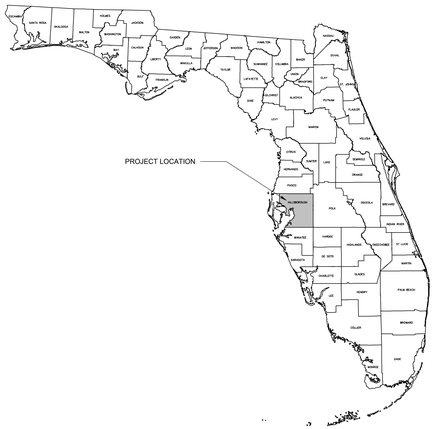
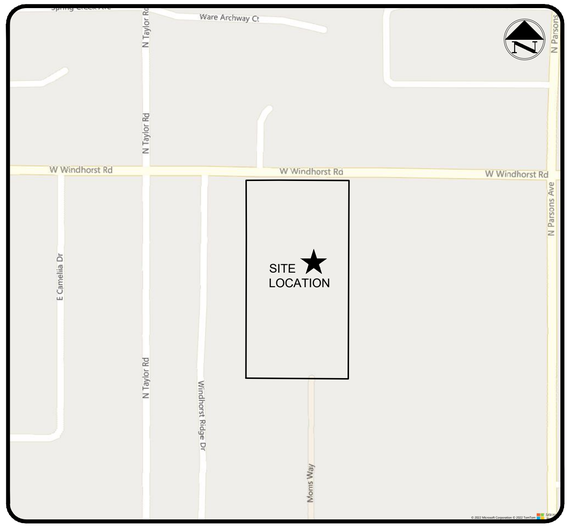
Construction Plans
For
WINDHORST COMMONS

Section 15, Township 20 South, Range 20 East
Hillsborough County, Florida





Vicinity Map
N.T.S.

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Site Data Table

Project Location	Hillsborough County, Florida
Folio Number	67361.0000
Project Area	4.34 Acres±
Address	205 West Windhorst Road, Brandon FL 33510
S/T/R	Section 15, Towhship 20, Range 20
Zoning	PD per PD 08-0270 Prior Major Modification- 21-0944
FEMA	Zone "X" Panel No. 12057c0385H, 08/28/2008
Comprehensive Plan Designation/FLU	R-6
Urban Service Area	Yes
Minimum Front Yard Setback	20'
Minimum Side Yard Setback	5'
Minimum Rear Yard Setback	5'
Maximum Building Height	2 Story/35'
Minimum Lot Size	3,480 Sq. Ft.
Minimum Lot Width	40'

PROPERTY DESCRIPTION

Legal Description Provided By: W.C. Sherrill and Company, LLC.

Description:

THE EAST 1/2 OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 15, TOWNSHIP 29 SOUTH, RANGE 20 EAST, LESS THE WEST 104 FEET OF THE NORTH 208 FEET AND LESS THE NORTH 25 FEET FOR ROAD, ALL LYING AND BEING IN HILLSBOROUGH COUNTY, FLORIDA.

Project Team Members:

Developer:
Habitat for Humanity
505 E. Jackson Street
Tampa, Florida 33602
Phone: (813) 239-2242

Engineer:
LevelUp Consulting, LLC
505 E. Jackson Street Suite 200
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Phone: (813) 375-0616

Surveyor:
W.C. Sherrill and Company, LLC.
26232 Wesley Chapel Boulevard
Lutz, Florida 33559
Phone: (813) 345-4270

Project Name: WINDHORST COMMONS

CONSTRUCTION PLAN REVISIONS		REV 00 <-> XX/XX/XX
1	01/31/23	REVISED PLANS PER COUNTY COMMENTS FROM 1ST SUBMITTAL

Engineering Business Certificate of Authorization No. 32771
Florida Certificate of Authorization No. LC26000638

KYLE GLORIOSO LICENSE NO. 88699 STATE OF FLORIDA PROFESSIONAL ENGINEER

KYLE GLORIOSO
FLORIDA LICENSED PROFESSIONAL ENGINEER
REGISTRATION NUMBER 88699

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PI#6163

VERTICAL DATUM INFORMATION

ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND ARE RELATIVE TO THE NATIONAL GEODETIC SURVEY BENCHMARK "VB-434" HAVING A PUBLISHED ELEVATION OF 57.41 FEET (NAVD 88)

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02/02/24 4:52:41 PM PLOTTED BY: artist saleris

LAKE / POND EXCAVATION NOTE

1.) NO EXCAVATION SHALL EXTEND BELOW THE PERMITTED DESIGN DEPTHS/ELEVATIONS SHOWN ON THE DRAWINGS, UNLESS ADDITIONAL TESTING SUPPORTS OTHERWISE; AND NO LOWER SEMI-CONFINING UNIT CLAYEY SOIL MATERIAL AND / OR LIMESTONE MATERIALS SHALL BE EXCAVATED, REGARDLESS IF THESE MATERIALS ARE ENCOUNTERED WITHIN THE PERMITTED EXCAVATION DEPTHS/ELEVATIONS. IF ANY LOWER SEMI-CONFINING UNIT CLAY SOIL MATERIALS OR LIMESTONE MATERIALS ARE ENCOUNTERED ABOVE THE PERMITTED DEPTHS /ELEVATIONS, THEN EXCAVATION OPERATIONS SHALL CEASE IN THE GENERAL AREA. EPC WETLANDS MANAGEMENT STAFF MUST BE CONTACTED PRIOR TO ANY EXCAVATION OF CLAYS. * IN THE ABSENCE OF ANY CONFINING OR SEMI-CONFINING UNIT CLAYEY SOILS, A MINIMUM OF FIVE FEET UNDISTURBED SOILS SHALL REMAIN ABOVE THE UNDERLYING LIMESTONE.

NATURAL RESOURCES

1.) WETLAND CONSERVATION AREA NOTE:
"THE WETLAND CONSERVATION AREA SHALL BE RETAINED IN A NATURAL STATE PURSUANT TO THE HILLSBOROUGH COUNTY LAND DEVELOPMENT CODE (LDC) AS AMENDED; THE HILLSBOROUGH COUNTY ENVIRONMENTAL PROTECTION ACT, CHAPTER 84-446; AND CHAPTER 1-11, RULES OF THE HILLSBOROUGH COUNTY ENVIRONMENTAL PROTECTION COMMISSION. IN ADDITION, A 30 FOOT SETBACK FROM THE WETLAND CONSERVATION AREA IS REQUIRED AND SHALL CONFORM TO THE PROVISIONS STIPULATED WITHIN THE HILLSBOROUGH COUNTY LAND DEVELOPMENT CODE."

2.) PRUNING OF A GRAND OAK, WITH THE EXCEPTION OF MINOR PRUNING, IS PROHIBITED UNLESS CONDUCTED IN ACCORDANCE WITH THE ANSI-A-300 PRUNING STANDARDS, AND PERFORMED BY AN ARBORIST CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) OR A REGISTERED CONSULTING ARBORIST WITH THE AMERICAN SOCIETY OF CONSULTING ARBORISTS (ASCA). MINOR PRUNING IS THE PRUNING OF A TREE BY THE REMOVAL OF BRANCHES NO GREATER THAN THREE INCHES IN DIAMETER AT THE POINT OF CONNECTION TO A SUPPORTING BRANCH AND SHALL BE IN ACCORDANCE WITH THE ANSI A-300 PRUNING STANDARDS. A NOTARIZED AFFIDAVIT AFFIRMING AN ISA CERTIFIED ARBORIST OR AN ASCA REGISTERED CONSULTING ARBORIST WILL CONDUCT OR PROVIDE ONSITE SUPERVISION OF THE PRUNING SHALL BE SUBMITTED TO THE COUNTY PRIOR TO THE PRUNING OF A GRAND OAK. AN ISA CERTIFIED ARBORIST OR AN ASCA REGISTERED CONSULTING ARBORIST CONTRACTED BY A PROPERTY OWNER TO PRUNE A GRAND OAK SHALL ASSUME FULL RESPONSIBILITY FOR ALL PRUNING ACTIVITIES DETERMINED IN NONCOMPLIANCE WITH STANDARDS SPECIFIED WITHIN THE LAND DEVELOPMENT CODE.

3.) DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES, IT SHALL BE UNLAWFUL TO REMOVE VEGETATION BY GRUBBING OR TO PLACE SOIL DEPOSITS, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND WITHIN THE DRIPLINE OF A TREE TO REMAIN ON THE SITE UNLESS OTHERWISE APPROVED BY THE COUNTY.

4.) ADEQUATE PROTECTION MEASURES (I.E., HAY BALES, BAFFLES, SODDING AND SANDBAGGING) SHALL BE PROVIDED, AS NECESSARY, TO MINIMIZE EROSION AND DOWNSTREAM SEDIMENTATION CAUSED BY SURFACE WATER RUN-OFF ON EXPOSED LAND SURFACES.

5.) ANY AREAS SUBJECT TO EROSION MUST BE ADEQUATELY STABILIZED WITH VEGETATIVE MATERIAL THAT WILL, WITHIN A REASONABLE TIME FRAME, DETER SOIL DISTURBANCE. SODDING, PLUGGING, SPRIGGING OR SEEDING IS ACCEPTABLE FOR STABILIZATION; HOWEVER, SODDING MAY BE REQUIRED IN AREAS OF EROSION-PRONE SOILS OR WHERE SLOPES ARE GREATER THAN 5:1. VEGETATION OTHER THAN GRASS IS ACCEPTABLE UNLESS OTHERWISE SPECIFIED. FOR COMMERCIAL SITE DEVELOPMENT PROJECTS, NO MORE THAN 50% OF THE LANDSCAPED AREA MAY BE PLANTED WITH SHALLOW-ROOTED (I.E., ST. AUGUSTINE) TURF GRASS VARIETIES. THESE TURF GRASS VARIETIES SHALL BE CONSOLIDATED IN AND LIMITED TO AREAS THAT ARE PROVIDED WITH CENTRAL AUTOMATIC IRRIGATION SYSTEMS.

GENERAL OPERATION AND MAINTENANCE PLAN FOR SURFACE WATER MANAGEMENT SYSTEM

1.) THE OWNER SHALL CHECK WEIR (AND/OR ORIFICE) IN ALL CONTROL STRUCTURES PERIODICALLY TO ASSURE THAT THEY ARE FREE FROM DEBRIS WHICH MAY HAVE EFFECT ON THEIR HYDRAULIC FUNCTION. ANY DAMAGES OR CLOGGING NEED TO BE REPAIRED AND/OR CLEANED IMMEDIATELY.

2.) THE OWNER AND/OR OPERATION/MAINTIENANCE ENTITY SHALL NOT CONSTRUCT OR MAINTAIN ANY BUILDING OR STRUCTURE OR UNDERTAKE OR PERFORM ANY ACTIVITY IN THE WETLANDS, BUFFER AREAS, DRAINAGE EASEMENTS AND CONSERVATION AREAS.

3.) THE POND BANKS SHOULD BE REGULARLY MOWED, WITH GRASS CLIPPINGS REMOVE FROM THE POND, AND NOTE THAT ANY ERODED BANKS SHOULD BE REPAIRED AND RESODDED TO MAINTAIN THE CORRECT VOLUME.

4.) PICK UP GRASS CLIPPINGS AFTER CUTTING, MOW FREQUENTLY ENOUGH TO PREVENT THATCH BUILDUP, LIMIT FERTILIZER USE AROUND THE RETENTION POND AND DO NOT FERTILIZE GRASS IN THE POND AREA.

5.) RESOD DISTURBED SIDE SLOPE AND ANY AREAS WHERE GRASS OR SOD HAS BEEN REMOVED OR ERODED.

6.) ALL STORMWATER PIPES, INLETS, YARD DRAINS, CATCH BASINS, MANHOLES, FLUMES, POND INFLOW AND OUTFALL STRUCTURES, INCLUDING OIL SKIMMERS AND DISCHARGE PIPES, SHOULD BE INSPECTED ON REGULAR BASIS (MONTHLY OR QUARTERLY) AND AFTER SEVERE RAINFALLS. THEY SHOULD BE MAINTAINED TO OPERATE AS DESIGNED BY REMOVING BUILT UP DEBRIS AND VEGETATION FROM INLETS, OUTLETS, CULVERTS, REPAIR DETERIORATION STRUCTURES. HOA TO ASSUME O&M RESPONSIBILITIES.

7.) NOTE THAT CHEMICALS, OILS, GREASES, OR SIMILAR WASTES ARE NOT TO BE DISPOSED OF DIRECTLY OR THROUGH STORM SEWERS TO THE STORMWATER FACILITY. TREATMENT PONDS ARE DESIGNED TO REMOVE NORMAL ROAD, PARKING LOT, ROOF, AND YARD RUNOFF ONLY.

8.) NO ALTERATION OF ANY PART OF THE STORMWATER FACILITIES IS PERMITTED WITHOUT PRIOR APPROVAL FROM ALL APPLICABLE GOVERNING AGENCIES.

9.) IT IS USUALLY MORE COST EFFECTIVE TO MONITOR AND PERFORM ROUTINE ON SURFACE WATER MANAGEMENT SYSTEM THAN TO LET IT FAIL AND THEN HAVE TO RECONSTRUCT THE ENTIRE SYSTEM.

10.) THE REMOVAL OF LITTORAL SHELF VEGETATION (INCLUDING CATTAILS) FROM THE WET DETENTION PONDS IS PROHIBITED UNLESS OTHERWISE APPROVED BY THE GOVERNING WATER MANAGEMENT DISTRICT. REMOVAL INCLUDED DREDGING, THE APPLICATION OF HERBICIDE, CUTTING, AND THE INTRODUCTION OF GRASS CARP. ANY QUESTIONS REGARDING AUTHORIZED ACTIVITIES WITHIN THE WET DETENTION PONDS SHALL BE ADDRESSED TO THE DISTRICTS SURFACE WATER REGULATION MANAGER, LOCAL SERVICE OFFICE.

11.) PERIODIC INSPECTIONS OF ALL SWALES WITHIN THE PROPERTY ARE REQUIRED IN ORDER TO MAINTAIN THE CAPACITY TO CONVEY THE INTENDED HYDRAULIC CONVEYANCE.

GENERAL NOTES

1.) THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE PERMIT AND INSPECTION REQUIREMENTS SPECIFIED BY THE VARIOUS GOVERNMENTAL AGENCIES AND THE ENGINEER/ARCHITECT. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION, AND SCHEDULE ANY NECESSARY INSPECTIONS ACCORDING TO AGENCY INSTRUCTIONS.

2.) ALL SPECIFICATIONS AND DOCUMENTS REFERRED TO IN THESE PLANS SHALL BE OF THE LATEST REVISION.

3.) ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.

4.) CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL PRECAST AND MANUFACTURED ITEMS TO THE OWNER'S ENGINEER FOR APPROVAL. FAILURE TO OBTAIN APPROVAL BEFORE INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT CONTRACTOR'S EXPENSE.

5.) WORK PERFORMED UNDER THIS CONTRACT SHALL INTERFACE SMOOTHLY WITH OTHER WORK BEING PERFORMED ON SITE BY OTHER CONTRACTORS AND UTILITY COMPANIES. IT WILL BE NECESSARY FOR THE CONTRACTOR TO COORDINATE AND SCHEDULE HIS ACTIVITIES, WHERE NECESSARY, WITH OTHER CONTRACTORS AND UTILITY COMPANIES, INCLUDING BUT NOT LIMITED TO TECO, VERIZON, BRIGHTHOUSE, TECO PEOPLE GAS AND THEIR SUBCONTRACTORS.

6.) THE WATER, SANITARY SEWER AND STORM DRAINAGE FACILITIES ARE SUBJECT TO THE REVIEW AND APPROVAL OF HILLSBOROUGH COUNTY PGMD.

7.) CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES BEFORE ORDERING MATERIALS AND CASTING STRUCTURES.

8.) IT WILL BE NECESSARY TO EXAMINE, COORDINATE AND ADJUST ACCORDINGLY THE PROPOSED LOCATIONS OF THE VARIOUS COMPONENTS OF THE SITE UTILITIES. THE LAYOUTS INDICATED IN THE PLANS ARE NOT EXACT AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUBMIT COORDINATION DRAWINGS SHOWING PIPE SIZES, STRUCTURES, AND ELEVATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SCHEDULING AND COORDINATION OF THE ALL UNDERGROUND WORK ASSOCIATED WITH THIS PROJECT.

9.) PRIOR TO ANY CLEARING, AREAS THAT ARE CUT CORRIDORS SHALL BE ROOT PRUNED WITH A DOSKO BRAND ROOT PRUNER, OR APPROVED EQUAL. PROVIDE TREE PROTECTION BARRICADES, IN ACCORDANCE WITH HILLSBOROUGH COUNTY SPECIFICATIONS, AROUND EXISTING TREES TO REMAIN. COORDINATE WITH OWNER'S ARBORIST PRIOR TO REMOVAL OF EXISTING TREES IN CONFLICT WITH PROPOSED UNDERGROUND UTILITIES.

10.) ALL UTILITY CONFLICTS NEED TO BE RESOLVED PRIOR TO CONSTRUCTION.

SAFETY NOTES

1.) DURING THE CONSTRUCTION AND MAINTENANCE OF THIS PROJECT, ALL SAFETY REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS PERSONNEL.

2.) LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF TRANSPORTATION.

