05	1.82	2.57	3.34	38	44	51	58
		48"	—	—	6'-9"	3.22'	15.43'	18.65'	15.03'	19'	2.65'	4.0'	7.83'	14.58'	21.33'	28.08'	1.42'	1.85	3.30	4.73	6.17	1.21	2.15	3.07	4.00	41	48	56	63
		54"	—	—	7'-8"	3.39'	17.49'	20.88'	17.03'	21'	2.83'	4.0'	8.42'	16.08'	23.75'	31.42'	1.46'	2.14	3.95	5.77	7.58	1.39	2.55	3.72	4.88	44	52	61	69
		60"	—	—	8'-6"	3.56'	19.55'	23.11'	19.03'	23'	3.00'	4.0'	9.00'	17.50'	26.00'	34.50'	1.50'	2.45	4.66	6.87	9.07	1.59	3.02	4.44	5.86	47	56	66	75
		66"	—	—	9'-2"	3.73'	21.62'	25.35'	21.03'	25'	3.18'	4.0'	9.58'	18.75'	27.92'	37.08'	1.54'	2.88	5.54	8.18	10.84	1.91	3.66	5.40	7.15	49	59	69	80
		72"	—	—	10'-0"	3.91'	23.68'	27.59'	23.03'	27'	3.30'	4.0'	10.16'	20.16'	30.16'	40.16'	1.58'	3.54	6.61	9.87	13.13	2.12	4.18	6.24	8.30	52	63	74	85
Elliptical Concrete Pipe	1:2 Slope	—	12"	18"	2'-10"	1.97'	1.62'	3.59'	1.56'	4'	1.50'	2.4'	4.92'	7.75'	10.58'	13.42'	1.21'	0.30	0.49	0.67	0.85	0.19	0.33	0.45	0.57	21	24	27	30
		—	14"	23"	3'-4"	2.01'	1.99'	4.00'	1.89'	5'	1.90'	3.1'	5.38'	8.71'	12.04'	15.38'	1.23'	0.37	0.59	0.81	1.02	0.25	0.40	0.55	0.69	22	26	29	33
		—	19"	30"	4'-0"	2.11'	2.92'	5.03'	2.73'	6'	2.31'	3.3'	6.04'	10.04'	14.04'	18.04'	1.27'	0.50	0.80	1.09	1.39	0.34	0.55	0.75	0.95	24	28	33	37
		—	24"	38"	5'-0"	2.20'	3.85'	6.05'	3.56'	7'	2.85'	3.4'	6.79'	11.79'	16.79'	21.79'	1.31'	0.62	1.03	1.45	1.86	0.43	0.71	1.00	1.28	26	31	37	42
		—	29"	45"	5'-11"	2.34'	4.79'	7.13'	4.39'	8'	3.18'	3.6'	7.50'	13.42'	19.33'	25.25'	1.38'	0.75	1.30	1.84	2.39	0.52	0.90	1.27	1.65	28	34	41	47
		—	34"	53"	7'-0"	2.43'	5.72'	8.15'	5.23'	9'	3.57'	3.8'	8.25'	15.25'	22.25'	29.25'	1.42'	0.90	1.61	2.32	3.03	0.62	1.11	1.60	2.09	30	37	45	53
		—	38"	60"	7'-10"	2.52'	6.46'	8.98'	5.89'	9'	3.95'	3.1'	8.92'	16.75'	24.58'	32.42'	1.46'	1.03	1.89	2.74	3.60	0.70	1.29	1.87	2.46	31	40	49	57
		—	43"	68"	8'-11"	2.62'	7.39'	10.01'	6.73'	10'	4.26'	3.6'	9.67'	18.58'	27.50'	36.42'	1.50'	1.19	2.26	3.33	4.40	0.81	1.54	2.26	2.99	33	43	53	63
		—	48"	76"	9'-11"	2.71'	8.33'	11.04'	7.56'	11'	4.59'	3.4'	10.42'	20.33'	30.25'	40.17'	1.54'	1.38	2.65	3.93	5.21	0.93	1.79	2.66	3.53	35	46	57	68
		—	53"	83"	10'-9"	2.80'	9.26'	12.06'	8.39'	12'	4.77'	3.6'	11.08'	21.75'	32.42'	43.08'	1.58'	1.55	3.03	4.50	5.96	1.04	2.04	3.03	4.02	37	49	61	73
		—	58"	91"	11'-8"	2.90'	10.19'	13.09'	9.23'	13'	5.01'	3.8'	11.83'	23.50'	35.17'	46.83'	1.63'	1.75	3.47	5.20	6.93	1.17	2.33	3.49	4.66	39	52	65	78
	1:4 Slope	—	12"	18"	2'-10"	2.36'	3.06'	5.42'	3.03'	5'	1.50'	2.0'	4.92'	7.75'	10.58'	13.42'	1.21'	0.45	0.68	0.92	1.14	0.30	0.45	0.61	0.76	23	26	29	32
		—	14"	23"	3'-4"	2.44'	3.75'	6.19'	3.70'	6'	1.90'	2.3'	5.38'	8.71'	12.04'	15.38'	1.23'	0.53	0.83	113	1.42	0.36	0.56	0.76	0.95	24	28	32	35
		—	19"	30"	4'-0"	2.62'	5.47'	8.09'	5.36'	8'	2.37'	2.6'	6.04'	10.04'	14.04'	18.04'	1.27'	0.74	115	1.57	1.98	0.51	0.79	1.08	1.36	27	32	36	40
		—	24"	38"	5'-0"	2.79'	7.18'	9.97'	7.03'	10'	2.85'	3.0'	6.79'	11.79'	16.79'	21.79'	1.31'	0.97	1.57	2.19	2.81	0.68	1.10	1.53	1.96	30	36	41	47
		—	29"	45"	5'-11"	3.05'	8.90'	11.95'	8.70'	12'	3.39'	3.3'	7.50'	13.42'	19.33'	25.25'	1.38'	1.22	2.07	2.92	3.77	0.86	1.45	2.04	2.63	33	40	46	53
		—	34"	53"	7'-0"	3.22'	10.62'	13.84'	10.36'	13'	3.57'	2.6'	8.25'	15.25'	22.25'	29.25'	1.42'	1.48	2.62	3.77	4.92	1.02	1.81	2.60	3.39	36	44	52	59
		—	38"	60"	7'-10"	3.39'	11.99'	15.38'	11.70'	15'	3.95'	3.3'	8.92'	16.75'	24.58'	32.42'	1.46'	1.72	3.12	4.53	5.92	1.18	2.14	3.10	4.05	38	47	56	65
		—	43"	68"	8'-11"	3.56'	13.71'	17.27'	13.36'	17'	4.28'	3.6'	9.67'	18.58'	27.50'	36.42'	1.50'	2.02	3.78	5.56	7.32	1.38	2.58	3.79	4.99	41	51	61	71
		—	48"	76"	9'-11"	3.73'	15.43'	19.16'	15.03'	19'	4.59'	4.0'	10.42'	20.33'	30.25'	40.17'	1.54'	2.34	4.49	6.64	8.79	1.59	3.05	4.51	5.97	44	55	66	77
		—	53"	83"	10'-8"	3.91'	17.15'	21.06'	16.70'	20'	4.77'	3.3'	11.08'	21.75'	32.42'	43.08'	1.58'	2.66	5.17	7.66	10.16	1.80	3.50	5.19	6.88	47	59	71	83
		—	58"	91"	11'-8"	4.08'	18.87'	22.95'	18.36'	22'	5.01'	3.6'	11.83'	23.50'	35.17'	46.83'	1.63'	3.02	5.98	8.95	11.90	2.04	4.04	6.05	8.05	50	63	76	89

B E

△ 6.42' △ 6.25' Dimensions permitted to allow use of 8' standard pipe lengths.

◇ 10.40' ◇ 10.10' Dimensions permitted to allow use of 12' standard pipe lengths.

CONCRETE PIPE DIMENSIONS AND QUANTITIES

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ISSUE	BY	DATE	DESCRIPTION
	DR	05/15/25	ISSUE FOR PERMIT
1	DR	10/03/25	RAI ROUND 1

PROJECT INFORMATION

JOB #	240661
DATE:	12/31/24
DRAWN BY:	IEG
CHECKED BY:	SJ

SHEET TITLE

FDOT DETAILS

SHEET NUMBER

C05.07

10/03/2025 11:40:08 AM

OWNER'S REQUIREMENTS

SITE DESCRIPTION

PROJECT NAME AND LOCATION:

FIFTH THIRD BANK - DELRAY BEACH

PROPERTY OWNER:

1820 FEDERAL DELRAY LLC
729 NW 7TH STREET
BOCA RATON, FLORIDA 33486-3507

SITE ADDRESS:

1820 SOUTH FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA 33483

DESCRIPTION:

CONSTRUCT NEW BUILDING AND PARKING LOT.
MODIFY EXISTING SMS AS REQUIRED TO ACCOMMODATE IMPROVEMENTS PER AUTHORITIES WITH JURISDICTION.

SOIL DISTURBING ACTIVITIES WILL INCLUDE: RE-GRADING, CONSTRUCTION OF FACILITY

SOILS:

SEE SOIL REPORT

SITE MAPS:

* SEE ATTACHED GRADING PLAN FOR PRE & POST DEVELOPMENT GRADES, AREAS OF SOILS, DISTURBANCE, LOCATION OF SURFACE WATERS, WETLANDS, PROTECTED AREAS, MAJOR STRUCTURAL AND NONSTRUCTURAL CONTROLS AND STORMWATER DISCHARGE POINTS.

* SEE ATTACHED EROSION & TURBIDITY CONTROL PLAN FOR TEMPORARY STABILIZATION PRACTICES, AND TURBIDITY BARRIERS

* SEE GENERAL NOTES FOR REQUIREMENTS FOR TEMPORARY AND PERMANENT STABILIZATION.

NAME OF RECEIVING WATERS:

ON-SITE POND

CONTROLS

THIS PLAN UTILIZES BEST MANAGEMENT PRACTICES TO CONTROL EROSION AND TURBIDITY CAUSED BY STORMWATER RUN OFF. AN EROSION AND TURBIDITY PLAN HAS BEEN PREPARED TO INSTRUCT THE CONTRACTOR ON PLACEMENT OF THESE CONTROLS. IT IS THE CONTRACTORS RESPONSIBILITY TO INSTALL AND MAINTAIN THE CONTROLS PER PLAN AS WELL AS ENSURING THE PLAN IS PROVIDING THE PROPER PROTECTION AS REQUIRED BY FEDERAL, STATE AND LOCAL LAWS. REFER TO "CONTRACTORS RESPONSIBILITY" FOR A VERBAL DESCRIPTION OF THE CONTROLS THAT MAY BE IMPLEMENTED.

STORMWATER MANAGEMENT

STORMWATER DRAINAGE WILL BE PROVIDED BY (DESCRIPTION:)

MODIFIED COLLECTION, CONVEYANCE, TREATMENT & ATTENUATION SYSTEM FOR THE PROJECT. AREAS WHICH ARE NOT TO BE CONSTRUCTED ON, BUT WILL BE REGRADED SHALL BE STABILIZED IMMEDIATELY AFTER GRADING IS COMPLETE, WHEN CONSTRUCTION IS COMPLETE. THE SITE DISCHARGES TO AN UNDERGROUND DETENTION SYSTEM. WHERE PRACTICAL, TEMPORARY SEDIMENT BASINS WILL BE USED TO INTERCEPT SEDIMENT BEFORE ENTERING THE PERMANENT DETENTION BASIN. THE DRY DETENTION SYSTEM IS DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION FOR THIS TYPE OF DEVELOPMENT AT THE TIME IT WAS CONSTRUCTED.

TIMING OF CONTROLS/MEASURES

REFER TO " CONTRACTORS RESPONSIBILITY" FOR THE TIMING OF CONTROL/MEASURES.

CONTRACTOR'S REQUIREMENTS

GENERAL

THE CONTRACTOR SHALL AT A MINIMUM IMPLEMENT THE CONTRACTOR'S REQUIREMENTS OUTLINED BELOW AND THOSE MEASURES SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IN ADDITION THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES REQUIRED TO BE IN COMPLIANCE WITH APPLICABLE PERMIT CONDITIONS AND STATE WATER QUALITY STANDARDS. DEPENDING ON THE NATURE OF MATERIALS AND METHODS OF CONSTRUCTION THE CONTRACTOR MAY BE REQUIRED TO ADD FLOCCULANTS TO THE RETENTION SYSTEM PRIOR TO PLACING THE SYSTEM INTO OPERATION.

SEQUENCE OF MAJOR ACTIVITIES

THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE
2. INSTALL SILT FENCES AND HAY BALES AS REQUIRED
3. CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN
4. CONSTRUCT SEDIMENTATION BASIN
5. CONTINUE CLEARING AND GRUBBING
6. STOCK PILE TOP SOIL IF REQUIRED
7. PERFORM PRELIMINARY GRADING ON SITE AS REQUIRED
8. STABILIZE DENUDED AREAS AND STOCKPILES AS SOON AS PRACTICABLE
9. INSTALL STORM SEWER AND IRRIGATION.
10. COMPLETE GRADING AND INSTALL PERMANENT SEEDING/SOD AND PLANTING
11. REMOVE ACCUMULATED SEDIMENT FROM BASINS
12. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/SOD AS REQUIRED

TIMING OF CONTROLS/MEASURES

AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, THE SILT FENCES AND HAY BALES, STABILIZED CONSTRUCTION ENTRANCE AND SEDIMENT BASIN WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED PERMANENTLY IN ACCORDANCE WITH THE PLANS. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE SEDIMENT TRAPS AND THE EARTH DIKE/SWALES WILL BE REGRADED/REMOVED AND STABILIZED IN ACCORDANCE WITH THE EROSION & TURBIDITY CONTROL PLAN.