3.) CONTRACTOR SHALL PROVIDE AND MAINTAIN ITS OWN SAFETY EQUIPMENT IN ACCORDANCE WITH ITS HEALTH & SAFETY PROGRAM AND ALL OTHER APPLICABLE LEGAL AND HEALTH AND SAFETY REQUIREMENTS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR PROVIDING ITS EMPLOYEES AND SUBCONTRACTORS WITH ADEQUATE INFORMATION AND TRAINING TO ENSURE THAT ALL EMPLOYEES AND SUBCONTRACTORS AND SUBCONTRACTORS' EMPLOYEES COMPLY WITH ALL APPLICABLE REQUIREMENTS. CONTRACTOR SHALL REMAIN IN COMPLIANCE WITH ALL OCCUPATION SAFETY AND HEALTH REGULATIONS AS WELL AS THE ENVIRONMENTAL PROTECTION LAWS. THE FOLLOWING IS NOT TO BE PERCEIVED AS THE ENTIRE SAFETY PROGRAM BUT JUST BASIC REQUIREMENTS.

4.) ALL EXCAVATIONS BY THE CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF THE DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. PARTICULAR ATTENTION MUST BE PAID TO THE CONSTRUCTION STANDARDS FOR EXCAVATIONS, 29 CFR PART 1926, SUBPART P.

5.) THE MINIMUM STANDARDS AS SET FORTH IN THE CURRENT EDITION OF "THE STATE OF FLORIDA, MANUAL ON TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS" SHALL BE FOLLOWED IN THE DESIGN APPLICATION, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PUBLIC AND WORKMEN FROM HAZARDS WITHIN THE PROJECT LIMITS.

6.) ALL TRAFFIC CONTROL MARKINGS AND DEVICES SHALL CONFORM TO THE PROVISIONS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES PREPARED BY THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION.

7.) IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS. THE ABOVE INFORMATION HAS BEEN PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATIONS.

8.) THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE UTILITY COMPANIES PRIOR TO CONSTRUCTION TO OBTAIN FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES. CALL SUNSHINE-ONE (1-800-432-4770) TO ARRANGE FIELD LOCATIONS.

9.) THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED BY THE CONTRACTOR CALLED FOR IN THIS CONTRACT.

10.) ALL UNDERGROUND UTILITIES MUST BE IN PLACE AND TESTED OR INSPECTED PRIOR TO BASE AND PAVEMENT CONSTRUCTION.

SITE PLAN AND COORDINATE GEOMETRY NOTES

1.) TOPOGRAPHIC INFORMATION SHOWN IS BASED ON A SURVEY CONDUCTED BY W.C. SHERRILL AND COMPANY ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

2.) ALL POINTS AND MONUMENTS SHALL BE SURVEYED UPON MOBILIZATION TO VERIFY THEIR ACCURACY. ANY DISCREPANCIES DISCOVERED MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING.

3.) MONUMENTS AND OTHER SURVEY CONTROL POINTS SHALL BE PROTECTED FROM DAMAGE AND DISTURBANCE. IF ANY CONTROL POINTS ARE DAMAGED OR DISTURBED, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER AND REPLACE THE CONTROL POINTS TO THEIR ORIGINAL CONDITION AT HIS OWN EXPENSE.

4.) LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THIS WORK PRIOR TO CONSTRUCTION.

5.) UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH THE OWNER'S ENGINEER WITH COMPLETE "AS-BUILT" INFORMATION CERTIFIED BY A REGISTERED LAND SURVEYOR. THIS "AS-BUILT" INFORMATION SHALL INCLUDE INVERT ELEVATIONS, LOCATION OF FITTINGS, LOCATION OF STRUCTURES FOR ALL UTILITIES INSTALLED. NO ENGINEER'S CERTIFICATIONS, FOR FINALIZATION PURPOSES, WILL BE MADE UNTIL THIS INFORMATION IS RECEIVED AND APPROVED BY THE ENGINEER.

CLEARING / DEMOLITION NOTES

1.) PRIOR TO ANY SITE CLEARING, ALL TREES SHOWN TO REMAIN AS INDICATED ON THE CONSTRUCTION PLANS SHALL BE PROTECTED IN ACCORDANCE WITH LOCAL TREE ORDINANCES AND DETAILS CONTAINED IN THESE PLANS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THESE TREES IN GOOD CONDITION. NO TREE SHOWN TO REMAIN SHALL BE REMOVED WITHOUT WRITTEN APPROVAL FROM HILLSBOROUGH COUNTY AND OR THE OWNER.

2.) THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE NECESSARY FOR CONSTRUCTION. DISTURBED AREAS WILL BE SEEDED, MULCHED, SODDED OR PLANTED WITH OTHER APPROVED LANDSCAPE MATERIAL IMMEDIATELY FOLLOWING CONSTRUCTION.

3.) REMAINING EARTHWORK THAT RESULTS FROM CLEARING AND GRUBBING OR SITE EXCAVATION IS TO BE UTILIZED ON-SITE IF REQUIRED, PROVIDED THAT THE MATERIAL IS DEEMED SUITABLE FOR CONSTRUCTION BY THE OWNER'S SOILS TESTING COMPANY. EXCESS MATERIAL IS TO BE EITHER STOCKPILED ON THE SITE AS DIRECTED BY THE OWNER OR OWNER'S ENGINEER, OR REMOVED FROM THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING EXCESS EARTHWORK FROM THE SITE.

4.) ALL CONSTRUCTION DEBRIS AND OTHER WASTE MATERIALS SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH APPLICABLE REGULATORY AGENCY REQUIREMENTS.

PAVING AND GRADING NOTES

1.) ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) IS TO BE EXCAVATED IN ACCORDANCE WITH THESE PLANS OR AS DIRECTED BY THE OWNER, THE OWNER'S ENGINEER, OR OWNER'S SOIL TESTING COMPANY. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER. EXCAVATED AREAS TO BE BACK FILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.

2.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND WILL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.

3.) ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOIL TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE PLANS OR THE REFERENCED SOILS REPORT.

4.) PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADE UNLESS OTHERWISE NOTED ON DRAWINGS.

5.) CONTRACTOR SHALL TRIM, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.

6.) CURBING WILL BE PLACED AT THE EDGE OF ALL PAVEMENT, AS SHOWN ON THE PLANS.

7.) REFER TO THE LATEST EDITION OF F.D.O.T. "ROADWAY AND TRAFFIC DESIGN STANDARDS" FOR DETAILS AND SPECIFICATIONS OF ALL F.D.O.T. TYPE CURBING AND GUTTERS CALLED FOR IN THESE PLANS.

8.) ALL PAVEMENT MARKINGS SHALL BE MADE WITH PERMANENT THERMOPLASTIC AND SHALL CONFORM TO APPLICABLE F.D.O.T. STANDARD INDEXES.

9.) THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING APPLICABLE TESTING WITH THE SOILS ENGINEER. TESTS WILL BE REQUIRED PURSUANT TO HILLSBOROUGH CO. AND FDOT SPECIFICATIONS. UPON COMPLETION OF PROPOSED CONSTRUCTION, SOILS ENGINEER WILL SUBMIT CERTIFICATIONS TO THE OWNER'S ENGINEER STATING THAT ALL REQUIREMENTS HAVE BEEN MET.

10.) A QUALIFIED TESTING LABORATORY SHALL PERFORM ALL TESTING NECESSARY TO ASSURE COMPLIANCE OF THE IN PLACE MATERIALS AS REQUIRED BY THESE PLANS AND THE VARIOUS AGENCIES. SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THE REQUIREMENTS, THE CONTRACTOR WILL BEAR ALL COSTS OF SAID RETESTING.

11.) THE CONTRACTOR IS RESPONSIBLE TO PREVENT ANY WIND OR STORMWATER RUNOFF EROSION AND IMPLEMENT A STORMWATER POLLUTION PREVENTION PLAN THAT MEETS REGULATORY REQUIREMENTS. REFER TO THE STORMWATER POLLUTION PREVENTION NOTES.

12.) ALL PRIVATE ROADS TO BE OWNED AND MAINTAINED BY THE H.O.A.

DRAINAGE NOTES

1.) STANDARD INDEXES REFER TO THE LATEST EDITION OF HILLSBOROUGH COUNTY TECHNICAL MANUAL.

2.) ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE CLASS III (ASTM C-76) UNLESS OTHERWISE NOTED ON PLANS. ALL DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH HILLSBOROUGH COUNTY ROADWAY AND TRAFFIC DESIGN STANDARDS UNLESS OTHERWISE NOTED ON PLANS.

3.) PIPE LENGTHS SHOWN ARE APPROXIMATE AND TO CENTER OF DRAINAGE STRUCTURE WITH THE EXCEPTION OF MITERED END SECTIONS WHICH ARE NOT INCLUDED IN LENGTHS.

4.) ALL DRAINAGE STRUCTURE TOPS AND COVERS SHALL BE TRAFFIC RATED FOR H-20 LOADINGS.

5.) ALL STORM DRAINAGE PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER PRIOR TO THE PLACEMENT OF BACKFILL. CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION.

6.) THE CONTRACTOR SHALL MAINTAIN AND PROTECT FROM MUD, DIRT, DEBRIS, ETC. THE STORM DRAINAGE SYSTEM UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE CONTRACTOR MAY BE REQUIRED TO RECLEAN PIPES AND INLETS FOR THESE PURPOSES.

CONSTRUCTION STANDARDS AND SPECIFICATIONS

1.) MAINTENANCE OF TRAFFIC SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND IN ACCORDANCE WITH STATE OF FLORIDA D.O.T. STANDARD INDEX 600.

2.) ALL PAVEMENT STRIPING AND TRAFFIC FLOW ARROWS SHALL BE THERMOPLASTIC COMPOUND, MEETING THE REQUIREMENTS OF AASHTO M 249-79 (LATEST EDITION) AND BE INSTALLED IN SUBSTANTIAL COMPLIANCE WITH F.D.O.T. STANDARD FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), SECTION 711 WITH RPMS PER FDOT #17352

3.) ALL WORK PERFORMED WITHIN THE RIGHT OF WAY SHALL CONFORM TO:
A.) FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), (AKA: STANDARD SPECS).
B.) FDOT DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND OPERATIONS ON THE STATE HIGHWAYS SYSTEM (LATEST EDITION) (AKA: STANDARD INDEX). COMPLIANCE WITH ALL APPLICABLE INDICES IS REQUIRED.
C.) FDOT ROADWAY PLANS PREPARATION MANUAL VOLUME 1, CHAPTERS 2 AND 25 (LATEST EDITION).
D.) FDOT FLEXIBLE PAVEMENT DESIGN MANUAL FOR NEW CONSTRUCTION AND PAVEMENT REHABILITATION (LATEST EDITION).
E.) ALL TRAFFIC STRIPES AND MARKINGS ARE TO BE LEAD-FREE, NON-SOLVENT BASED THERMOPLASTIC. THE PERMITTEE SHALL FURNISH THE FDOT WITH THE MANUFACTURE'S CERTIFICATION THAT THE THERMOPLASTIC IS "LEAD-FREE".

4.) ALL PROPOSED PAVEMENT MARKINGS TO MEET AND MATCH EXISTING PAVEMENT MARKINGS.

SANITARY SEWER NOTES

1.) SANITARY SEWERS, RECLAIMED WATER MAINS AND STORM SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHENEVER POSSIBLE.

2.) WHERE SANITARY SEWERS, RECLAIMED WATER MAINS AND STORM SEWERS MUST CROSS A WATER MAIN WITH LESS THAN 18 INCHES VERTICAL DISTANCE, BOTH PIPES SHALL BE CONSTRUCTED OF DUCTILE IRON PIPES (DIP) AT THE CROSSING. (DIP IS NOT REQUIRED FOR STORM SEWERS IF IT IS NOT AVAILABLE IN THE SIZE PROPOSED.) SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE LEAK FREE AND MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT THE CROSSING.

3.) ALL CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING).

4.) WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE, THE NEW PIPE SHALL BE CONSTRUCTED OF DIP AND THE CROSSING SHALL BE ARRANGED TO MEET THE REQUIREMENTS ABOVE.

5.) A MINIMUM 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.

6.) IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10-FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.

7.) WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 18 INCHES IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SEWER OR THE FORCE MAIN SHALL BE CONSTRUCTED OF DIP (IF AVAILABLE IN THE SIZE PROPOSED) WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM THE JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).

8.) MINIMUM FORCE MAIN DEPTH IS 48". MINIMUM GRAVITY SEWER LINE DEPTH IS 5'.

9.) ALL ON SITE PVC GRAVITY SANITARY SEWER SHALL BE IN ACCORDANCE WITH THE HILLSBOROUGH COUNTY WATER AND WASTE WATER TECHNICAL MANUAL. SOLID WALL PVC PIPE SHALL COMPLY WITH ASTM D 3034 AND ALL APPLICABLE ASTM DOCUMENTS AS COVERED IN SECTION NO. 2 OF ASTM D 3034. MINIMUM WALL THICKNESS OF SDR-26 IS REQUIRED. REFERENCE EXHIBIT # S-6A FOR SERVICE LATERAL DETAIL.

10.) ALL SANITARY SEWER WORK SHALL CONFORM WITH APPLICABLE AGENCY STANDARDS AND SPECIFICATIONS.

11.) PRIOR TO COMMENCING WORK WHICH REQUIRES CONNECTING NEW SANITARY SEWER LINES TO EXISTING LINES OR APPURTENANCES, THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES NEAR THE POINT OF CONNECTION AND NOTIFY OWNER'S ENGINEER OF ANY CONFLICTS OR DISCREPANCIES WITH DESIGN INFORMATION SHOWN IN THESE PLANS.

12.) ALL GRAVITY SEWER PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER PRIOR TO PLACEMENT OF PAVING AND AGAIN PRIOR TO OBTAINING CERTIFICATE OF BASE OCCUPANCY. CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS.

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

14.) GRAVITY SANITARY SEWER PIPES WHICH ARE LOCATED UNDER UNPAVED AREAS SHALL COMPLY WITH AWWA C-900 AND SHALL BE CLASS 150 SDR 18.

WATER DISTRIBUTION NOTES

1.) SANITARY SEWERS, RECLAIMED WATER MAINS AND STORM SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHENEVER POSSIBLE.

2.) WHERE SANITARY SEWERS, RECLAIMED WATER MAINS AND STORM SEWERS MUST CROSS A WATER MAIN WITH LESS THAN 18 INCHES VERTICAL DISTANCE, BOTH THE SEWER AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON (DIP) AT THE CROSSING. (DIP IS NOT REQUIRED FOR STORM SEWERS IF IT IS NOT AVAILABLE IN THE SIZE PROPOSED.) SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE LEAK FREE AND MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT THE CROSSING.

3.) ALL CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING).

4.) WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE, THE NEW PIPE SHALL BE CONSTRUCTED OF DIP AND THE CROSSING SHALL BE ARRANGED TO MEET THE REQUIREMENTS ABOVE.

5.) A MINIMUM 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.

6.) IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10-FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.

7.) WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 18 INCHES IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SEWER OR THE FORCE MAIN SHALL BE CONSTRUCTED OF DIP (IF AVAILABLE IN THE SIZE PROPOSED) WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM THE JOINTS ON THE, SEWER OR FORCE MAIN (STAGGERED JOINTS).

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

9.) ALL WATER SYSTEM WORK SHALL CONFORM TO HILLSBOROUGH CO. UTILITIES DEPARTMENT STANDARDS AND SPECIFICATIONS.

10.) CONFLICTS BETWEEN WATER AND STORM OR SANITARY SEWER TO BE RESOLVED BY ADJUSTING THE WATER LINES AS NECESSARY AND PER ABOVE REQUIREMENTS.

11.) ALL ON SITE PVC WATER MAINS 4 INCHES THROUGH 12 INCHES SHALL BE IN ACCORDANCE WITH AWWA C-900 AND SHALL BE CLASS 150 SDR 18. ALL ON-SITE PVC WATER MAINS 2" TO 3" SHALL BE CLASS 120 AND MEET REQUIREMENTS OF SDR 21 IN ACCORDANCE WITH ASTM D-2241. WATER MAINS SMALLER THAN 1 1/2" SHALL BE P.E. PIPE MEETING AWWA C-901. PIPE SHALL BE POLY-E DRISCO-PIPE 5100 ULTRALINE OR ENDOPURE BY ENDOT OR APPROVED EQUAL. PIPE SHALL BE BLUE OR ENCASED IN BLUE SLEEVE.

12.) ALL DUCTILE IRON PIPE AND JOINTS SHALL BE IN ACCORDANCE WITH THE HILLSBOROUGH CO. UTILITIES DEPARTMENT TECHNICAL MANUAL MATERIAL SPECIFICATIONS.

13.) ALL DUCTILE FITTINGS SHALL BE COMPACT WITH A MINIMUM PRESSURE RATING OF 350 PSI AND SHALL CONFORM TO THE REQUIREMENTS OF AWWA STANDARD C-153/A21.53, LATEST EDITION. ALL FITTINGS SHALL BE COATED AND LINED AS SPECIFIED ABOVE FOR DUCTILE IRON PIPE.

14.) THRUST BLOCKS ARE NOT ALLOWED FOR WATER MAINS LARGER THAN 4 INCHES.

15.) 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 HILLSBOROUGH CO. UTILITIES DEPARTMENT SPECIFICATIONS. CONTRACTOR TO NOTIFY OWNER'S ENGINEER AND MUNICIPALITY INSPECTORS 48 HOURS IN ADVANCE OF PERFORMING TESTS.

16.) CONTRACTOR TO PERFORM CHLORINATION AND BACTERIOLOGICAL SAMPLING AND PRESSURE TEST ON ENTIRE WATER SYSTEM. COPIES OF ALL BACTERIOLOGICAL TESTS TO BE SUBMITTED TO OWNER'S ENGINEER.

17.) PIPE DEFLECTION SHALL BE IN ACCORDANCE WITH AWWA STANDARD C-600, LATEST EDITION.

18.) ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS ESTABLISHED IN THE FIELD. NO ADDITIONAL COMPENSATION SHALL BE MADE BY THE OWNER.