CONTROLS

IT IS THE CONTRACTORS RESPONSIBILITY TO IMPLEMENT THE EROSION AND TURBIDITY CONTROLS AS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED , MAINTAINED AND FUNCTIONING PROPERLY TO PREVENT TURBID OR POLLUTED WATER FROM LEAVING THE PROJECT SITE. THE CONTRACTOR WILL ADJUST THE EROSION AND TURBIDITY CONTROLS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN AND ADD ADDITIONAL CONTROL MEASURES, AS REQUIRED,TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND TURBIDITY CONTROL REQUIREMENTS. THE FOLLOWING BEST MANAGEMENT PRACTICES WILL BE IMPLEMENTED BY THE CONTRACTOR AS REQUIRED BY THE EROSION AND TURBIDITY CONTROL PLAN AND AS REQUIRED TO MEET THE EROSION AND TURBIDITY REQUIREMENTS IMPOSED ON THE PROJECT SITE BY THE REGULATORY AGENCIES.

SPILL PREVENTION

MATERIAL MANAGEMENT PRACTICES

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORMWATER RUNOFF.

GOOD HOUSEKEEPING

THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.

* AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.

* ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.

* PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.

* SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.

* WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.

* MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.

* THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE MATERIALS ONSITE RECEIVE PROPER USE AND DISPOSAL.

STABILIZATION PRACTICES EROSION AND SEDIMENT CONTROLS

1. HAY BALE BARRIER: HAY BALE BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS:
   A. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.
   B. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.
   C. WHERE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS.
   D. EVERY EFFORT SHOULD BE MADE TO LIMIT THE USE OF STRAW BALE BARRIERS CONSTRUCTED IN LIVE STREAMS OR IN SWALES WHERE THERE IS THE POSSIBILITY OF A WASHOUT. IF NECESSARY, MEASURES SHALL BE TAKEN TO PROPERLY ANCHOR BALES TO INSURE AGAINST WASHOUT.
2. FILTER FABRIC BARRIER: FILTER FABRIC BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS:
   A. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.
   B. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2. ACRES.
3. BRUSH BARRIER WITH FILTER FABRIC: BRUSH BARRIER MAY BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WHERE ENOUGH RESIDUE MATERIAL IS AVAILABLE ON SITE.
4. LEVEL SPREADER: A LEVEL SPREADER MAY BE USED WHERE SEDIMENT-FREE STORM RUNOFF IS INTERCEPTED AND DIVERTED AWAY FROM THE GRADED AREAS ONTO UNDISTURBED STABILIZED AREAS. THIS PRACTICE APPLIES ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE APPLIES ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE APPLIES ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE CONSTRUCTED ON UNDISTURBED SOIL AND THE AREA BELOW THE LEVEL LIP IS STABILIZED. THE WATER SHOULD NOT BE ALLOWED TO RECONCENTRATE AFTER RELEASE.
5. STOCKPILING MATERIAL: NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE INTO ANY ADJACENT WATER BODY OR STORMWATER COLLECTION FACILITY.
6. EXPOSED AREA LIMITATION: THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL NOT EXCEED 10 ACRES. THIS REQUIREMENT MAY BE WAIVED FOR LARGE PROJECTS WITH AN EROSION CONTROL PLAN WHICH DEMONSTRATES THAT OPENING OF ADDITIONAL AREAS WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENTS.
7. INLET PROTECTION: INLETS AND CATCH BASINS WHICH DISCHARGE DIRECTLY OFF-SITE SHALL BE PROTECTED FROM SEDIMENT-LADEN STORM RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET.
8. TEMPORARY SEEDING: AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE RE-EXCAVATED OR DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN 30 DAYS SHALL BE SEEDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING.
9. TEMPORARY SEEDING AND MULCHING: SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN PARAGRAPH 8 ABOVE SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA ADEQUATE TO PREVENT MOVEMENT OF SEED AND MULCH.
10. TEMPORARY GRASSING: THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED OR HYDROMULCHED OR OTHER SUITABLE METHODS IF REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER. TEMPORARY GRASSING SHALL BE THE SAME MIX & AMOUNT REQUIRED FOR PERMANENT GRASSING IN THE CONTRACT SPECIFICATIONS.
11. TEMPORARY REGRASSING : IF, AFTER 14 DAYS FROM SEEDING, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75 PERCENT GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATIVE COVER.
12. MAINTENANCE: ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED.
13. PERMANENT EROSION CONTROL: THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON THE OFFSITE FACILITIES.
14. PERMANENT SEEDING: ALL AREAS WHICH HAVE BEEN DISTURBED BY CONSTRUCTION WILL, AS A MINIMUM, BE SEEDED. THE SEEDING MIX MUST PROVIDE BOTH LONG-TERM VEGETATION AND RAPID GROWTH SEASONAL VEGETATION. SLOPES STEEPER THAN 4:1 SHALL BE SEEDED AND MULCHED OR SODDED.

OTHER CONTROLS

WASTE DISPOSAL

WASTE MATERIALS ALL WASTE MATERIALS EXCEPT LAND CLEARING DEBRIS SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER WILL BE EMPTIED AS NEEDED AND THE TRASH WILL BE HAULED TO A STATE APPROVED LANDFILL. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED AT THE CONSTRUCTION SITE BY THE CONSTRUCTION SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

HAZARDOUS WASTE

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES AND THE SITE SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES DAY-TO-DAY SITE OPERATIONS,WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.

SANITARY WASTE

ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NEEDED TO PREVENT POSSIBLE SPILLAGE. THE WASTE WILL BE COLLECTED AND DEPOSED OF IN ACCORDANCE WITH STATE AND LOCAL WASTE DISPOSAL REGULATIONS FOR SANITARY SEWER OR SEPTIC SYSTEMS.

OFFSITE VEHICLE TRACKING

A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEPT DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN.

INVENTORY FOR POLLUTION PREVENTION PLAN

THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION:

☐ Concrete	☐ Fertilizers	☐ Wood
☐ Asphalt	☐ Petroleum Based Products	☐ Masonry Blocks
☐ Tar	☐ Cleaning Solvents	☐ Roofing Materials
☐ Detergents	☐ Paints	☐ Metal Studs
☐ _____	☐ _____	☐ _____

STRUCTURAL PRACTICES

1. TEMPORARY DIVERSION DIKE: TEMPORARY DIVERSION DIKES MAY BE USED TO DIVERT RUNOFF THROUGH A SEDIMENT-TRAPPING FACILITY.
2. TEMPORARY SEDIMENT TRAP: A SEDIMENT TRAP SHALL BE INSTALLED IN AN DRAINAGEWAY AT A STORM DRAIN INLET OR AT OTHER POINTS OF DISCHARGE FROM A DISTURBED AREA. THE FOLLOWING SEDIMENT TRAPS MAY BE CONSTRUCTED EITHER INDEPENDENTLY OR IN CONJUNCTION WITH A TEMPORARY DIVERSION

DIKE:

1. BLOCK & GRAVEL SEDIMENT FILTER - THIS PROTECTION IS APPLICABLE WHERE HEAVY FLOWS AND/OR WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.
2. GRAVEL SEDIMENT TRAP - THIS PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES & UNPROTECTED AREAS.
3. DROP INLET SEDIMENT TRAP - THIS PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (S < 5%) AND WHERE SHEET OR OVERLAND FLOWS (Q < 0.5 CFS) ARE TYPICAL. THIS METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS SUCH AS IN STREET OR HIGHWAY MEDIANS.
4. OUTLET PROTECTION: APPLICABLE TO THE OUTLETS OF ALL PIPES AND PAVED CHANNEL SECTIONS WHERE THE FLOW COULD CAUSE EROSION & SEDIMENT PROBLEM TO THE RECEIVING WATER BODY. SILT FENCES & HAY BALES ARE TO BE INSTALLED IMMEDIATELY DOWNSTREAM OF THE DISCHARGING STRUCTURE AS SHOWN ON THE OUTLET PROTECTION DETAIL.
5. SEDIMENT BASIN: WILL BE CONSTRUCTED AT THE COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH 10 OR MORE DISTURBED ACRES AT ONE TIME, THE PROPOSED STORMWATER PONDS (OR TEMPORARY PONDS) WILL BE CONSTRUCTED FOR USE AS SEDIMENT BASINS. THESE SEDIMENT BASINS MUST PROVIDE A MINIMUM OF 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED UNTIL FINAL STABILIZATION OF THE SITE. THE 3,600 CUBIC FEET OF STORAGE AREA PER ACRE DRAINED DOES NOT APPLY TO FLOWS FROM OFFSITE AREAS AND FLOWS FROM ONSITE AREAS THAT ARE EITHER UNDISTURBED OR HAVE UNDERGONE FINAL STABILIZATION WHERE SUCH FLOWS ARE DIVERTED AROUND BOTH THE DISTURBED AREA AND THE SEDIMENT BASIN. ANY TEMPORARY SEDIMENT BASINS CONSTRUCTED MUST BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR STRUCTURAL FILL ALL SEDIMENT COLLECTED IN PERMANENT OR TEMPORARY SEDIMENT TRAPS MUST BE REMOVED UPON FINAL STABILIZATION.

HAZARDOUS PRODUCTS

THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.

* PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.

* ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION.

* IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

PRODUCT SPECIFIC PRACTICES THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ONSITE:

PETROLEUM PRODUCTS

ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

FERTILIZERS

FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER. STORAGE WILL BE IN A COVERED AREA. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

PAINTS

CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURERS' INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

CONCRETE TRUCKS

CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.

SPILL CONTROL PRACTICES

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED ON SITE AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.

MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, LIQUID ABSORBENT (i.e. KITTY LITTER OR EQUAL), SAND, SAWDUST, PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.

ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

SPILL OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE OF THE SPILL.

THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED. THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE/SHE WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IF APPLICABLE, IN THE OFFICE TRAILER ONSITE.

MAINTENANCE/INSPECTION PROCEDURES

EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES

THE FOLLOWING ARE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS.

* NO MORE THAN 10 ACRES OF THE SITE WILL BE DENUDED AT ONE TIME WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.

* ALL CONTROL MEASURES WILL BE INSPECTED BY THE SUPERINTENDENT, THE PERSON RESPONSIBLE FOR THE DAY TO DAY SITE OPERATION OR SOMEONE APPOINTED BY THE SUPERINTENDENT, AT LEAST ONCE A WEEK AND FOLLOWING ANY STORM EVENT OF 0.25 INCHES OR GREATER.

* ALL TURBIDITY CONTROL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT.

* BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.

* SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.

* DIVERSION DIKES/SWALES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED.

MAINTENANCE/INSPECTION PROCEDURES

* THE SEDIMENT BASINS WILL BE INSPECTED FOR THE DEPTH OF SEDIMENT AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 10 PERCENT OF THE DESIGN CAPACITY OR AT THE END OF THE JOB, WHICHEVER COMES FIRST.

* TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.

* A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. A COPY OF THE REPORT FORM TO BE COMPLETED BY THE INSPECTOR IS ATTACHED. THE REPORTS WILL BE KEPT ON SITE DURING CONSTRUCTION AND AVAILABLE UPON REQUEST TO THE OWNER, ENGINEER OR ANY FEDERAL, STATE OR LOCAL AGENCY APPROVING SEDIMENT AND AND EROSION PLANS, OR STORMWATER MANAGEMENT PLANS. THE REPORTS SHALL BE MADE AND RETAINED AS PART OF THE WATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED AND THE NOTICE OF TERMINATION IS SUBMITTED THE REPORTS SHALL IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE.

* THE SITE SUPERINTENDENT WILL SELECT UP TO THREE INDIVIDUALS WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.

* PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING FROM THE SITE SUPERINTENDENT. THEY WILL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ONSITE IN GOOD WORKING ORDER.

NON-STORMWATER DISCHARGES

IT IS EXPECTED THAT THE FOLLOWING NON-STORMWATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:

* WATER FROM WATER LINE FLUSHING

*PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED).

* UNCONTAMINATED GROUNDWATER (FROM DEWATERING EXCAVATION).

ALL NON-STORMWATER DISCHARGE WILL BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE.

CONTRACTOR'S CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND THAT AUTHORIZES THE STORM CONDITIONS OF THE DEP GENERIC PERMIT WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

RESPONSIBLE FORDUTIES	GENERAL CONTRACTOR	SUB-CONTRACTOR	SUB-CONTRACTOR	SUB-CONTRACTOR	SUB-CONTRACTOR
BUSINESS NAME AND ADDRESS OF CONTRACTOR & ALL SUBS					
SIGNATURE					

bdg architects
550 S. Caldwell Street
Suite 1800
Charlotte, NC 28202
P: 704.981.8951
Lic. #: AA - 0003590
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FIFTH THIRD

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FL Cert. of Auth. No 27889

IEG JOB NO. 15-386.00

SEAL
NISIT SAPPARKHAO, P.E.
FL REG. NO. 64085

DATE

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ISSUE	BY	DATE	DESCRIPTION
	DR	05/15/25	ISSUE FOR PERMIT
1	DR	10/03/25	RAI ROUND 1