19.) WHERE A HOUSE OR OTHER CONNECTION TERMINATES, THE CONTRACTOR SHALL PROVIDE AND INSTALL 2" x 4" STAKE WITH A MINIMUM OF EIGHTEEN INCHES (18") ABOVE GROUND AND TWO FEET (2') BELOW GROUND THE TOP TWELVE INCHES (12") ARE TO BE PAINTED BLUE.

20.) THE CONTRACTOR/ENGINEER OF RECORD SHALL CONTACT THE HILLSBOROUGH COUNTY PUBLIC UTILITY DEPT. INSPECTION SECTION AND LINE MAINTENANCE TO SET UP THE PRE-CONSTRUCTION MEETING. CONTACT MATT CIOFALO @ 272-5977 EXT. 43534 FOR INSPECTIONS AND THE SOUTH/CENTRAL LINE MAINTENANCE UNIT AT 671-7604 OR THE NORTHWEST LINE MAINTENANCE UNIT AT 554-5010.

21,) CONTRACTOR TO EXPOSE WATER MAIN AND FURNISH TAPPING SLEEVE AND VALVE FOR WATER METER TAP AND INSTALL 2” POLYETHYLENE (P.E.) WATER SERVICE LINE FROM MAIN TO METER. HILLSBOROUGH COUNTY PUBLIC UTILITIES WILL PERFORM THE TAPPING OPERATION.

22.) ALL NON-METALLIC PIPE WILL BE INSTALLED WITH 2 PAIR, 10-GAUGE COPPER TRACER WIRE.

23.) THE LOCATION OF ALL NEWLY INSTALLED FIRE HYDRANTS SHALL BE IDENTIFIED WITH A BLUE REFLECTIVE PAVEMENT MARKER INSTALLED ON THE ROADWAY, PERPENDICULAR TO THE FIRE HYDRANT. THE REFLECTIVE MARKER WILL BE LOCATED IN THE CENTER OF THE LANE CLOSEST TO THE HYDRANT.

24.) THE ENGINEER OF RECORD AND/OR CONTRACTOR WILL BE RESPONSIBLE FOR THE FLOW TESTING AND COLOR CODING OF ALL NEWLY INSTALLED FIRE HYDRANTS IN THE EXISTING OR PROPOSED HILLSBOROUGH COUNTY RIGHT OF WAY AND UTILITY EASEMENTS THAT ARE TO BE DEDICATED TO HILLSBOROUGH COUNTY PRIOR TO THE FINAL INSPECTION OF THE PROJECT. THE ENGINEER OF RECORD AND/OR CONTRACTOR SHALL REFER TO NFPA STANDARD 291 FOR FLOW TESTING AND COLOR-CODING METHODS AND PROCEDURES.

25.) CONTRACTOR TO COORDINATE WITH KEN WILLIAMS FOR SOUTH/CENTRAL @ 813-671-7604, OR VICTOR LEBRON FOR NORTHWEST @ 813-554-5010 OF THE HILLSBOROUGH COUNTY PUBLIC UTILITIES DEPT. PRIOR TO THE SELECTION AND ORDERING OF THE WATER METER AND/OR BACKFLOW PREVENTION DEVICE ASSEMBLIES.

26.) THE MASTER METER ASSEMBLY SHALL BE DIRECTLY ACCESSIBLE BY BOOM TRUCK OFF OF THE COUNTY R.O.W. OR BY AN INTERIOR ROAD THAT IS NOT BLOCKED BY A WALL, FENCE, OR GATE. THE ELEVATION OF THE CONCRETE SLAB WILL BE HIGHER THAN THE IMMEDIATE SURROUNDING AREA. DO NOT MULCH AREA AROUND SLAB. DO NOT PLANT ANY LANDSCAPE THAT WILL HINDER DIRECT ACCESS IN THE FUTURE TO THE METER ASSEMBLY.

27.) CONTRACTOR MUST COORDINATE THE SHUTDOWN OF THE EXISTING POTABLE WATER, WASTEWATER FORCEMAIN, OR RECLAIMED WATER MAIN WITH HILLSBOROUGH COUNTY FIELD MAINTENANCE SERVICES. CONTACT THE NORTHWEST UNIT AT 813-554-5010 OR THE SOUTH/CENTRAL UNIT AT 813-671-7604.

28.) ALL ELEVATIONS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

29.) CONTRACTOR TO CONTACT TERRY SHIFLETT/COUNTY WATER LINE MAINTENANCE SUPERVISOR @ (813)298-3943 AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. A PLAN TO MAINTAIN SERVICE TO EXISTING WATER CUSTOMERS MUST BE DEVELOPED, AS NOTIFICATIONS TO EXISTING CUSTOMERS WILL NEED TO BE SENT OUT.

30.) CONTRACTOR TO CONTACT THE UTILITY COORDINATION TEAM BY EMAIL NOTIFICATION TO UTILITYCOORDINATION@HCFLGOV.NET AT LEAST 1 WEEK PRIOR TO CONSTRUCTION.

DEWATERING NOTES

1.) NO EXCAVATION SHALL EXTEND BELOW THE PERMITTED DESIGN DEPTHS/ELEVATIONS SHOWN ON THE DRAWINGS, UNLESS ADDITIONAL TESTING SUPPORTS OTHERWISE; AND NO LOWER SEMI-CONFINING UNIT CLAYEY SOIL MATERIAL AND / OR LIMESTONE MATERIALS SHALL BE EXCAVATED, REGARDLESS IF THESE MATERIALS ARE ENCOUNTERED WITHIN THE PERMITTED EXCAVATION DEPTHS/ELEVATIONS. IF ANY LOWER SEMI-CONFINING UNIT CLAY SOIL MATERIALS OR LIMESTONE MATERIALS ARE ENCOUNTERED ABOVE THE PERMITTED DEPTHS /ELEVATIONS, THEN EXCAVATION OPERATIONS SHALL CEASE IN THE GENERAL AREA. EPC WETLANDS MANAGEMENT STAFF MUST BE CONTACTED PRIOR TO ANY EXCAVATION OF CLAYS. * IN THE ABSENCE OF ANY CONFINING OR SEMI-CONFINING UNIT CLAYEY SOILS, A MINIMUM OF FIVE FEET UNDISTURBED SOILS SHALL REMAIN ABOVE THE UNDERLYING LIMESTONE.

2.) THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD AND THE GEOTECHNICAL ENGINEER IF SIGNIFICANT CLAY LAYERS ARE ENCOUNTERED DURING POND EXCAVATION. POND EXCAVATION DEPTHS MAY BE RAISED TO ELIMINATE OR MINIMIZE EXCAVATION OF CLAY MATERIAL. IF THE EXCAVATION EXPOSES CLAYS OR VERY CLAYEY SANDS TO THE FINAL POND SURFACES, THE EXPOSED CLAY AND CLAYEY AREAS SHALL BE COVERED WITH ONE FOOT OF CLEAN SANDY SOILS.

3.) POND BERMS ADJACENT TO WETLANDS, WHERE SHOWN, SHALL BE CONSTRUCTED AS EARLY AS PRACTICAL IN THE RELATED POND EXCAVATION OPERATION. THE PURPOSE IS TO PREVENT TURBID WATER DISCHARGE TO THE WETLAND DURING POND EXCAVATION. CONTROL STRUCTURES ARE TO BE TEMPORARILY BLOCKED IF NECESSARY TO PREVENT DISCHARGE OF TURBID WATERS.

4.) WHERE PUMPS ARE TO BE USED TO REMOVE TURBID WATERS FROM CONSTRUCTION AREAS, THE WATER SHALL BE TREATED PRIOR TO DISCHARGE TO THE WETLANDS AND TO PROTECTED UPLANDS. TREATMENT METHODS INCLUDE, FOR EXAMPLE, TURBID WATER BEING PUMPED INTO GRASSED SWALES OR APPROPRIATE VEGETATED AREAS (OTHER THAN UPLAND PRESERVATION AREAS AND WETLAND BUFFERS), SEDIMENT BASINS, OR CONFINED BY AN APPROPRIATE ENCLOSURE SUCH AS TURBIDITY BARRIERS, AND KEPT CONFINED UNTIL ITS TURBIDITY LEVEL MEETS STATE WATER QUALITY STANDARDS. POND TURBIDITY LEVELS MUST BE VISUALLY EVALUATED UPON CONSTRUCTION COMPLETION. ADDITIONAL MEASURES SUCH AS TEMPORARY LOWERING OF POND WATER LEVELS BY PUMPING TURBID WATER TO OVERLAND FILTRATION MAY BE NECESSARY TO PREVENT DIRECT DISCHARGE OF TURBID WATER TO ADJACENT WETLANDS.

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NOT TO SCALE

CONSTRUCTION PLAN REVISIONS

WINDHORST COMMONS

CLIENT: HABITAT FOR HUMANITY

GENERAL NOTES

Engineering Business Certificate of Authorization No. 32771
Florida Certificate of Authorization No. LC26000638

KYLE GLORIOSO LICENSE NO. 88699 STATE OF FLORIDA PROFESSIONAL ENGINEER

KYLE GLORIOSO
FLORIDA LICENSED PROFESSIONAL ENGINEER
REGISTRATION NUMBER 88699

PROJECT No.	194-01-02
SHEET	C 2.0

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SCALE IN FEET

CONSTRUCTION PLAN REVISIONS

WINDHORST COMMONS

CLIENT: HABITAT FOR HUMANITY

AERIAL SITE PLAN

Engineering Business Certificate of Authorization No. 32771
Florida Certificate of Authorization No. LC26000638

KYLE GLORIOSO
LICENSE
NO. 86699
STATE OF FLORIDA
PROFESSIONAL ENGINEER

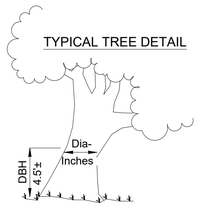
KYLE GLORIOSO
FLORIDA LICENSED PROFESSIONAL ENGINEER
REGISTRATION NUMBER 86699

PROJECT No.	194-01-02
SHEET	C 3.0

TREE LEGEND

O	OAK TREE
P	PINE TREE
C	CAMPHOR TREE
PM	PALM TREE
CD	CEDAR TREE
R	RAIN TREE
MB	MULBERRY TREE
CB	CHINA BERRY TREE
M	MAPLE TREE
DIA	DIAMETER
DBH	DIA AT BREAST HEIGHT
11"O	11" OAK TREE
X	TREE TO BE REMOVED

TYPICAL TREE DETAIL



NOTE: TREE SIZE IS SHOWN IN DIAMETER INCHES MEASURED AT BREAST HEIGHT (DBH).

DEMOLITION NOTES

1. DEMOLITION AREA SHOWN ON PLAN IS A GENERAL REPRESENTATION. ACTUAL EXTENTS OF PAVING, CURBING, SIDEWALK, ROAD BASES AND DRAINAGE REMOVAL THAT IS NECESSARY SHALL BE DETERMINED AT TIME OF CONSTRUCTION BY OWNER AND CONTRACTOR.
2. CONTRACTOR TO COORDINATE RELOCATION OF ALL EXISTING UTILITIES.
3. NO SEPTIC TANKS WERE LOCATED ON THE SURVEY BY HAMILTON ENGINEERING & SURVEYING SURVEYING, INC. SHOULD A SEPTIC TANK BE FOUND AND IS TO BE ABANDONED, THE SEPTIC TANK SHOULD BE PUMPED OUT, BOTTOMS RUPTURED, AND FILLED WITH CLEAN SAND OR OTHER SUITABLE MATERIAL. A PERMIT WILL BE REQUIRED FROM FL DEPARTMENT OF HEALTH PRIOR TO WORK BEING PERFORMED.

NOTE : REFER TO LANDSCAPE SHEET L 1.0 FOR DETAILED TREE REMOVAL INFO.

SURVEYOR'S NOTES

1. NO UNDERGROUND INSTALLATIONS OR IMPROVEMENTS HAVE BEEN LOCATED, EXCEPT AS SHOWN.
2. NO INSTRUMENTS OF RECORD REFLECTING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WERE FURNISHED THIS SURVEYOR, EXCEPT AS SHOWN. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT OR OWNERSHIP AND ENCUMBRANCE REPORT.
3. SURVEY FIELD WORK WAS COMPLETED ON JANUARY 19, 2021.
4. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY
5. LEGAL DESCRIPTION SHOWN HEREON WAS OBTAINED FROM DEED RECORDED IN O.R. BOOK 22292.
6. 6. BEARINGS SHOWN HEREON ARE BASED ON THE GRID BEARING OF SOUTH 00°11'35" WEST FOR PAGE 234, OF THE PUBLIC RECORDS OF HILLSBOROUGH COUNTY, FLORIDA. THE EAST BOUNDARY LINE OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF THE SOUTHEAST, 1/4 OF SECTION 15 TOWNSHIP 29 SOUTH, RANGE 20 EAST, HILLSBOROUGH COUNTY, FLORIDA, AND ARE TIE TO THE FLORIDA COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983, ADJUSTED 2011. ORIGINATING COORDINATES: FLORIDA DEPARTMENT OF TRANSPORTATION CONTROL NETWORK.
7. TRACT SURVEYED HEREON CONTAINS 4.37 ACRES, MORE OR LESS.
8. ELEVATIONS SHOWN HEREON ARE IN FEET AND REFER TO N.A.V.D. OF 1988.
9. BENCHMARK: HILLSBOROUGH COUNTY BENCHMARK "VB-434" BEING A STANDARD DISK SET IN A CURB INLET LOCATED AT THE SOUTHEAST CORNER OF PASONS AVENUE AND WINDHORST ROAD. ELEVATION = 57.41 FEET (N.A.V.D. OF 1988).

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SCALE IN FEET

CONSTRUCTION PLAN REVISIONS

WINDHORST COMMONS

CLIENT: HABITAT FOR HUMANITY

EXISTING CONDITIONS AND DEMOLITION PLAN

Engineering Business Certificate of Authorization No. 32771
Florida Certificate of Authorization No. LC26000638

KYLE GLORIOSO LICENSE NO. 88699 STATE OF FLORIDA PROFESSIONAL ENGINEER

KYLE GLORIOSO
FLORIDA LICENSED PROFESSIONAL ENGINEER
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PROJECT No.	194-01-02
SHEET	C 4.0

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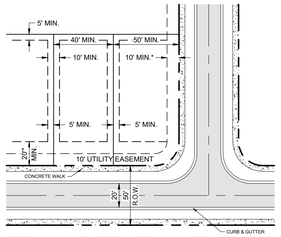
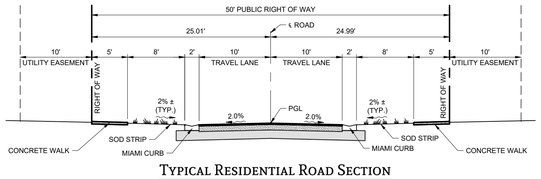


Minimum 40' Wide Typical Lot Detail

N.T.S.

*GARAGE SETBACK FOR A FRONT YARD FUNCTIONING AS A SIDE YARD SHALL BE 20' MINIMUM.

*EACH LOT HAS A MAXIMUM ALLOWABLE CURVE NUMBER OF 77.0.



Typical Residential Road Section

N.T.S.

SIGNAGE NOTES

1. ALL PAVEMENT MARKINGS, EXCEPT PARKING STALLS, SHALL BE "ALKYD THERMOPLASTIC 90 MILS IN THICKNESS" IN ACCORDANCE WITH FDOT, MUTCD, AND HILLSBOROUGH COUNTY STANDARDS.
2. ALL TRAFFIC CONTROL SIGNS WITHIN THE RIGHT-OF-WAY WILL BE MANUFACTURED USING DIAMOND GRADE REFLECTIVE SHEETING (OR AN EQUIVALENT). ALL SIGNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MUTCD CRITERIA FOR SIGN SIZE AND SHAPE AND LETTERING DIMENSIONS.
3. ALL TRAFFIC SIGN POSTS WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE U CHANNEL, GALVANIZED, 2.5 LB/FT. POST IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. THE SIGN LOCATIONS SHOWN ARE APPROXIMATE AND MAY REQUIRE FIELD ADJUSTMENT AS DIRECTED BY THE ENGINEER OF RECORD.

Signage Legend

1 STOP — R1-1 36"	2 OM4-1 RED 18"x18"	3 SPEED LIMIT 25 — R2-1 24"x30"
4 ONE WAY — R6-1R 36"x12"	5 FUTURE ROADWAY CONNECTION — CUSTOM SIGN 36"x24"	6 FL DOT FTP-21-06 18"x18"; PARKING BY DISABLED PERMIT ONLY — FL DOT FTP-21-06 18"x12"; FINE $250 MAX — FL DOT FTP-22-06 12"x6"

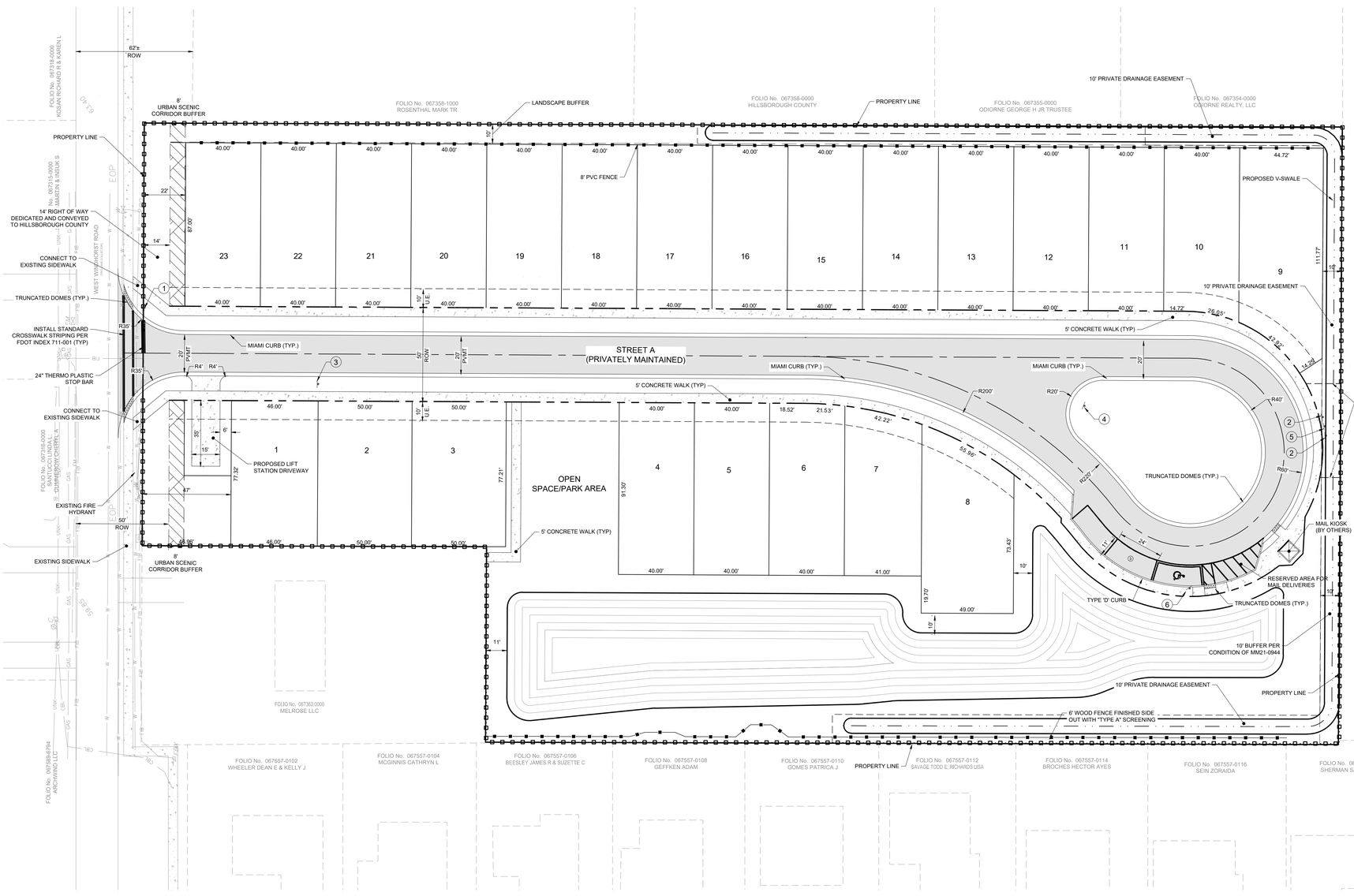
F.D.O.T. DESIGN STANDARDS
INDEX # 522-002 - DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS
INDEX # 700-010 - SINGLE COLUMN GROUND SIGNS
INDEX # 711-001 - PAVEMENT MARKINGS
INDEX # 700-109 - TRAFFIC CONTROLS FOR STREET TERMINATIONS
INDEX # 706-001 - TYPICAL PLACEMENT OF REFLECTIVE PAVEMENT MARKERS

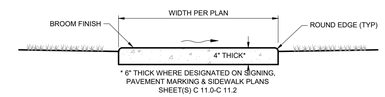
M.U.T.C.D.
SECTION 2B.05 - STOP SIGN (R1-1)
SECTION 2B.37 - DO NOT ENTER (R5-1)
SECTION 2B.40 - ONE WAY SIGN (R6-1L)

NOTE: DETAILS REFERENCED
M.U.T.C.D. & F.D.O.T. DESIGN STANDARDS

LEGEND

- PROPERTY LINE
- RIGHT OF WAY LINE
- FEMA FLOOD LINE
- WETLAND LINE
- WETLAND SETBACK LINE
- 35 EXISTING CONTOUR
- SILT FENCE
- TURBIDITY BARRIER





NOTES:

1.) SIDEWALK SHALL BE CONSTRUCTED IN CONFORMANCE WITH FDOT STANDARD INDEX 310 AND STANDARD SPECIFICATION 522 AND CORRESPONDING STANDARDS.

2.) COMPACT FILL AREAS TO MINIMUM 95 % OF AASHTO T99 DENSITY.

3.) SIDEWALK SHALL HAVE CONTRACTION JOINTS SPACED EQUALLY TO THE SIDEWALK WIDTH AND HAVE EXPANSION JOINTS EVERY 120' MAXIMUM.

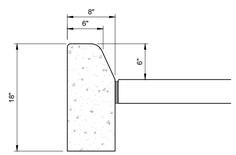
4.) CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS.

5.) SIDEWALK SHALL HAVE A MAXIMUM CROSS SLOPE OF 2% PER ADA STANDARDS FOR ACCESSIBLE DESIGN SECTION 4.3.

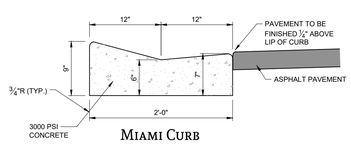
6.) CURB RAMPS SHALL BE CONSTRUCTED IN CONFORMANCE WITH ADA STANDARDS FOR ACCESSIBLE DESIGN SECTION 4.7 AND FDOT STANDARD INDEX 304.

Concrete Sidewalk Detail

Scale: N.T.S.



TYPE "D" CURB



Miami Curb

Curb Details

Scale: N.T.S.

Concrete Curb Notes:

1.) CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3,000 P.S.I. IN 28 DAYS UNLESS OTHERWISE NOTED.

2.) CURB SHALL BE CONSTRUCTED IN CONFORMANCE WITH FDOT INDEX 300.

3.) CURB SHALL HAVE EXPANSION JOINTS INSTALLED AT ALL INLETS AND EVERY ±500'.

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Office: 813-375-0616
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CONSTRUCTION PLAN REVISIONS

WINDHORST COMMONS

CLIENT: HABITAT FOR HUMANITY

SITE PLAN

Engineering Business Certificate of Authorization No. 32771
Florida Certificate of Authorization No. LC26000638

KYLE GLORIOSO LICENSE NO. 88699 STATE OF FLORIDA PROFESSIONAL ENGINEER

KYLE GLORIOSO
FLORIDA LICENSED PROFESSIONAL ENGINEER
REGISTRATION NUMBER 88699

PROJECT No. 194-01-02

SHEET C 5.0

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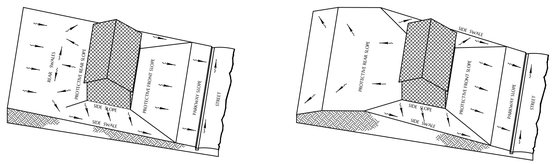


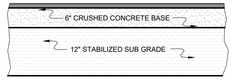
LOT GRADING TYPE "A"
ALL DRAINAGE TO STREET

LOT GRADING TYPE "B"
DRAINAGE BOTH TO STREET AND TO REAR LOT LINE

NOTE: LOTS DESIGNATED A/B, B/C, ETC. INDICATE LOTS THAT TRANSITION FROM ONE TYPE TO THE OTHER AND SHALL BE GRADED ACCORDINGLY.

TYPICAL PAVING SECTION PAVEMENT DESIGN

LAYER TYPE	STRUCTURAL COEFFICIENT	PROPOSED THICKNESS (IN)	SN
TYPE SP-12.5 SURFACE COURSE (1 LIFT)	0.44	1.50	0.66
CRUSHED CONCRETE BASE (MIN. 150 LBR)	0.15	6.00	0.90
STABILIZED SUBGRADE (MIN. 40 LBR)	0.08	12.00	0.96
TOTAL PROPOSED SN			2.52
MINIMUM ALLOWED SN FOR LOCAL ROAD			2.30

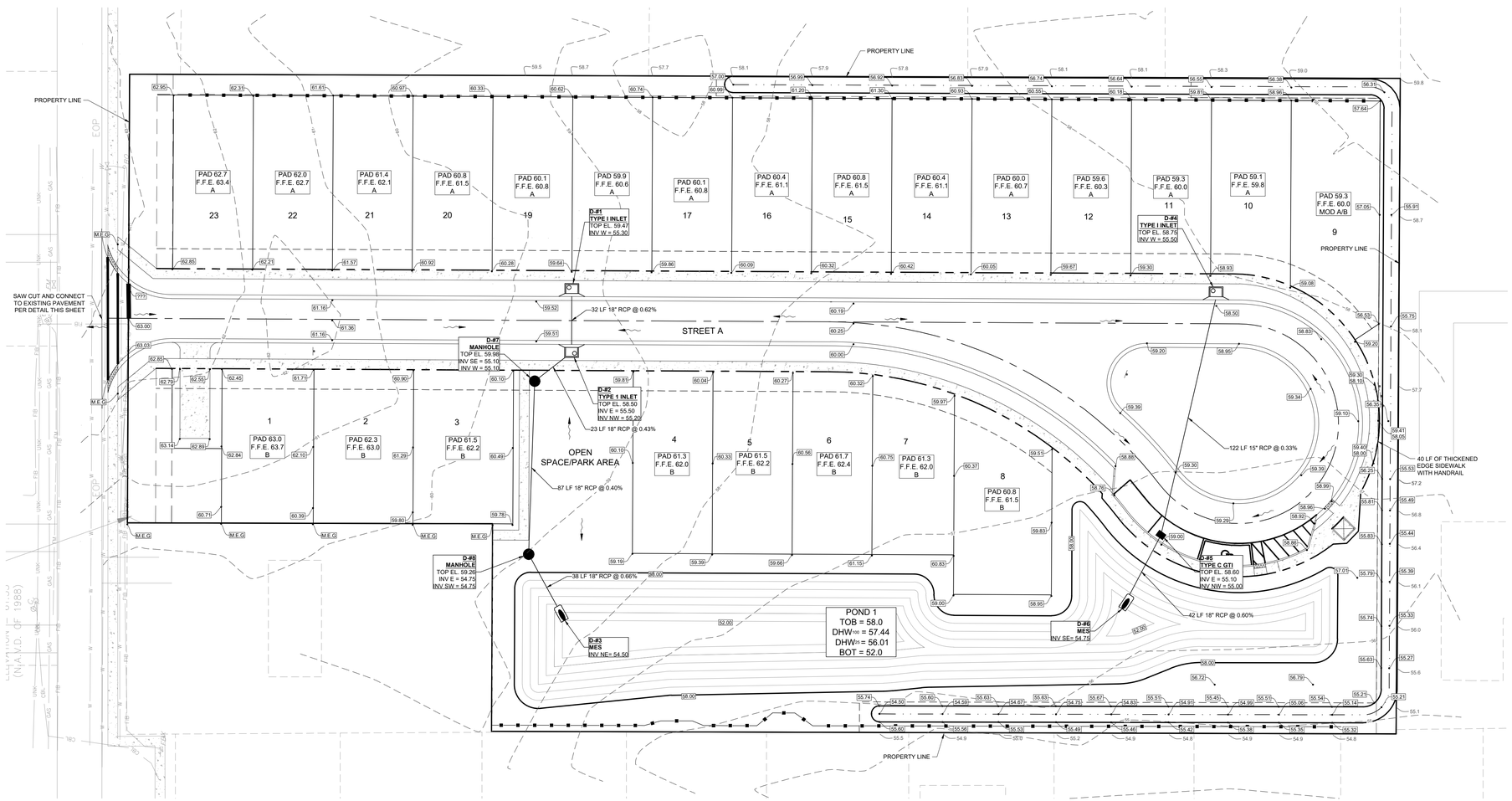


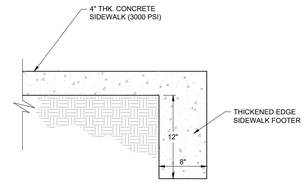
NOTES

1. THE PROPERTY DESCRIBED HEREON IS LOCATED IN ZONE "X" PER FLOOD INSURANCE RATE MAP COMMUNITY PANEL NO. 12057C0385H, (DATED AUGUST 28, 2008). NO BASE FLOOD ELEVATION PROVIDED BY FEMA.
2. BASE FLOOD ELEVATIONS ARE PER WATERSHED MODEL FOR BELMOND RESERVE BY LEVELUP CONSULTING, LLC. ELEVATIONS ARE PER THE POST-DEVELOPMENT CONDITION. MODEL BOUNDARY CONDITION IS NODE 730.755 DERIVED FROM THE ALAFIA RIVER WATERSHED MODEL.
3. PAD GRADE PRIOR TO BUILDING CONSTRUCTION IS FINISHED FLOOR MINUS 8".
4. MINIMUM SLOPE FOR SIDE YARD SWALE SHALL BE 1%. SLOPES ARE INDICATED IN AREAS WHERE MIN. SLOPE IS NOT ATTAINED.
5. ALL GRADES ARE TO TOP OF SOD.
6. SLOPES GREATER THAN 4:1 MUST BE SODDED.
7. PER SECTION 4.01.07.B.4 OF THE HILLSBOROUGH COUNTY LAND DEVELOPMENT CODE, NO PERMANENT STRUCTURE CAN BE CONSTRUCTED WITHIN THE 30' WETLAND SETBACK BUFFER WITHOUT FIRST GETTING A VARIANCE FROM THE LAND USE HEARING OFFICER.
8. SEE PLAN AND PROFILE SHEETS FOR UNDER DRAIN LOCATIONS.

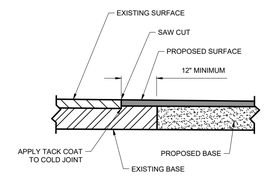
LEGEND

- PROPERTY LINE
- RIGHT OF WAY LINE
- 39 — EXISTING CONTOUR
- SILT FENCE
- PAD 72.1 / F.F.E. 72.8 / B — PROPOSED LOT GRADE; MIN. FINISHED FLOOR ELEV.; LOT TYPE
- 60.00 — FINISHED GRADE
- TYPE I INLET
- TYPE II INLET
- TYPE III INLET
- MITERED END SECTION
- MANHOLE
- GRATE INLET/CONTROL STRUCTURE





THICKENED EDGE SIDEWALK DETAIL
SCALE: N.T.S.



TIE-IN OF PROPOSED CONSTRUCTION TO EXISTING

NOTES:
1. SAW CUT EXISTING ASPHALT/CONCRETE PAVEMENT.
2. CLEARLY SAW CUT EXISTING EoP 12" WIDE.
3. REPAIR WITH NEW PAVEMENT - EQUAL DEPTH ASPHALT.

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CONSTRUCTION PLAN REVISIONS

WINDHORST COMMONS

CLIENT: HABITAT FOR HUMANITY

PAVING, GRADING, AND DRAINAGE PLAN

Engineering Business Certificate of Authorization No. 32771
Florida Certificate of Authorization No. LC26000638

KYLE GLORIOSO
LICENSE
NO. 88699
STATE OF FLORIDA
PROFESSIONAL ENGINEER

KYLE GLORIOSO
FLORIDA LICENSED PROFESSIONAL ENGINEER
REGISTRATION NUMBER 88699

PROJECT No.	194-01-02
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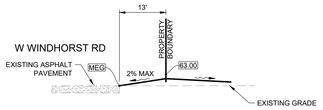

SECTION A-A
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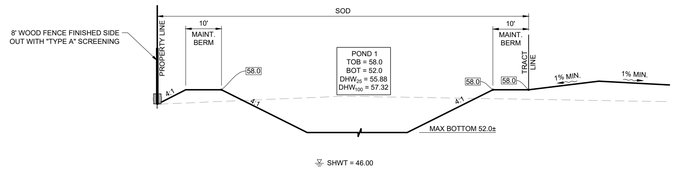

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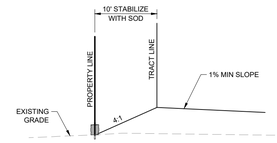

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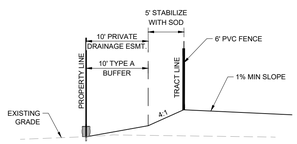

SECTION D- D
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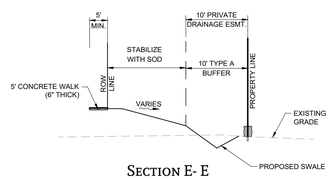

SECTION E- E
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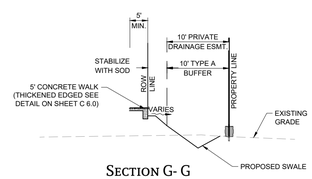

SECTION G- G
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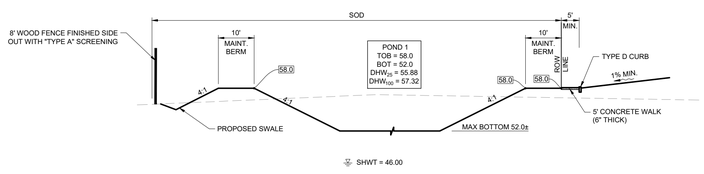

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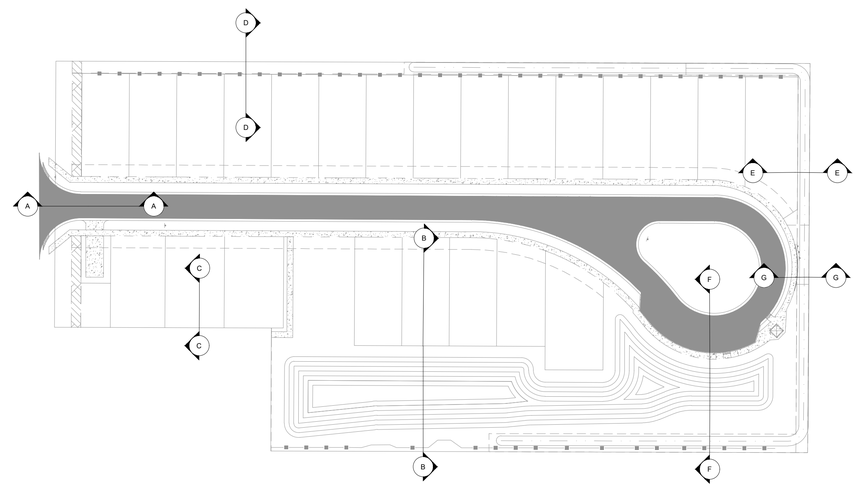