PROJECT INFORMATION	
JOB #	240661
DATE:	12/31/24
DRAWN BY:	IEG
CHECKED BY:	SJ

SHEET TITLE

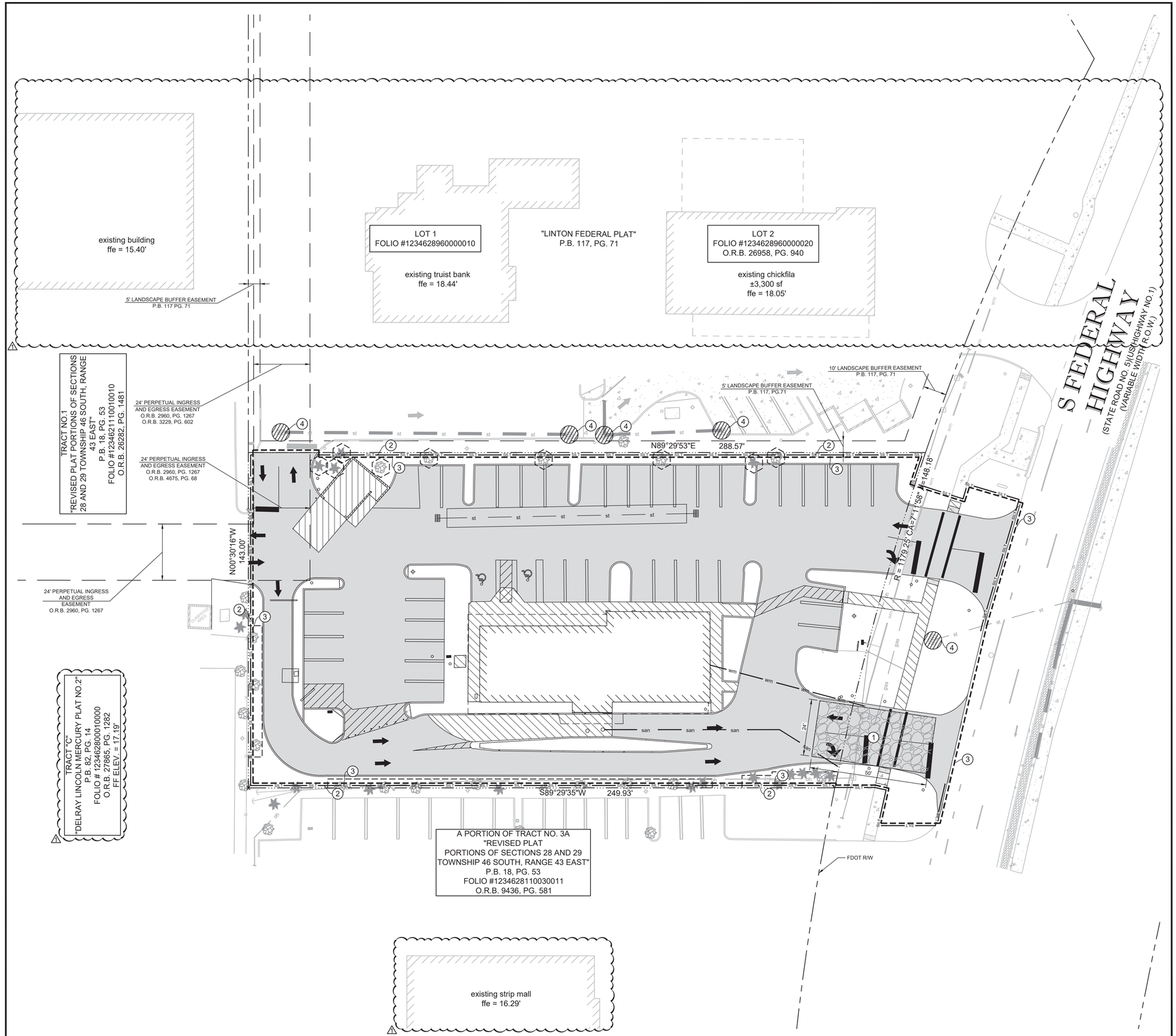
SWPPP GENERAL REQUIREMENTS

SHEET NUMBER

C06.01

FIFTH THIRD BANK
DELRAY BEACH

1820 SOUTH FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA 33483



LEGEND

- PROPERTY LINE
- EXISTING CONCRETE TO REMAIN
- EXISTING TO REMAIN
- SILT FENCE
- LIMITS OF CONSTRUCTION
- INLET PROTECTION
- EXISTING CONTOUR
- EXISTING GRADE ELEVATION

GENERAL NOTES

- ALL MATERIALS INCLUDING FILL STOCKPILES SHALL NOT BE PERMANENTLY LOCATED ON THE UNDEVELOPED AREA OF PROPOSED DEVELOPMENT.
- ALL DISTURBED AREAS OF UNDEVELOPED PROPERTY SHALL BE HYDROMULCHED WITH SEED TO ESTABLISH TURN AND PREVENT SILT RUNOFF INTO THE STREETS.

EROSION CONTROL KEYED NOTES

1	CRUSHED STONE CONSTRUCTION ENTRANCE AND CONCRETE TRUCK WASHOUT AREA
2	SILT FENCE
3	LIMITS OF CONSTRUCTION (1.0 AC)
4	INLET PROTECTION

PLAN VIEW | SCALE: AS NOTED | -

SCALE

0 ' 20' 40 ' 60 '

bdg architects
550 S. Caldwell Street
Suite 1800
Charlotte, NC 28202
P: 704.981.8951
Lic. #: AA - 0003590
www.bdgllp.com

FIFTH THIRD

FIFTH THIRD BANK
DELRAY BEACH

1820 SOUTH FEDERAL HIGHWAY
DELRAY BEACH, FLORIDA 33483

INFINITY
INFINITY ENGINEERING GROUP, LLC
1208 East Kennedy Boulevard
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www.iegroup.net
FL Cert. of Auth. No 27889

IEG JOB NO. 15-386.00

SEAL NISIT SAPPARKHAO, P.E.
FL REG. NO. 64085

DATE

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ISSUE	BY	DATE	DESCRIPTION
	DR	05/15/25	ISSUE FOR PERMIT
1	DR	10/03/25	RAI ROUND 1