LEVELUP CONSULTING, LLC

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CONSTRUCTION PLAN REVISIONS

WINDHORST COMMONS

CLIENT: HABITAT FOR HUMANITY

CROSS SECTIONS

Engineering Business Certificate of Authorization No. 32771
Florida Certificate of Authorization No. LC26000638

KYLE GLORIOSO LICENSE NO. 88699 STATE OF FLORIDA PROFESSIONAL ENGINEER

KYLE GLORIOSO
FLORIDA LICENSED PROFESSIONAL ENGINEER
REGISTRATION NUMBER 88699

PROJECT No. 194-01-02

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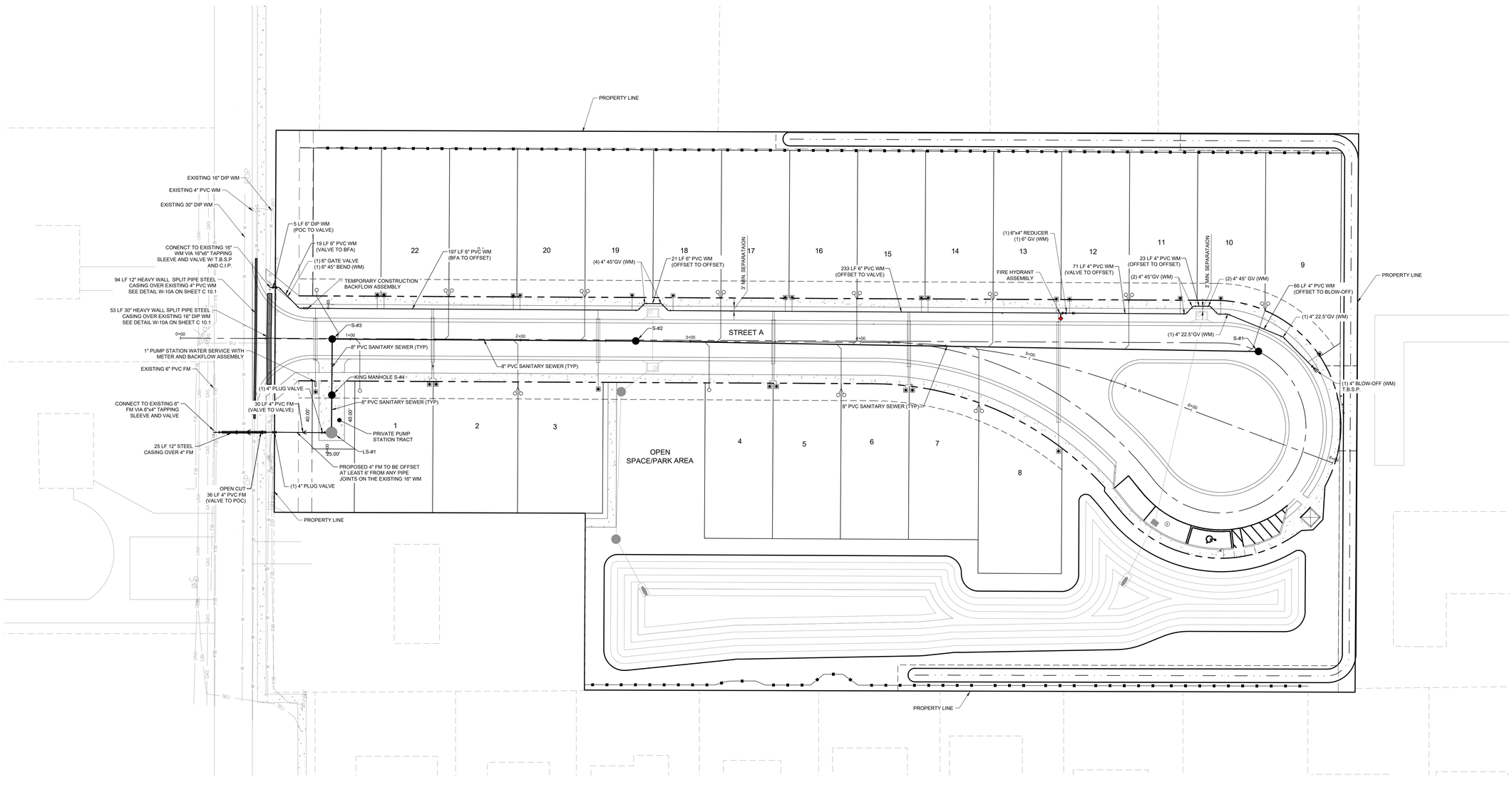
SPECIFIC UTILITY CONSTRUCTION NOTES

1. CONSULTANT TO BE PRESENT AT ALL TIMES DURING INSTALLATION OF SANITARY SEWER IN COMMON AREA.
2. CONDUIT FOR CABLE PROVIDERS TO BE LOCATED ALONG FRONT YARD LINE IN COMMON AREA.
3. ALL JOINTS TO BE RESTRAINED PER DETAIL W-7A ON SHEET C 10.0.
4. ALL NEAR AND FAR SIDE WATER SERVICES ARE INDIVIDUAL TAPS AND SERVICE LINES.
5. METERS & SANITARY SEWER LATERALS WILL BE INSTALLED IN ACCORDANCE WITH DETAILS W-3 AND S-4A RESPECTIVELY.
6. ALL BLOW OFFS, METERS, SERVICE LINE TAPS AND CLEAN OUTS WILL NOT BE INSTALLED UNDER OR IN SIDEWALK OR DRIVEWAYS.
7. VALVES WILL NOT BE INSTALLED IN ADA RAMPS, DRIVEWAYS, OR CURB LINE.
8. ALL D.I.P. WATER MAIN TO BE CLASS 50 D.I.P. WATER MAIN.
9. ANY COLLECTION SYSTEM MANHOLE GREATER THAN 15' IN DEPTH SHALL REQUIRE A 60" DIAMETER MANHOLE.
10. REQUIRED LEVEL A SUE WAS PREFORMED AND EXISTING INFRASTRUCTURE IS SHOWN PER THE LEVEL A SUE WORK REPORT.
11. THE GRAVITY WASTEWATER COLLECTION SYSTEM TO BE PRIVATELY OWNED AND MAINTAINED.
12. THE CONTRACTOR/ENGINEER OF RECORD SHALL CONTACT THE HILLSBOROUGH COUNTY PUBLIC UTILITY DEPT. INSPECTION SECTION AND LINE MAINTENANCE TO SET UP THE PRE-CONSTRUCTION MEETING. CONTACT MATT CIOFALO @ 272-5977 EXT. 43534 FOR INSPECTIONS AND THE SOUTHCENTRAL LINE MAINTENANCE UNIT AT 671-7604 OR THE NORTHWEST LINE MAINTENANCE UNIT AT 554-5010.
13. ALL ELEVATIONS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
14. CONTRACTOR TO EXPOSE WATER MAIN AND FURNISH TAPPING SLEEVE AND VALVE FOR WATER METER TAP AND INSTALL 2" POLYETHYLENE (P.E.) WATER SERVICE LINE FROM MAIN TO METER. HILLSBOROUGH COUNTY PUBLIC UTILITIES WILL PERFORM THE TAPPING OPERATION.
15. CONTRACTOR TO COORDINATE WITH SCOTT KULA FOR SOUTHCENTRAL @ 813-690-4382, OR CHRISTOPHER REPAK FOR NORTHWEST @ 813-554-5011 OF THE HILLSBOROUGH COUNTY PUBLIC UTILITIES DEPT. PRIOR TO THE SELECTION AND ORDERING OF THE WATER METER AND/OR BACKFLOW PREVENTION DEVICE ASSEMBLIES.
16. THE MASTER METER ASSEMBLY SHALL BE DIRECTLY ACCESSIBLE BY BOOM TRUCK OFF THE COUNTY R.O.W. OR BY AN INTERIOR ROAD THAT IS NOT BLOCKED BY A WALL, FENCE, OR GATE. THE ELEVATION OF THE CONCRETE SLAB WILL BE HIGHER THAN THE IMMEDIATE SURROUNDING AREA. DO NOT MULCH AREA AROUND SLAB. DO NOT PLANT ANY LANDSCAPE THAT WILL HINDER DIRECT ACCESS IN THE FUTURE TO THE METER ASSEMBLY.
17. CONTRACTOR MUST COORDINATE THE SHUTDOWN OF THE EXISTING POTABLE WATER, WASTEWATER FORCEMAIN, OR RECLAIMED WATER MAIN WITH HILLSBOROUGH COUNTY FIELD MAINTENANCE SERVICES. CONTACT THE NORTHWEST UNIT AT 813-554-5010 OR THE SOUTHCENTRAL UNIT AT 813-671-7604.
18. ALL NON-METALLIC PIPE WILL BE INSTALLED WITH 2 PAIR, 10-GAUGE COPPER TRACER WIRE.
19. THE LOCATION OF ALL NEWLY INSTALLED FIRE HYDRANTS SHALL BE IDENTIFIED WITH A BLUE REFLECTIVE PAVEMENT MARKER INSTALLED ON THE ROADWAY, PERPENDICULAR TO THE FIRE HYDRANT. THE REFLECTIVE MARKER SHALL BE LOCATED IN THE CENTER OF THE LANE CLOSEST TO THE HYDRANT.
20. THE ENGINEER OF RECORD AND/OR CONTRACTOR WILL BE RESPONSIBLE FOR THE FLOW TESTING AND COLOR CODING OF ALL NEWLY INSTALLED FIRE HYDRANTS IN THE EXISTING OR PROPOSED HILLSBOROUGH COUNTY RIGHT OF WAY AND UTILITY EASEMENTS THAT ARE TO BE DEDICATED TO HILLSBOROUGH COUNTY PRIOR TO THE FINAL INSPECTION OF THE PROJECT. THE ENGINEER OF RECORD AND/OR CONTRACTOR SHALL REFER TO NFPA STANDARD 291 FOR FLOW TESTING AND COLOR-CODING METHODS AND PROCEDURES.

LEGEND

WATER		SANITARY SEWER	
	WATER MAIN		MANHOLE W/ FLOW DIRECTION
	GATE VALVE		FORCEMAIN
	REDUCER		SINGLE SERVICE
	BLOW OFF		DOUBLE SERVICE
	BLOW OFF (TEMPORARY)		GATE VALVE
	FIRE HYDRANT ASSEMBLY		
	DOUBLE SERVICE		
	SINGLE SERVICE		
TBSP	TEMPORARY BACTERIALOGICAL SAMPLE POINT		

NOTE:
NO VALVES ARE TO BE INSTALLED WITHIN THE CURB LINE, CURB RAMPS OR DETECTABLE WARNING SURFACES.



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CONSTRUCTION PLAN REVISIONS

WINDHORST COMMONS

CLIENT: HABITAT FOR HUMANITY

UTILITY PLAN

Engineering Business Certificate of Authorization No. 32771
Florida Certificate of Authorization No. LC26000638

KYLE GLORIOSO LICENSE NO. 88699 STATE OF FLORIDA PROFESSIONAL ENGINEER

KYLE GLORIOSO
FLORIDA LICENSED PROFESSIONAL ENGINEER
REGISTRATION NUMBER 88699

PROJECT No.	194-01-02
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LEGEND

WATER		SANITARY SEWER	
	WATER MAIN		MANHOLE W/ FLOW DIRECTION
	GATE VALVE		FORCEMAIN
	REDUCER		SINGLE SERVICE
	BLOW OFF		DOUBLE SERVICE
	BLOW OFF (TEMPORARY)		PLUG VALVE
	FIRE HYDRANT ASSEMBLY		
	DOUBLE SERVICE		
	SINGLE SERVICE		
TBSP	TEMPORARY BACTERIALOGICAL SAMPLE POINT		

NOTE:
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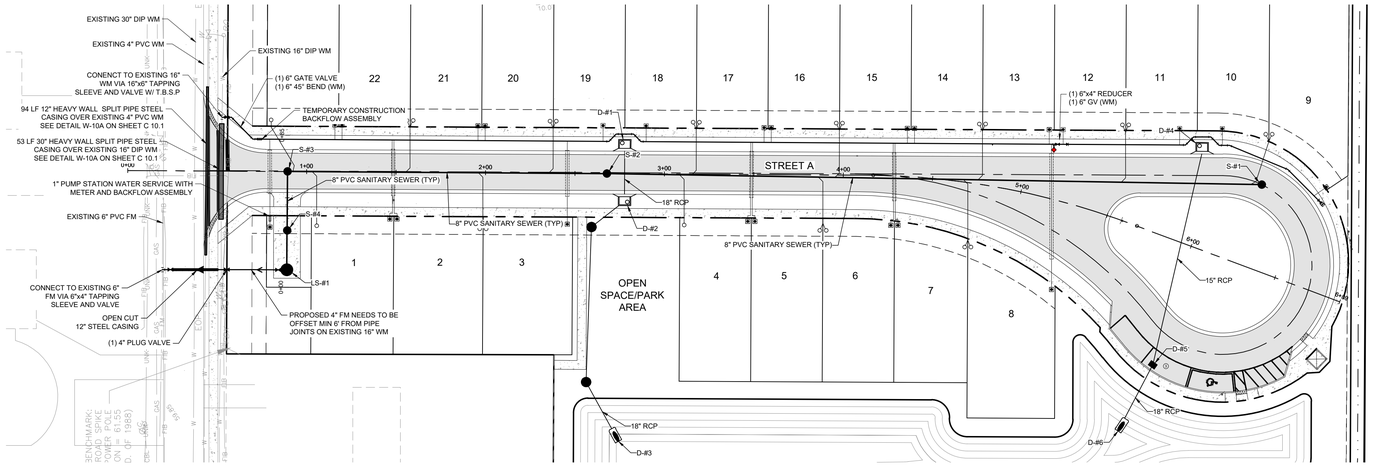
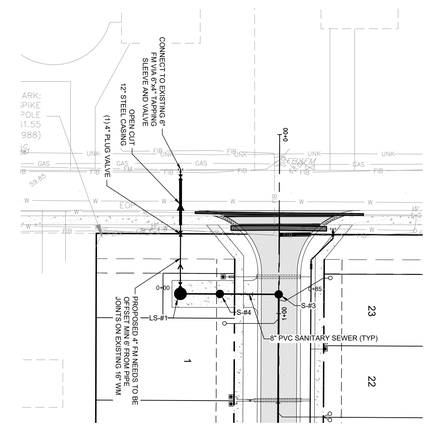
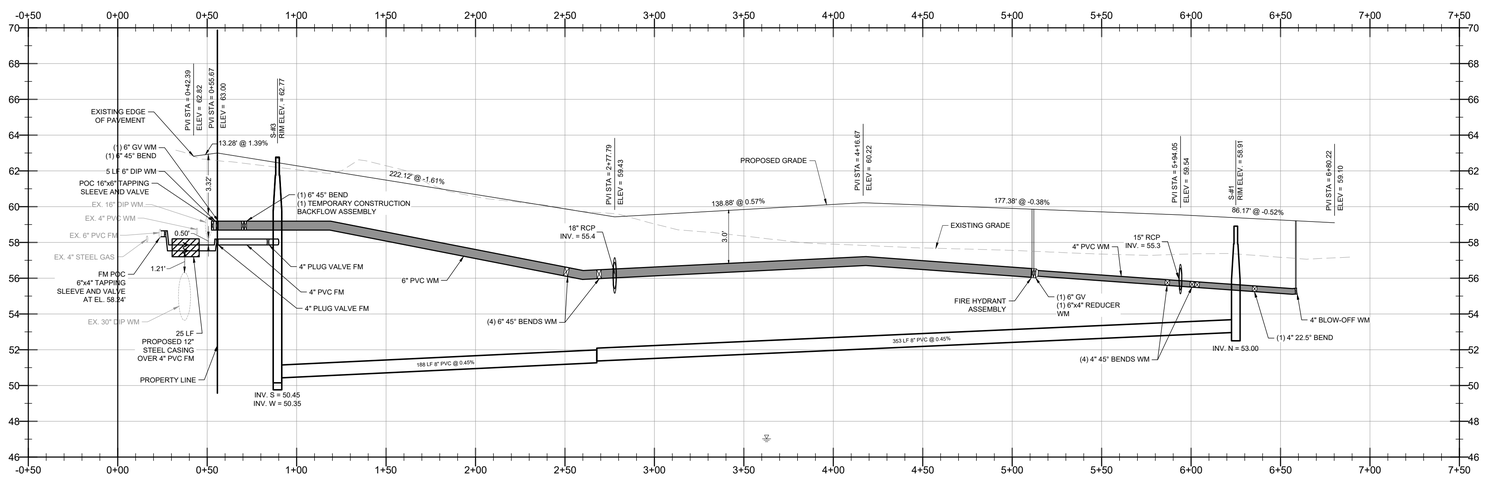
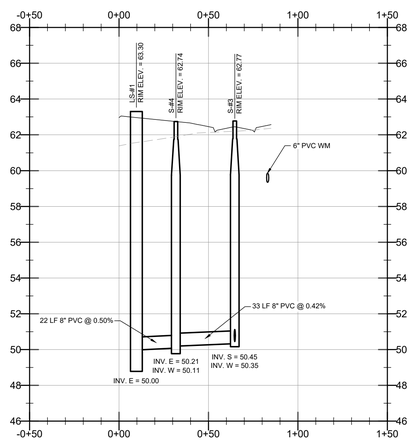




PROFILE SCALE:
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'





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CONSTRUCTION PLAN REVISIONS

WINDHORST COMMONS

CLIENT: HABITAT FOR HUMANITY

PLAN AND PROFILE - STREET A

Engineering Business Certificate of Authorization No. 32771
Florida Certificate of Authorization No. LC26000638

KYLE GLORIOSO LICENSE NO. 88699 STATE OF FLORIDA PROFESSIONAL ENGINEER

KYLE GLORIOSO
FLORIDA LICENSED PROFESSIONAL ENGINEER
REGISTRATION NUMBER 88699

PROJECT No. 194-01-02

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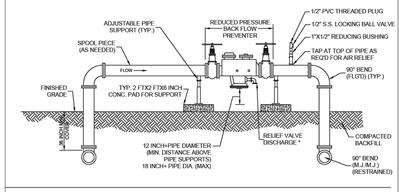
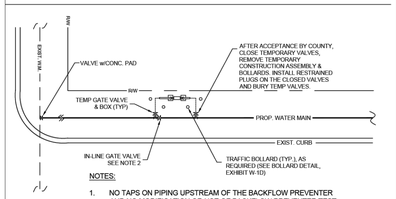
Exhibit No. W-1F





NOTES:

1. NO TAPS ON PIPING UPSTREAM OF THE BACKFLOW PREVENTER AND NO MODIFICATION OR USE OF BACKFLOW PREVENTER TEST PORTS FOR ANYTHING OTHER THAN TESTING.
2. AFTER REMOVAL OF THE TEMPORARY BACKFLOW ASSEMBLY, THE IN-LINE GATE VALVE SHALL HAVE A VALVE BOX, COVER, AND A 2'X2'X6" CONCRETE PAD INSTALLED PER EXHIBIT W-9A OR W-9B.
3. SEE ALSO TEMPORARY CONSTRUCTION BACKFLOW ASSEMBLY (TCA) NOTES, EXHIBIT W-1G.