PROJECT INFORMATION

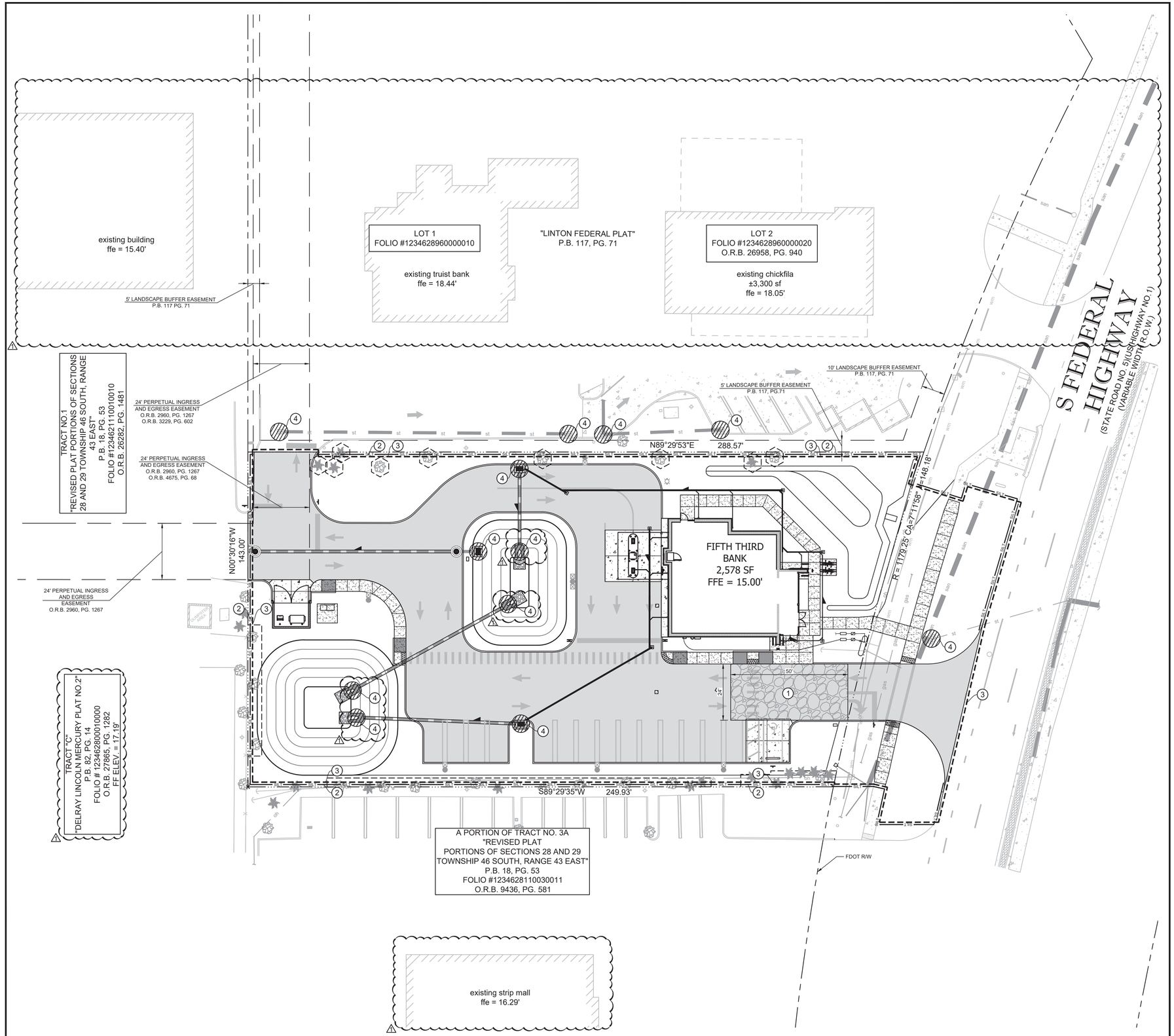
JOB #	240661
DATE:	12/31/24
DRAWN BY:	IEG
CHECKED BY:	SJ

SHEET TITLE

EROSION CONTROL PLAN PHASE I

SHEET NUMBER

C06.02



PLAN VIEW | SCALE: AS NOTED | -

LEGEND

- PROPERTY LINE
- EXISTING CONCRETE TO REMAIN
- EXISTING TO REMAIN
- SILT FENCE
- LIMITS OF CONSTRUCTION
- INLET PROTECTION

GENERAL NOTES

- ALL MATERIALS INCLUDING FILL STOCKPILES SHALL NOT BE PERMANENTLY LOCATED ON THE UNDEVELOPED AREA OF PROPOSED DEVELOPMENT.
- ALL DISTURBED AREAS OF UNDEVELOPED PROPERTY SHALL BE HYDROMULCHED WITH SEED TO ESTABLISH TURN AND PREVENT SILT RUNOFF INTO THE STREETS.

EROSION CONTROL KEYED NOTES

1	CRUSHED STONE CONSTRUCTION ENTRANCE AND CONCRETE TRUCK WASHOUT AREA
2	SILT FENCE
3	LIMITS OF CONSTRUCTION (1.0 AC)
4	INLET PROTECTION

SCALE

0 ' 20' 40 ' 60 '

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FIFTH THIRD

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ISSUE	BY	DATE	DESCRIPTION
	DR	05/15/25	ISSUE FOR PERMIT
1	DR	10/03/25	RAI ROUND 1

PROJECT INFORMATION

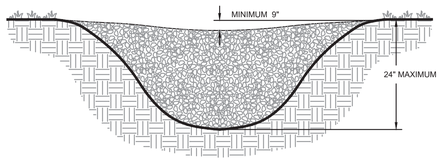
JOB #	240661
DATE:	12/31/24
DRAWN BY:	IEG
CHECKED BY:	SJ

SHEET TITLE

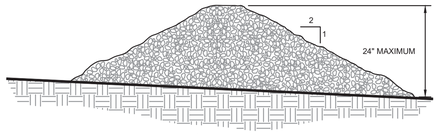
EROSION CONTROL PLAN PHASE II

SHEET NUMBER

C06.03



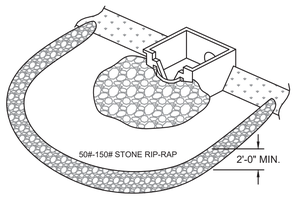
CROSS SECTION



PROFILE VIEW

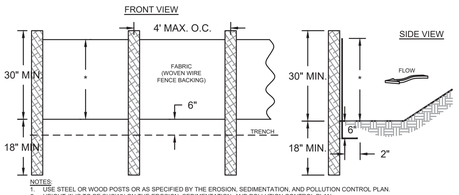
NOTES:
1. CHECK DAMS ARE TO BE USED ONLY IN SMALL OPEN CHANNELS (THEY ARE NOT TO BE USED IN LIVE STREAMS)
2. THE DRAINAGE AREA FOR STONE CHECK DAMS SHALL NOT EXCEED TWO ACRES.
3. THE CENTER OF THE CHECK DAM MUST BE AT LEAST 9 INCHES LOWER THAN THE OUTER EDGES.
4. THE DAM HEIGHT SHOULD BE A MAXIMUM OF 2 FEET FROM CENTER TO RIM EDGE.
5. THE SIDE SLOPES OF THE CHECK DAM SHALL NOT EXCEED A 2:1 SLOPE.
6. GEOTEXTILE SHALL BE USED TO PREVENT THE MITIGATION OF SUBGRADE SOIL PARTICLES INTO THE STONES (REFER TO AASHTO M288-96, SECTION 7.3, TABLE 3).

STONE CHECK DAM



A TEMPORARY STONE BARRIER CONSTRUCTED AT STORM DRAIN INLETS AND POND OUTLETS TO REDUCE FLOW VELOCITIES, PREVENT FAILURE OF OTHER SEDIMENT CONTROL DEVICES AND TO PREVENT SEDIMENT FROM LEAVING THE SITE OR ENTERING DRAINAGE SYSTEMS.