TEMPORARY CONSTRUCTION BACKFLOW ASSEMBLY (TCA) FOR RESIDENTIAL OR COMMERCIAL DEVELOPMENT 6" AND LARGER	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-1G

GENERAL NOTES:

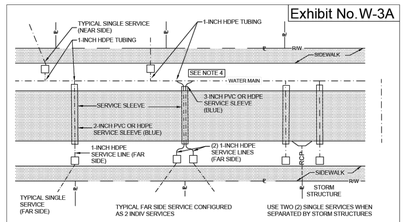
1. A MASTER METER ASSEMBLY SHALL BE DIRECTLY ACCESSIBLE BY A MAINTENANCE VEHICLE OFF A COUNTY ROW, OR BY AN INTERIOR ROAD THAT IS NOT BLOCKED BY A WALL OR GATE. THE TRUCK ACCESS ROAD SHALL BE 12 FT WIDE (MIN.) AND PAVED (CONCRETE OR ASPHALT)
2. ALL ABOVE GROUND PIPES AND FITTINGS SHALL BE CLASS 53 D.I.P. FOR 4 INCH AND LARGER PIPE.
3. CERTIFICATION OF PROPER OPERATION WILL BE REQUIRED FROM A CERTIFIED BACKFLOW TESTER PRIOR TO THE WATER MAIN ACCEPTANCE BY THE HILLSBOROUGH COUNTY PUBLIC UTILITIES DEPARTMENT.
4. ALL BACKFLOW ASSEMBLIES OR DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH AND SHALL MEET THE REQUIREMENTS FOUND IN CHAPTER 121 OF THE HILLSBOROUGH COUNTY CODE OF ORDINANCES, PART B, PUBLIC UTILITIES.
5. THE PROPER OPERATION, MAINTENANCE, AND TESTING OF THE BACKFLOW PREVENTION ASSEMBLY, SHALL BE IN ACCORDANCE WITH CHAPTER 121 OF THE HILLSBOROUGH COUNTY CODE OF ORDINANCES PART B, PUBLIC UTILITIES.
6. THE 6 INCH CONCRETE SLAB SHALL BE REINFORCED WITH 6x6-W1.4xW1.4 WELDED WIRE FABRIC AND SHALL BE TYPE I, PORTLAND CEMENT WITH A MINIMUM 28-DAY STRENGTH OF 3000psi.
7. SLAB WIDTH AND LENGTH SHALL VARY WITH ASSEMBLY. THE TOP OF SLAB SHALL BE 2 INCHES ABOVE FINISHED GRADE.
8. THE METER ASSEMBLY & BOLLARDS SHALL BE PAINTED IN ACCORDANCE WITH SPECIFICATION 331001, PART 2.6.
9. IF THE METER ASSEMBLY IS LOCATED WITHIN OR ADJACENT TO A TRAFFIC/VEHICLE AREA (PARKING LOT, DRIVEWAY, OR WITHIN 15 FT OF EDGE OF PAVEMENT/BACK OF CURB), METERS UP TO 2 INCHES SHALL HAVE A MINIMUM OF 4 TRAFFIC BOLLARD PROTECTION POSTS, AND FOR METERS 3 INCHES & LARGER A MINIMUM OF 6 TRAFFIC BOLLARDS ARE REQUIRED.

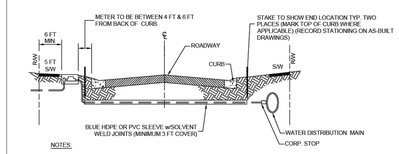
TEMPORARY CONSTRUCTION BACKFLOW ASSEMBLY (TCA) NOTES:

1. THE IN-LINE VALVE IS TO REMAIN CLOSED UNTIL AFTER THE CONSTRUCTION AND FINAL ACCEPTANCE OF THE DEVELOPMENT WATER DISTRIBUTION SYSTEM. NO DOWNSTREAM TIE-INS TO THE WRD WATER DISTRIBUTION SYSTEM ARE ALLOWED UNTIL AFTER A PASSING PRESSURE TEST AND 2 BAC-T TESTS ARE CERTIFIED BY THE EOR AND SUBMITTED TO PUD INSPECTION. ONCE FINAL TIE-INS ARE MADE 2 ADDITIONAL BAC-T TESTS ARE REQUIRED FOR EACH TIE-IN BEFORE SUBMITTING TO THE DOH FOR FINAL CLEARANCE.
2. THE BACKFLOW ASSEMBLY IS TO BE REMOVED BY THE CONTRACTOR AFTER FINAL ACCEPTANCE OF THE WATER DISTRIBUTION SYSTEM BY BOTH THE HILLSBOROUGH COUNTY DOH AND HILLSBOROUGH COUNTY DSD.
3. ALL CONSTRUCTION MUST MEET APPLICABLE STATE AND/OR LOCAL ROADWAY/ROADSIDE DESIGN STANDARDS INCLUDING, BUT NOT LIMITED TO, CLEAR ZONE REQUIREMENTS.

NOTES WATER METER ASSEMBLIES	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-3A



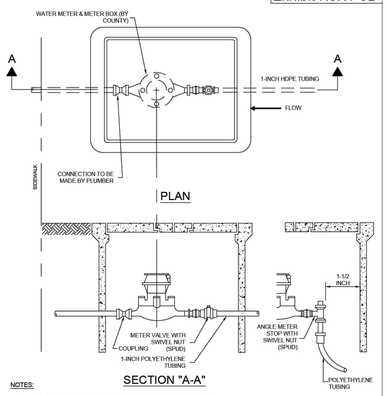


NOTES:

1. SLEEVE SHALL BE EXTENDED 24 INCHES PAST ANY PAVED SURFACE WITHIN DEDICATED R/W.
2. EACH SERVICE SHALL TERMINATE AT A CURB METER VALVE WHICH SHALL BE BURIED 6 INCHES, ± 1 INCH, BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2 INCH x 2 INCH x 18 INCH STAKE WITH THE TOP PAINTED BLUE AND MARKED WITH THE LOT(S) NUMBER SERVED.
3. STATIONING NOT REQUIRED IF SERVICE IS LOCATED ON LOT LINE.
4. 18 INCH MIN. SPACING BETWEEN SERVICE TAPS ON WATER MAIN SHALL BE MAINTAINED.
5. A NEAR SIDE DUAL SERVICE CONNECTION SERVICING MORE THAN ONE RESIDENCE IS ONLY ALLOWED WHERE RECLAIMED WATER SERVICE IS AVAILABLE.

RESIDENTIAL SERVICE LAYOUTS	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-3B

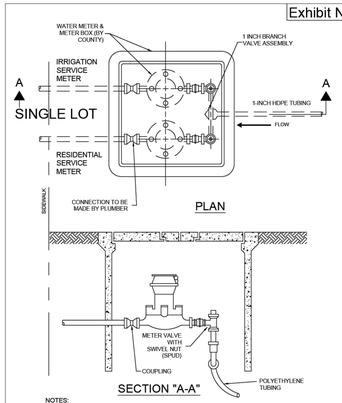


NOTES:

1. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.
2. TEMPORARY INDENTIFICATION:EACH SERVICE SHALL TERMINATE AT A METER VALVE WHICH SHALL BE BURIED 6 INCHES, ± 1 INCH, BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2 INCH x 2 INCH x 18 INCH STAKE WITH THE TOP PAINTED BLUE AND MARKED WITH THE LOT NUMBER SERVED.

RESIDENTIAL SINGLE METER SERVICE (NEAR SIDE & FAR SIDE)	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-3C

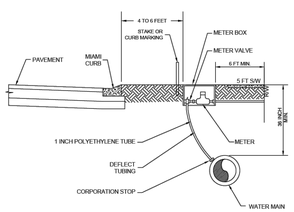


NOTES:

1. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.
2. TEMPORARY INDENTIFICATION: EACH SERVICE SHALL TERMINATE AT A METER VALVE WHICH SHALL BE BURIED 6 INCHES, ± 1 INCH, BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2 INCH x 2 INCH x 18 INCH STAKE WITH THE TOP PAINTED BLUE AND MARKED WITH THE LOT NUMBER SERVED.

RESIDENTIAL DUAL METER SINGLE LOT SERVICE	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-3D

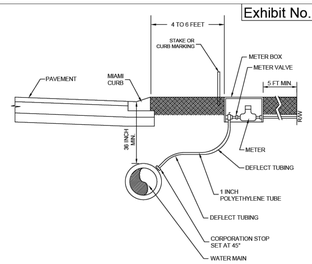


NOTE:

1. CAST BRONZE COMPRESSION FITTING CONNECTIONS SHALL BE USED & INSTALLED IN ACCORDANCE WITH COUNTY SPECIFICATIONS.
2. METER AND METER BOX SUPPLIED BY HILLSBOROUGH COUNTY.
3. USE 1-INCH DIAMETER HDPE FOR SINGLE SERVICE.
4. REDUCE HDPE AT THE METER WITH A BRASS REDUCER.
5. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.
6. EACH SERVICE SHALL TERMINATE AT A METER VALVE WHICH SHALL BE BURIED 6 INCHES, ± 1 INCH, BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2 INCH x 2 INCH x 18 INCH STAKE WITH THE TOP PAINTED BLUE AND MARKED WITH THE LOT NUMBER SERVED.

RESIDENTIAL METER SERVICE INSTALLATION (METER OVER MAIN)	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-3E

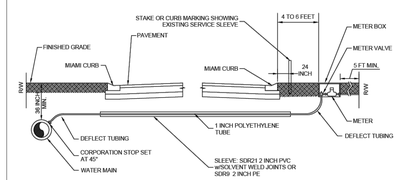


NOTE:

1. CAST BRONZE COMPRESSION FITTING CONNECTIONS SHALL BE USED & INSTALLED IN ACCORDANCE WITH COUNTY SPECIFICATIONS.
2. METER AND METER BOX SUPPLIED BY HILLSBOROUGH COUNTY.
3. USE 1-INCH DIAMETER HDPE FOR SINGLE SERVICE.
4. REDUCE HDPE AT THE METER WITH A BRASS REDUCER.
5. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.
6. EACH SERVICE SHALL TERMINATE AT A METER VALVE WHICH SHALL BE BURIED 6 INCHES, ± 1 INCH, BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2 INCH x 2 INCH x 18 INCH STAKE WITH THE TOP PAINTED BLUE AND MARKED WITH THE LOT NUMBER SERVED.

RESIDENTIAL METER SERVICE INSTALLATION (NEAR SIDE)	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-3F

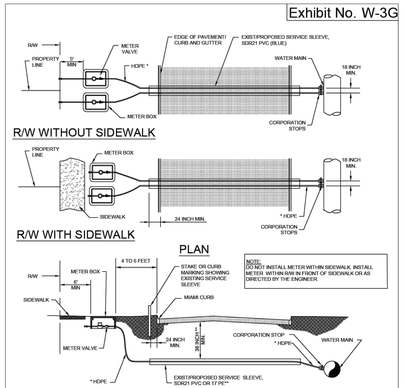


NOTE:

1. CAST BRONZE COMPRESSION FITTING CONNECTIONS SHALL BE USED & INSTALLED IN ACCORDANCE WITH COUNTY SPECIFICATIONS.
2. METER AND METER BOX SUPPLIED BY HILLSBOROUGH COUNTY.
3. USE 1-INCH DIAMETER HDPE FOR SINGLE SERVICE.
4. REDUCE HDPE AT THE METER WITH A BRASS REDUCER.
5. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.
6. EACH SERVICE SHALL TERMINATE AT A METER VALVE WHICH SHALL BE BURIED 6 INCHES, ± 1 INCH, BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2 INCH x 2 INCH x 18 INCH STAKE WITH THE TOP PAINTED BLUE AND MARKED WITH THE LOT NUMBER SERVED.

RESIDENTIAL METER SERVICE INSTALLATION (FAR SIDE)	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-3G



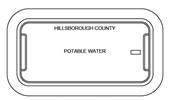
NOTE:
DO NOT INSTALL METER WITHIN SIDEWALK. INSTALL METER WITHIN R/W IN FRONT OF SIDEWALK OR AS DIRECTED BY THE ENGINEER.

METER SIZE	*EACH SERVICE LINE SIZE (IN)	CASING SIZE (inches)
5/8 & 1 INCH Dual Service	1	3 **

** FOR SERVICES > 50 FT (E.G., CUL DE SAC CROSSINGS), A 4-INCH DIAMETER CASING IS REQUIRED

RESIDENTIAL DUAL LOT METERED SERVICE (FAR SIDE)	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

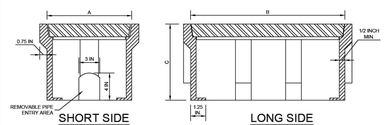
Exhibit No. W-4



PLAN VIEW

NOTE:

1. ALL LETTERING SHALL BE CAPITALIZED AND AT LEAST ONE INCH IN HEIGHT.
2. REMAINDER OF OPEN SURFACE SHALL BE CROSS HATCHED TO REDUCE SLIPPING ACCIDENTS.
3. COLOR OF BOX AND LID SHALL BE BLACK.
4. A METAL REINFORCED PICK HOLE SHALL BE CENTERED ON THE LIFTING SIDE OF THE LID.
5. THE OPTION OF HAVING LOCKING TABS TO PREVENT "FLOATING" SHALL BE BY REQUEST ONLY.
6. METER BOXES ARE TRAFFIC RATED (H-20).
7. LID THICKNESS TO BE 1.5 INCH MIN.



SHORT SIDE VIEW

LONG SIDE VIEW

DIMENSION *	SINGLE	DUAL
A	11-1/8 INCHES	14-5/8 INCHES
B	18 INCHES	16-5/8 INCHES
C	12 INCHES	12 INCHES

* ALL DIMENSIONS ± 1/8 INCH

POTABLE WATER METER BOX	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

LEVELUP CONSULTING, LLC
505 E. JACKSON STREET
SUITE 200
TAMPA, FLORIDA 33602
OFFICE: 813-375-0616
WWW.LEVELUPFLORIDA.COM

NOT TO SCALE

CONSTRUCTION PLAN REVISIONS

WINDHORST COMMONS

CLIENT: HABITAT FOR HUMANITY

WATER DETAILS

Engineering Business Certificate of Authorization No. 32771
Florida Certificate of Authorization No. LC26000638

KYLE GLORIOSO LICENSE NO. 88699 STATE OF FLORIDA PROFESSIONAL ENGINEER

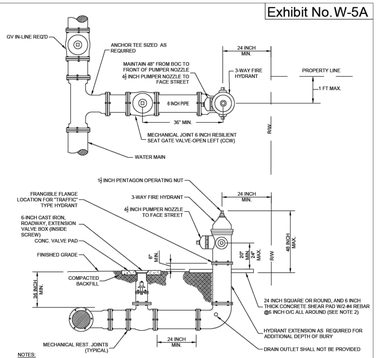
KYLE GLORIOSO
FLORIDA LICENSED PROFESSIONAL ENGINEER
REGISTRATION NUMBER 88699

PROJECT No. 194-01-02

SHEET C 10.0

T:\Projects\194-01 Windhorst Commons\Drawings\194-01-02 Construction Plans\Current Plans\194010210.0-WDTLS.dwg
10/26/2021 4:25:07 PM PLOTTED BY: ertan tatlerli

Exhibit No. W-5A

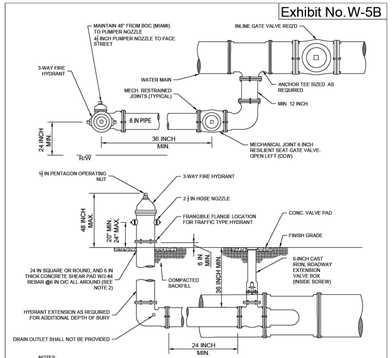


NOTES:

1. SHEAR PAD REQUIRED FOR ALL HYDRANTS ALONG ARTERIAL AND COLLECTOR ROADWAYS. 20 IN MIN CLEARANCE TO BE MAINTAINED BETWEEN PAD AND HYDRANT NOZZLES.
2. **CLEARANCE BETWEEN BOTTOM OF FLANGE AND TOP OF SHEAR PAD SHALL BE 6 INCH ± 1/2 INCH TOLERANCE.**
3. FIRE HYDRANTS SHALL BE INSTALLED BETWEEN BACK OF CURB AND FACE OF SIDEWALK EXCEPT WHERE CONDITIONS AND/OR REGULATIONS PROHIBIT.
4. PUMPER NOZZLE TO FACE STREET.
5. PER NFPA 1, CLEARANCES OF 5' IN FRONT AND 3' TO SIDES THE FIRE HYDRANT, AND 3 FEET TO THE REAR OF THE HYDRANT MUST BE MAINTAINED.
6. WHEN AN INLINE ISOLATION VALVE FALLS WITHIN 50 FT OF AN EXISTING ISOLATION VALVE, THE EOR MAY CONTACT THE UTILITY DESIGN TEAM TO DETERMINE IF THE NUMBER OF VALVES CAN BE REDUCED.
7. MAINTAIN 3 FT CLEARANCE BETWEEN ALL VALVES AND HYDRANTS

FIRE HYDRANT (RESTRAINED)	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-5B

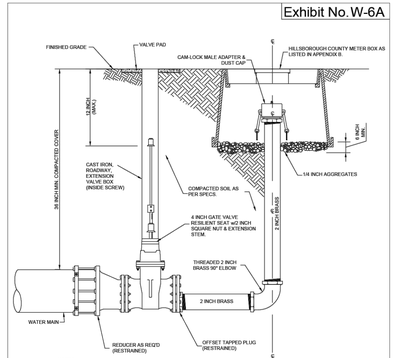


NOTES:

1. SHEAR PAD REQUIRED FOR ALL HYDRANTS ALONG ARTERIAL AND COLLECTOR ROADWAYS. 20 IN MIN CLEARANCE TO BE MAINTAINED BETWEEN PAD AND HYDRANT NOZZLES.
2. CLEARANCE BETWEEN BOTTOM OF FLANGE AND TOP OF SHEAR PAD SHALL BE 6 INCH ± 1/2 IN TOLERANCE.
3. FIRE HYDRANTS SHALL BE INSTALLED BETWEEN BACK OF CURB AND FACE OF SIDEWALK EXCEPT WHERE CONDITIONS AND/OR REGULATIONS PROHIBIT.
4. PUMPER NOZZLE TO FACE STREET.
5. PER NFPA 1, CLEARANCES OF 5' IN FRONT AND 3' TO SIDES, AND 3 FT TO THE REAR OF THE HYDRANT MUST BE MAINTAINED.
6. WHEN AN INLINE ISOLATION VALVE FALLS WITHIN 50 FT OF AN EXISTING ISOLATION VALVE, THE EOR MAY CONTACT THE UTILITY DESIGN TEAM TO DETERMINE IF THE NUMBER OF VALVES CAN BE REDUCED.
7. MAINTAIN 3 FT CLEARANCE BETWEEN ALL VALVES AND HYDRANTS

FIRE HYDRANT FOR LIMITED SPACE (RESTRAINED)	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-6A

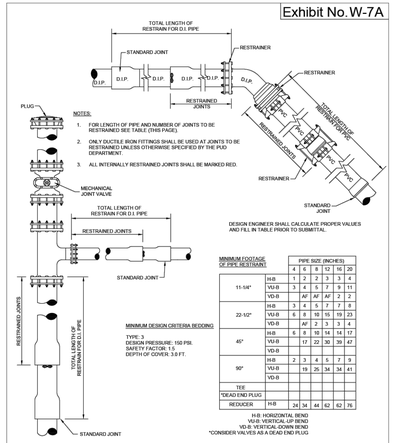


NOTES:

1. ALL BRASS PIPE AND FITTINGS SHALL BE THREADED SCH. 40.
2. CAM-LOCK MALE ADAPTER & DUST CAP SHALL BE STAINLESS STEEL/THREADED.
3. ACTUAL LENGTH OF THE BLOWOFF PIPING TO BE DETERMINED IN THE FIELD.
4. DEFLECT OR INSTALL FITTINGS AS REQUIRED TO MAINTAIN COVER AND TO SET BLOW-OFF ASSEMBLY PLUMB.
5. EXTENSION OF VALVE BOX SHALL BE SET SO AS TO RESERVE 1/2 OF THE ADJUSTMENT LENGTH FOR FUTURE USE.
6. A FULL SIZE IN-LINE VALVE MAY BE USED AT PROJECT PHASE LINES. THE VALVE MAY REQUIRE RELOCATION, IF THE VALVE FALLS WITHIN CONCRETE IN THE NEXT PHASE.

BLOWOFF ASSEMBLY	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-7A



NOTES:

1. FOR LENGTH OF PIPE AND NUMBER OF JOINTS TO BE RESTRAINED SEE TABLE (THIS PAGE)
2. ONLY DUCTILE IRON FITTINGS SHALL BE USED AT JOINTS TO BE RESTRAINED UNLESS OTHERWISE SPECIFIED BY THE PUD DEPARTMENT.
3. ALL INTERNALLY RESTRAINED JOINTS SHALL BE MARKED RED.

DESIGN ENGINEER SHALL CALCULATE PROPER VALUES AND FILL IN TABLE PRIOR TO SUBMITTAL.

MINIMUM FOOTAGE OF PIPE RESTRAINT

		PIPE SIZE (INCHES)					
		4	6	8	12	16	20
11-1/4°	H-B	1	2	2	3	3	4
	VU-B	3	4	5	7	9	11
	VD-B	4	6	7	10	13	16
22-1/2°	H-B	3	4	5	7	7	8
	VU-B	6	8	10	15	19	23
	VD-B	7	10	13	20	25	31
45°	H-B	6	8	10	14	14	17
	VU-B	17	22	30	39	47	
	VD-B						
90°	H-B	2	3	4	5	7	9
	VU-B	19	25	34	34	41	
	VD-B						
TEE							
*DEAD END PLUG							
REDUCER	H-B	24	34	44	62	62	76

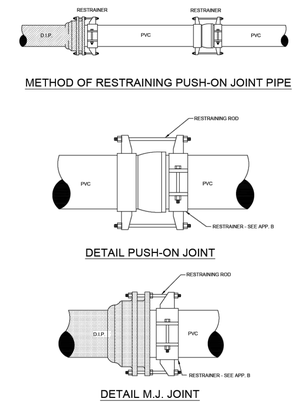
MINIMUM DESIGN CRITERIA BEDDING

TYPE: 3
DESIGN PRESSURE: 150 PSI.
SAFETY FACTOR: 1.5
DEPTH OF COVER: 3.0 FT.

H-B: HORIZONTAL BEND
VU-B: VERTICAL UP BEND
VD-B: VERTICAL-DOWN BEND
*CONSIDER VALVES AS A DEAD END PLUG

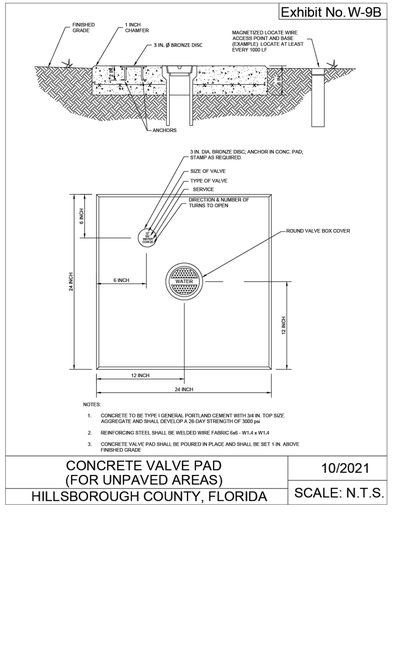
RESTRAINED JOINT-STANDARD	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-7B



RESTRAINED JOINT FOR PVC C-900 PIPE (4 IN TO 12 IN)	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-9B

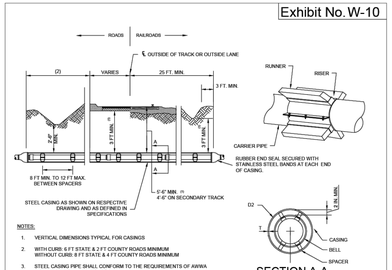


NOTES:

1. CONCRETE TO BE TYPE I GENERAL PORTLAND CEMENT WITH 3/4 IN. TOP SIZE AGGREGATE AND SHALL DEVELOP A 28-DAY STRENGTH OF 3000 psi
2. REINFORCING STEEL SHALL BE WELDED WIRE FABRIC 6x6 - W1.4 x W1.4
3. CONCRETE VALVE PAD SHALL BE POURED IN PLACE AND SHALL BE SET 1 IN ABOVE FINISHED GRADE

CONCRETE VALVE PAD (FOR UNPAVED AREAS)	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-10



NOTES:

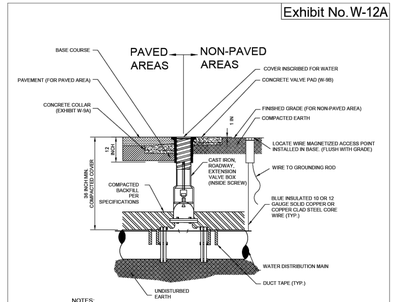
1. VERTICAL DIMENSIONS TYPICAL FOR CASINGS
2. WITH CURB: 6 FT STATE & 2 FT COUNTY ROADS MINIMUM WITHOUT CURB: 8 FT STATE & 4 FT COUNTY ROADS MINIMUM
3. STEEL CASING PIPE SHALL CONFORM TO THE REQUIREMENTS OF AWWA C-200 AND ASTM A 139, GRADE B.
4. WHEN CASING IS INSTALLED WITHOUT BENEFIT OF A PROTECTIVE COATING, AND SAID CASING IS NOT CATHODICALLY PROTECTED, THE WALL THICKNESS SHOWN SHALL BE INCREASED TO THE NEAREST STANDARD SIZE WHICH IS A MINIMUM OF 0.067 GREATER THAN THE THICKNESS SHOWN EXCEPT FOR DIAMETERS LESS THAN 12.75 IN.
5. FOR REFERENCE ONLY.

MINIMUM CASING SIZE AND THICKNESS (INCHES)

D.I.P. -B.J.	----	----	4	6	----	8	10	12	14	16	18	20	----	24	30	36	42	48
D.I.P.-P.O.	----	4	----	6	8	10	12	----	14	16	18	20	24	----	30	36	42	48
PVC	----	4	6	----	8	10	12	----	----	----	----	----	----	----	----	----	----	----
PVC FUSIBLE	4	6	8	10	12	----	----	----	----	----	----	----	----	----	----	----	----	----
(in) STEEL CASING PIPE (OD)	10	12	14	16	18	20	24	24	30	30	36	36	36	42	48	54	60	66
WALL THICKNESS (T) ROADS	188	188	.25	.25	.25	.25	.25	.25	.312	.312	.312	.375	.375	.5	.5	.5	.5	.5
(in) WALL THICKNESS (T) R.R.	188	188	188	.219	.25	.281	.312	.312	.406	.406	.406	.469	.469	.562	.625	.719	.781	.875

CASING DETAILS JACK & BORE	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-12A

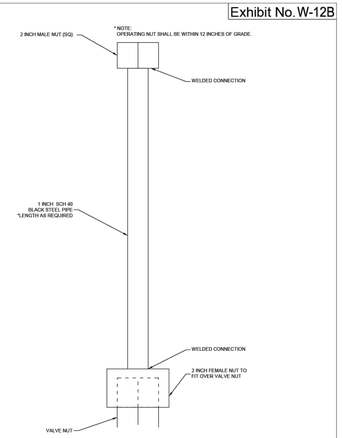


NOTES:

1. VALVE BOX EXTENSIONS MUST BE SET SO AS TO RESERVE 1/2 OF THE ADJUSTMENT LENGTH FOR FUTURE USE. VALVE BOX EXTENSIONS MUST BE CAST IRON.
2. THE VALVE OPERATING NUT MUST BE WITHIN 12 INCHES OF FINAL GRADE. A VALVE EXTENSION MUST BE INSTALLED AS NEEDED. REFER TO EXHIBIT W-12B.
3. ALL PIPE MUST BE INSULATED WITH 10 OR 12 GAUGE SOLID COPPER OR COPPER CLAD STEEL CORE LOCATING WIRE. TAPED WITH 2 INCH WIDE DUCT TAPE AT THE 10:00 OR 2:00 POSITION ON THE PIPE AT EVERY JOINT AND 4 TO 5 FEET SPACING. REFER TO 331001 PART 4.3.13.
4. LOCATING WIRES TO TERMINATE AT MAGNETIZED ACCESS POINTS IN A BASE LOCATED NO MORE THAN OF 1000 LF APART. ACCESS POINTS TO BE TWO TERMINALS (MIN.) AND HAVE A GROUNDING ROD AT EACH ACCESS POINT AND BASE.
5. LOCATING WIRES MUST BE CAPABLE OF DETECTION BY A CABLE LOCATOR AND PASS A FIELD LOCATE TEST FROM THE POINT OF CONNECTION TO END OF WIRES THAT IS CERTIFIED BY THE EOR. THE TEST MUST BE BY THE CONTRACTOR OR BY A SUE FIRM.
6. SPLICES MUST BE CAPABLE OF COMPLETE SUBMERSION.
7. NO MORE THAN 6 SPLICES BETWEEN ACCESS POINTS.

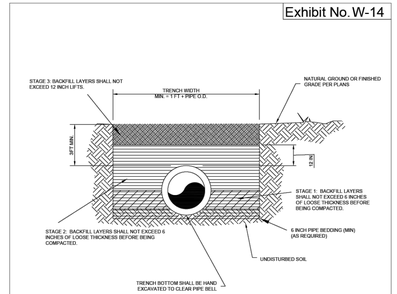
VALVE AND TRACER WIRE PAVED OR NON-PAVED AREAS	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-12B



VALVE EXTENSION FOR GATE VALVES	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-14

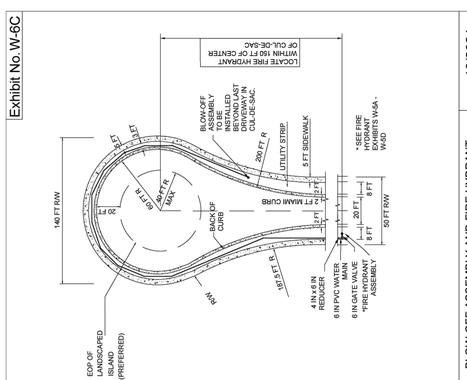


NOTES:

1. TESTING: SEE SPECIFICATION 331001, PART 4.12 FOR TESTING REQUIREMENTS.
2. BEDDING: 6 INCHES BEDDING (MIN) AS REQUIRED. IN THE EVENT UNSUITABLE OR UNSTABLE SOIL IS ENCOUNTERED, REMOVE IT AND REPLACE WITH MATERIAL MEETING AASHTO SOIL CLASSIFICATION A-1, A-2, OR A-3. SEE SPECIFICATION 331001 PART 4.4.
3. STAGE 1: ADEQUATE COMPACTED FILL SHALL BE PLACED ABOVE THE BEDDING MATERIAL AND PIPE TO A POINT 12 INCHES ABOVE THE PIPE. BACKFILL LAYERS SHALL NOT EXCEED 6 INCHES OF LOOSE THICKNESS BEFORE BEING COMPACTED.
4. STAGE 2: BACKFILL LAYERS SHALL NOT EXCEED 6 INCHES OF LOOSE THICKNESS BEFORE BEING COMPACTED. COMPACTION SHALL BE 98% OF THE MAXIMUM DENSITY (AASHTO T-180/ASTM D1557) TO A POINT 1 FT ABOVE THE PIPE (OR AS STATED IN THE SPECIFICATION).
5. STAGE 3: BACKFILL LAYERS SHALL NOT EXCEED 12-INCH LIFTS. COMPACTION SHALL BE 98% OF THE MAXIMUM DENSITY (AASHTO T-180/ASTM D1557) OR AS STATED IN THE SPECIFICATION

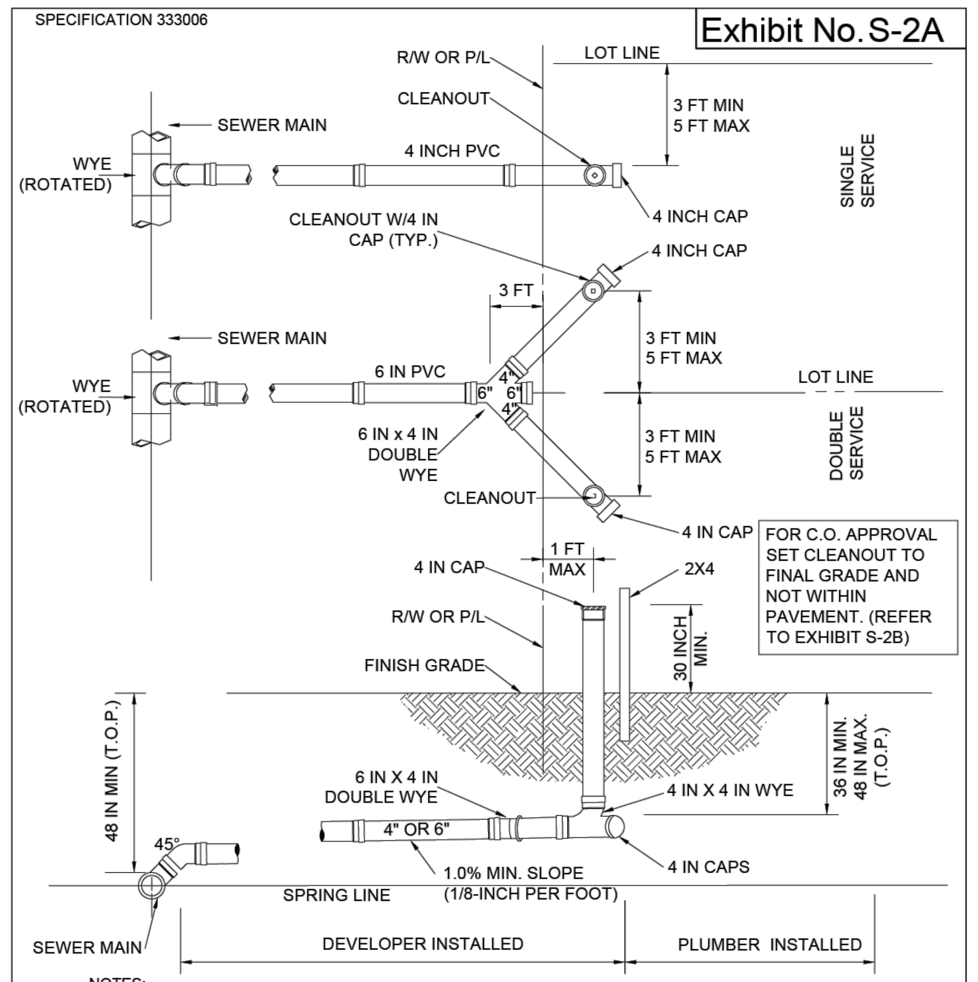
TRENCH DETAIL BACKFILL & COMPACTION	10/2021
HILLSBOROUGH COUNTY, FLORIDA	SCALE: N.T.S.