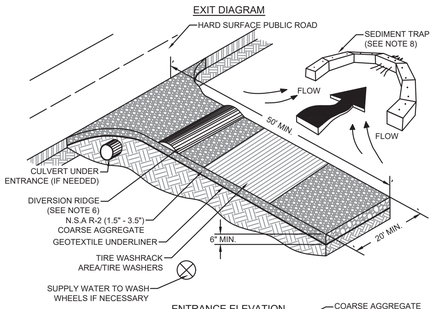
STONE FILTER RING



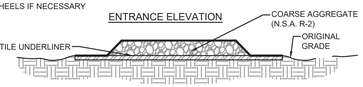
NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (") IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
3. DOT ALTERNATIVE

Sd1-S SILT FENCE - TYPE SENSITIVE

EXIT DIAGRAM

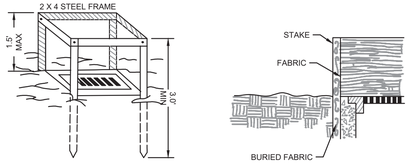


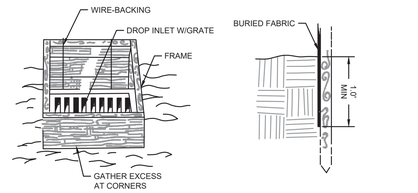
ENTRANCE ELEVATION



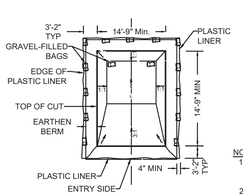
NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

CRUSHED STONE CONSTRUCTION EXIT

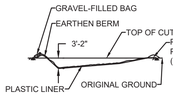




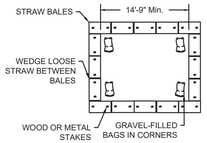
Sd2-F INLET SEDIMENT TRAP-FILTER FABRIC



BELOW GRADE PLAN



SECTION A-A



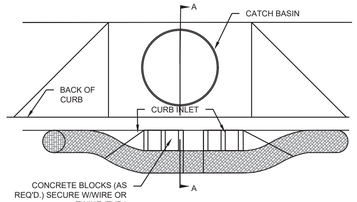
NOTES:
1. STRAW BALES ARE TO BE STACKED 2 HIGH WITH TWO METAL OR WOOD STAKES PER BALE. STAKES ARE TO BE DRIVEN INTO THE GROUND A MINIMUM OF 1 FOOT.
2. PLASTIC LINER TO BE PLACED SO THAT AN EXCESS OF 6 INCHES WILL BE OVER THE OUTSIDE EDGE OF THE BALES.
3. A MINIMUM OF TWO 8"x2"x8" 16 GAUGE STEEL ANCHOR PINS (OR LARGER) ARE TO BE USED PER BALE TO ANCHOR THE PLASTIC LINER IN PLACE.

ON GRADE PLAN

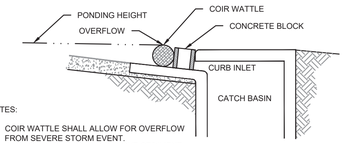
EARTHEN BERM SECTION

NOTES:
1. WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.
2. A SUITABLE WASHOUT FACILITY MUST BE PROVIDED FOR THE CLEANING OF CHUTES, MIXERS, AND HOPPERS OF THE DELIVERY VEHICLES UNLESS SUCH A FACILITY WILL BE USED AT THE SOURCE OF THE CONCRETE.UNDER NO CIRCUMSTANCES MAY WASH WATER FROM THESE VEHICLES BE ALLOWED TO ENTER ANY SURFACE WATERS.
3. A 4'X2' WHITE SIGN WITH 6" BLACK LETTERS STATING "CONCRETE WASHOUT" IS TO BE PROVIDED SO DRIVERS ARE AWARE OF THE PRESENCE OF WASHOUT FACILITIES.
4. WASHOUT FACILITIES SHOULD NOT BE PLACED WITHIN 50 FEET OF STORM DRAINS, OPEN DITCHES OR SURFACE WATERS. THEY SHOULD BE IN A CONVENIENT LOCATION FOR THE TRUCKS, PREFERABLY NEARR THE PLACE WHERE THE CONCRETE IS BEING POURED, BUT FAR ENOUGH FROM OTHER VEHICULAR TRAFFIC TO MINIMIZE THE POTENTIAL FOR ACCIDENTAL DAMAGE OR SPILLS.
5. THE CONTRACTOR SHALL INSPECT THE WASH DOWN AREA INTERMITTENTLY TO ENSURE PROPER CONTAINMENT IS ACCOMPLISHED.
6. IN THE EVENT OF A SPILL OR LEAK THE CONTRACTOR SHALL IMMEDIATELY REPORT & REMEDIATE SAME IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL LAWS.

Cw TEMPORARY CONCRETE WASHOUT FACILITY



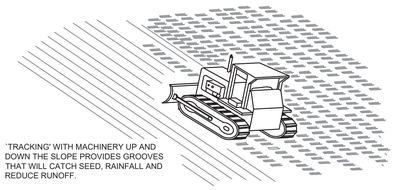
PLAN VIEW



NOTES:
1. COIR WATTLE SHALL ALLOW FOR OVERFLOW FROM SEVERE STORM EVENT.
2. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

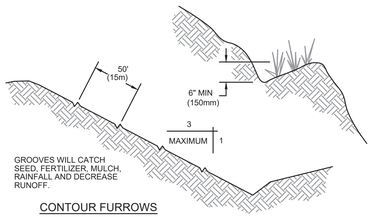
SECTION A - A

Sd2-P CURB INLET SEDIMENT BARRIER (COIR WATTLE)



'TRACKING' WITH MACHINERY UP AND DOWN THE SLOPE PROVIDES GROOVES THAT WILL CATCH SEED, RAINFALL AND REDUCE RUNOFF.

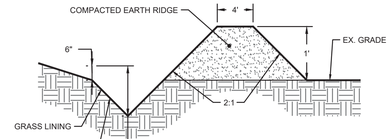
TRACKING



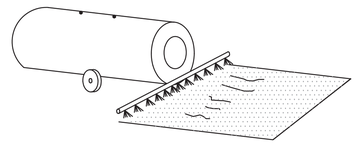
GROOVES WILL CATCH SEED, FERTILIZER, MULCH, RAINFALL AND DECREASE RUNOFF.

CONTOUR FURROWS

Su SURFACE ROUGHENING



Di DIVERSION



TEMPORARY METHODS
- MULCHES
- TEMPORARY VEGETATIVE COVER
- SPRAY ON ADHESIVES
- TILLAGE
- IRRIGATION
- BARRIERS
- CALCIUM CHLORIDE

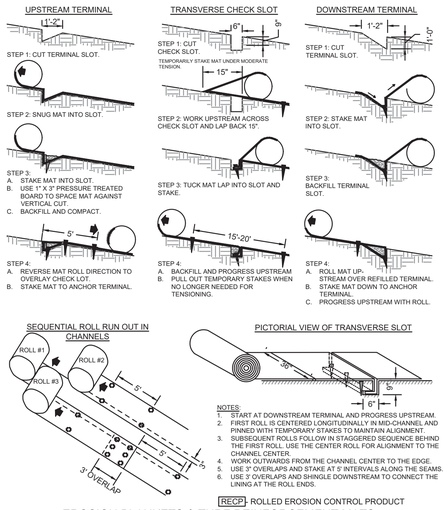
PERMANENT METHODS
- PERMANENT VEGETATION
- TOPSOILING
- STONE COVER

CHEMICAL CONTROL

ADHESIVE	WATER DILUTION	TYPE OF NOZZLE	APPLICATION RATE (GAL/AC)
ANIOIC ASPHALT EMULSION	7.1*	SPRAY	1200
LATEX EMULSION	12 1/2:1*	FINE SPRAY	235
RESIN-IN-WATER EMULSION	4:1*	FINE SPRAY	300

*USE MANUFACTURER'S RECOMMENDATIONS WHEN AVAILABLE

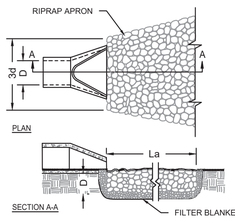
Du DUST CONTROL ON DISTURBED AREAS



RECP ROLLED EROSION CONTROL PRODUCT

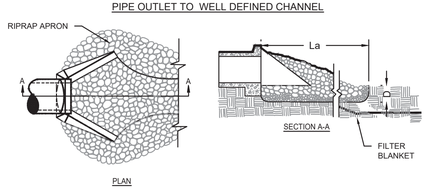
Ss EROSION BLANKETS & TURF REINFORCEMENT MATS
INSTALL NORTH AMERICAN GREEN SC-150 EROSION BLANKET OR EQUAL U.N.O. INSTALL PER MANUFACTURES SPECIFICATIONS.

PIPE OUTLET TO FLAT AREA -- NO WELL DEFINED CHANNEL



NOTES:
1. La IS THE LENGTH OF THE RIPRAP APRON.
2. D = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6"
3. IN A WELL-DEFINED CHANNEL, EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK (WHICHEVER IS LESS).
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND THE SOIL FOUNDATION.

PIPE OUTLET TO WELL DEFINED CHANNEL



St STORM OUTLET PROTECTION

GENERAL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AND SWALES AT COMPLETION OF CONSTRUCTION.
2. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
3. ADDTIONAL PROTECTION - ON-SITE PROTECTION IN ADDITION TO THE ABOVE MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNSEEN CONDITIONS OR ACCIDENTS.
4. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES. ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
5. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST MANAGEMENT PRACTICES (BMP) AND MOST CURRENT EROSION AND SEDIMENT CONTROL PRACTICES. THIS PLAN INDICATES THE MINIMUM EROSION AND SEDIMENT MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.

PRE-Construction SITE PROTECTION:

8. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. SEE DETAIL SHEET FOR TYPICAL CONSTRUCTION.
9. ANY DISCHARGE FROM DEWATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE OUTFALL IN A MANNER WHICH PREVENTS EROSION AND TRANSPORTATION OF SUSPENDED SOLIDS TO THE RECEIVING OUTFALL.
10. DEWATERING PUMPS SHALL NOT EXCEED THE CAPACITY OF THAT WHICH REQUIRES A CONSUMPTIVE USE PERMIT FROM THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.
11. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-THIRD (1/3) THE HEIGHT OF THE BARRIER OR INLET. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
12. ALL DISTURBED AREAS ARE TO BE STABILIZED THROUGH COMPACTION. SILT SCREENS, SYNTHETIC BALES, AND GRASSING. ALL FILL SLOPES 3:1 OR STEEPER TO RECEIVE STAKED SOLID SOD.

SITE PROTECTION:

13. THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED PROPERLY. A TRENCH SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 8 INCHES. BARRIER IS STAKED. THE EXCAVATED SOIL OR GRAVEL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER. USING WIRE BACKING FOR SUPPORT IS DISCOURAGED DUE TO DISPOSAL PROBLEMS.
14. WATER OR SLURRY USED TO CONTROL DUST SHALL BE RETAINED ON THE SITE AND NOT ALLOWED TO RUN DIRECTLY INTO WATERCOURSE OR STORMWATER CONVEYANCE SYSTEMS.
15. SPECIAL AREAS SHALL BE DESIGNATED AS VEHICLE AND EQUIPMENT WASHING AREAS AND SUCH AREAS SHALL NOT ALLOW RUNOFF TO FLOW DIRECTLY INTO WATERCOURSE OR STORMWATER CONVEYANCE SYSTEMS.
16. SILT FENCE BARRIERS ARE NOT TO BE USED WHERE CONCENTRATED FLOWS OF WATER ARE ANTICIPATED SUCH AS DRAINAGE DITCHES. AROUND INLETS OR ABOVE/ BELOW WHERE CULVERTS DISCHARGE.
17. SYNTHETIC BALES, SANDBAGS OR OTHER APPROVED DEVICE FACED WITH FILTER FABRIC SHALL BE USED IN HIGH VOLUME AREAS TO DECREASE THE RUNOFF VELOCITY AND SHALL BE SECURELY ANCHORED.
18. ALL DEVICES INCLUDING SILT FENCE. FILTER BARRIERS. SYNTHETIC BALES AND/OR SANDBAGS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED BARRIERS. END RUNS AND UNDERCUTTING BENEATH BARRIERS.
19. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
20. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.

STORM DRAIN INLET PROTECTION:

21. FILTER FABRIC SHALL BE LAID OVER INLETS SO THAT THE FABRIC EXTEND A MINIMUM OF 1 FOOT BEYOND EAST SIDE OF THE INLET STRUCTURE. IF MORE THAN ONE STRIP OF FABRIC IS NECESSARY, THE STRIPS SHALL BE OVERLAPPED.
22. 2 INCH - 3 INCH COARSE AGGREGATE SHALL BE PLACED OVER THE FILTER FABRIC. THE DEPTH OF STONE SHALL BE AT LEAST 6 INCHES OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18 INCHES ON ALL SIDES.
23. IF STONE FILTERS BECOME CLOGGED WITH SEDIMENT SO THAT THEY NO LONGER ADEQUATELY PERFORM THEIR FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.

POST-CONSTRUCTION SITE PROTECTION:

24. ALL DEWATERING, EROSION AND SEDIMENT CONTROL TO REMAIN IN PLACE AFTER COMPLETION OF CONSTRUCTION AND REMOVED ONLY WHEN AREAS HAVE STABILIZED.
25. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER TEMPORARY BARRIERS ARE. NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA IN SUCH A MANNER THAT IT WILL NOT ERODE.
26. ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED, MULCHED AND MAINTAINED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED.
27. SOD SHALL BE PLACED IN AREAS WHICH MAY REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITY STANDARDS ARE MAINTAINED.

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SEAL NISIT SAPPARKHAO, P.E.
FL REG. NO. 64085

DATE

ISSUE	BY	DATE	DESCRIPTION
	DR	05/15/25	ISSUE FOR PERMIT
1	DR	10/03/25	RAI ROUND 1

PROJECT INFORMATION	
JOB #	240661
DATE:	12/31/24
DRAWN BY:	IEG
CHECKED BY:	SJ

SHEET TITLE

EROSION AND SEDIMENT CONTROL DETAILS

SHEET NUMBER

C06.04