Exhibit No. W-6C


LOCATE FIRE HYDRANT WITHIN 150 FT OF CENTER OF CUL-DE-SAC
BLOW-OFF ASSEMBLY TO BE INSTALLED BEYOND LAST HYDRANT IN CUL-DE-SAC.
200 FT R.
UTILITY STRIP
5 FT SIDEWALK
2 FT MIN
1 FT
1 FT
1 FT

SPECIFICATION 333006

Exhibit No. S-2A

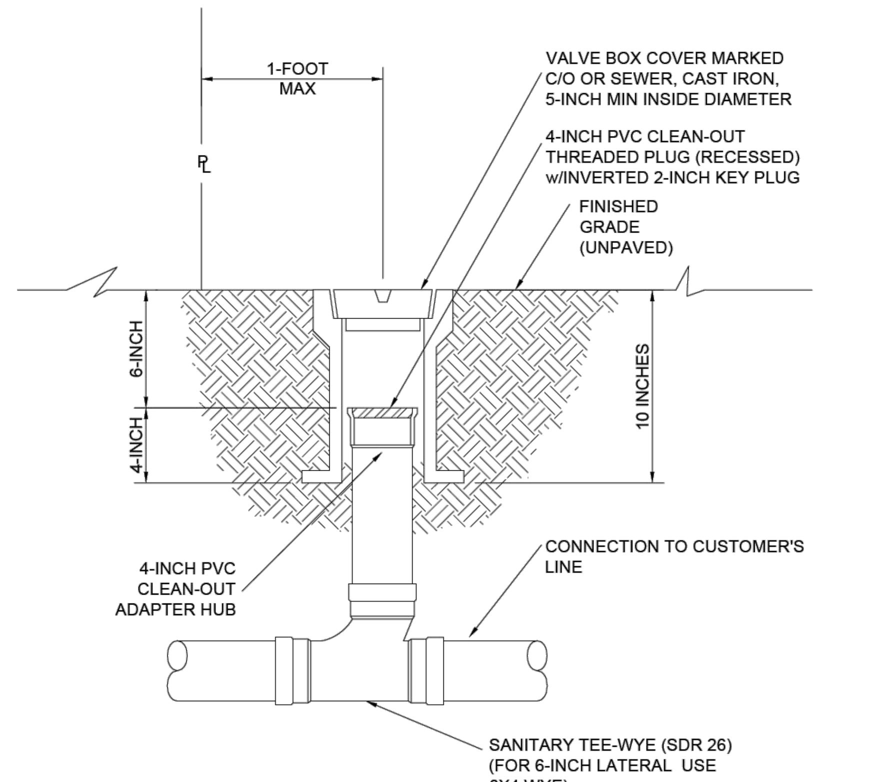


NOTES:
1. CENTER A DOUBLE WYE FITTING ON THE LOT LINE.
2. INVERT OF SERVICE LATERAL SHALL NOT ENTER SEWER BELOW SPRING LINE.
3. THE TOP OF THE CLEANOUT SHALL TERMINATE 30 TO 40 INCHES ABOVE DESIGN GRADE UNTIL CONNECTION TO A STRUCTURE IS MADE.
4. ALL LATERALS PIPING AND FITTINGS SHALL BE GASKETED SDR 26 PVC.
5. ALL LATERAL LOCATIONS SHALL BE MARKED WITH AN "S" SAW CUT INTO THE TOP OF CURB.
6. CLEANOUTS SHALL NOT BE INSTALLED IN CONCRETE (NO DRIVEWAYS OR SIDEWALKS).

TYPICAL PVC SANITARY SEWER NEW CONNECTION W/CLEANOUT — 10/2021
HILLSBOROUGH COUNTY, FLORIDA — SCALE: N.T.S.

SPECIFICATION 333006

Exhibit No. S-2B

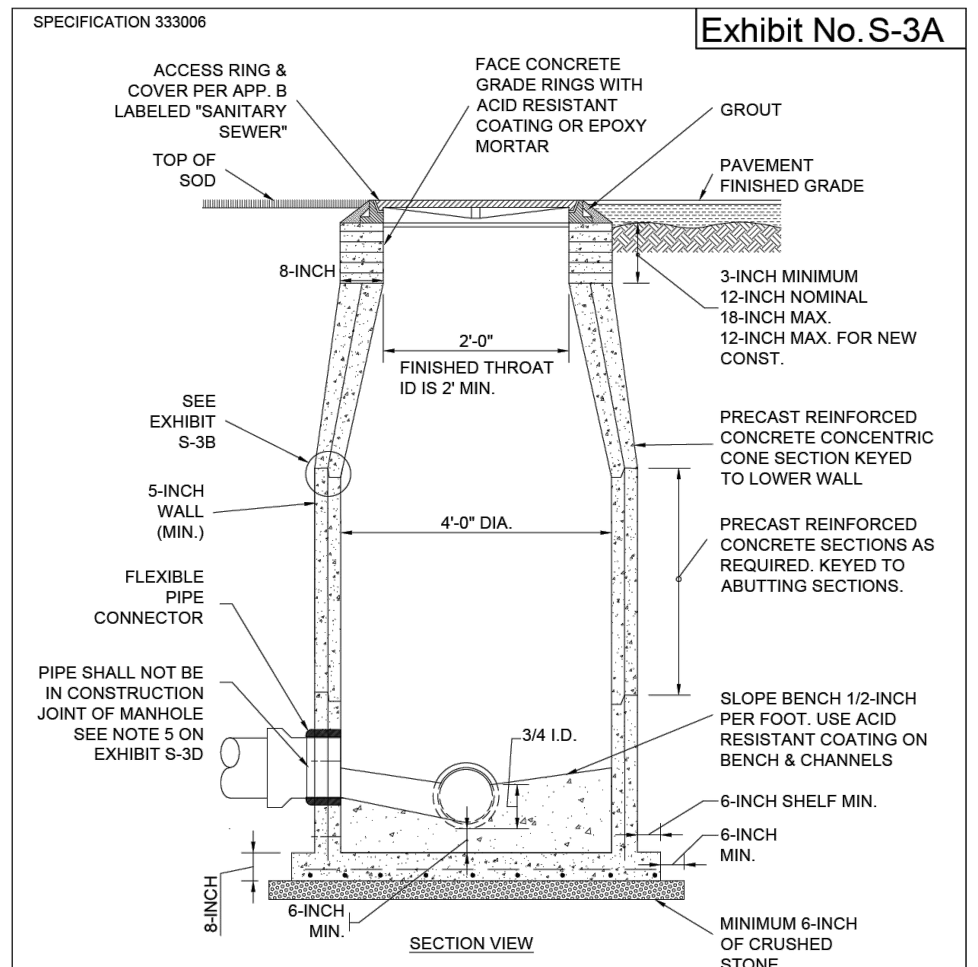


NOTE
1. ALL LATERALS PIPING AND FITTINGS SHALL BE GASKETED SDR 26 PVC
2. CLEANOUT SHALL NOT BE INSTALLED IN CONCRETE

CLEAN-OUT DETAIL WITH VALVE BOX COVER — 10/2021
HILLSBOROUGH COUNTY, FLORIDA — SCALE: N.T.S.

SPECIFICATION 333006

Exhibit No. S-3A

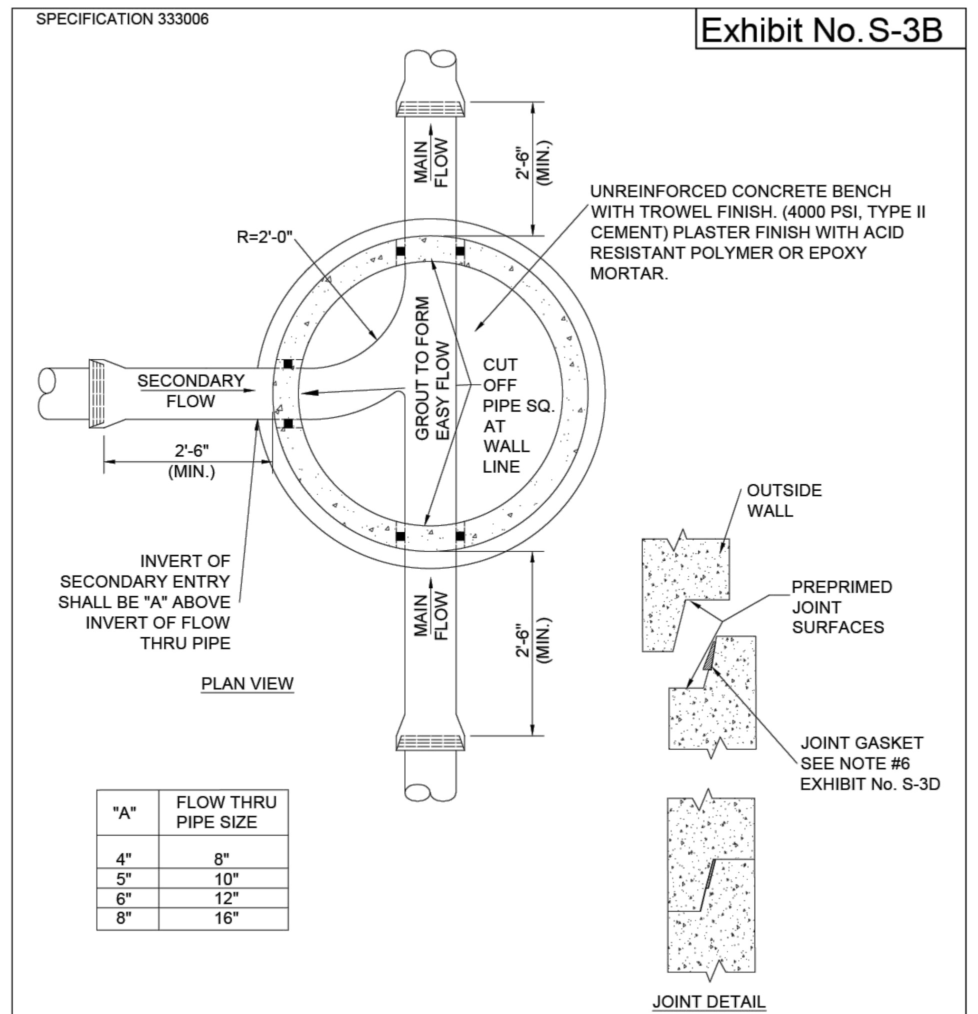


NOTE:
ALL STANDARD MANHOLE NOTES APPLY. REFER TO EXHIBIT No. S-3D. THIS DETAIL APPLIES TO MANHOLES WITH DEPTHS OF 5 FT TO 15 FT. IF DEPTH TO INVERT IS LESS THAN 5 FT, DESIGN EXCEPTION APPROVAL BY PUBLIC UTILITIES DEPARTMENT IS REQUIRED

STANDARD 48" PRECAST MANHOLE FOR SEWERS 16" OR LESS IN DIA — 10/2021
HILLSBOROUGH COUNTY, FLORIDA — SCALE: N.T.S.

SPECIFICATION 333006

Exhibit No. S-3B



"A"	FLOW THRU PIPE SIZE
4"	8"
5"	10"
6"	12"
8"	16"

NOTE:
ALL STANDARD MANHOLE NOTES APPLY. REFER TO EXHIBIT No. S-3D.

STANDARD 48" PRECAST MANHOLE FOR SEWERS 16" OR LESS IN DIA — 10/2021
HILLSBOROUGH COUNTY, FLORIDA — SCALE: N.T.S.

SPECIFICATION 333006

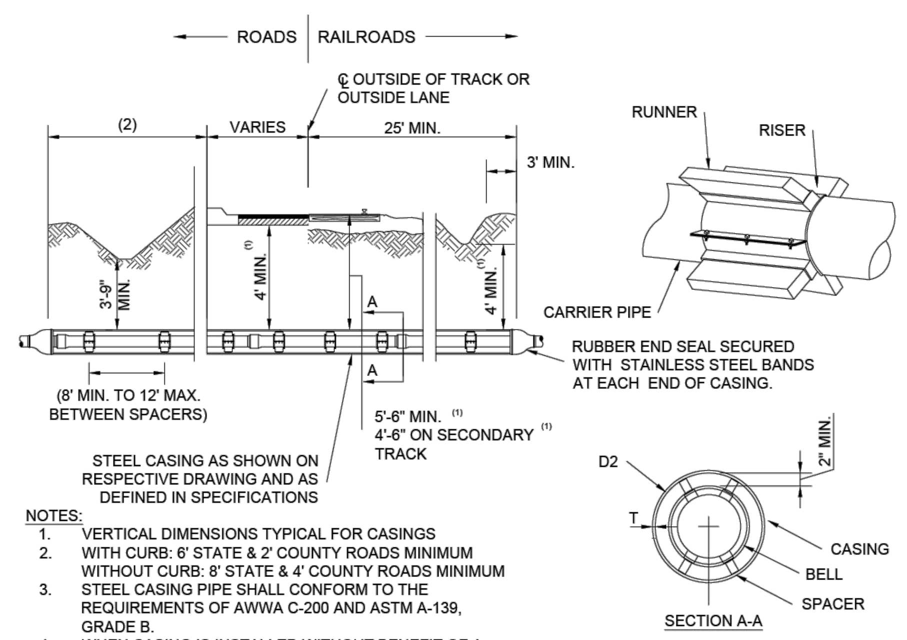
Exhibit No. S-3D

NOTES:
1. PRECAST MANHOLE SECTIONS & BASES SHALL BE MANUFACTURED IN ACCORDANCE WITH LATEST EDITION OF ASTM C478 WITH 4000 P.S.I., TYPE II CEMENT (ASTM C150).
2. CONCRETE PLACED IN MANHOLE INVERTS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 P.S.I. AND SHALL UTILIZE TYPE II CEMENT.
3. LIFT HOLES THROUGH PRECAST STRUCTURES ARE NOT PERMITTED.
4. ALL PIPE PENETRATIONS SHALL BE PRECAST OR CORE-DRILLED. THE PERIMETER OF A PENETRATION SHALL NOT BE CLOSER THAN 12 INCHES TO A BARREL SECTION JOINT.
5. FLEXIBLE PIPE CONNECTORS (ASTM C923) SHALL BE USED AT ALL PIPE PENETRATIONS.
6. JOINT CONTACT SURFACES SHALL BE SEALED USING A RUBBER GASKET PER THE MANUFACTURER'S RECOMMENDATION. GASKETS SHALL BE 1/2 INCH MIN. THICK WITH WIDTH AT LEAST 1/2 THE WALL THICKNESS.
7. THE INTERIOR OF THE GRADE RINGS SHALL BE PLASTERED WITH AN ACID RESISTANT COATING, OR EPOXY MORTAR WHEN CONCRETE RINGS ARE USED.
8. THE MANHOLE COVER SHALL BE EQUIPPED WITH AN INFLOW PROTECTOR AND SHALL COMPLY WITH SPECIFICATION 333001, PART 3.3.8 AND THE APPROVED PRODUCTS LIST IN APP. B.
9. BOTTOM BARREL AND BASE OF MANHOLE TO BE MONOLITHICALLY CAST.
10. SERVICE LATERALS SHALL NOT ENTER A MANHOLE UNLESS THE MANHOLE IS A TERMINAL MANHOLE, AND SPECIFIED ON THE PLANS. IF APPROVED, THE LATERAL MUST BE TREATED AS A MAIN (SHOW ELEVATIONS, PRECAST OR CORE-DRILLED PENETRATIONS, FLOW CHANNEL CONSTRUCTION, ETC.).
11. AN OUTSIDE DROP CONNECTION SHALL BE REQUIRED FOR ALL INFLUENT LINES WHICH HAVE AN INVERT 2-FOOT OR MORE ABOVE THE MANHOLE INVERT.
12. FOR NONSTANDARD MANHOLES, THE ENGINEER OF RECORD SHALL DESIGN ALL MANHOLE REINFORCEMENT STEEL AND JOINT DETAILS AND SHALL SUBMIT CALCULATIONS TO THE COUNTY FOR REVIEW.
13. PRECAST OR CORE-DRILLED PENETRATION DIAMETERS SHALL BE PER MANUFACTURER SPECIFICATIONS OR AS FOLLOWS: 12 INCH FOR 8 INCH DIAMETER PIPE. 14 INCH TO 16 INCH FOR 10 INCH DIAMETER PIPE. 16 INCH FOR 12 INCH DIAMETER PIPE.
14. MATERIALS OF CONSTRUCTION, PLACEMENT, AND COMPACTION REQUIREMENTS FOR BEDDING MATERIALS SHALL BE PER COUNTY SPECIFICATIONS.
15. FLOW CHANNELS SHALL BE CONSTRUCTED TO DIRECT INFLUENT INTO THE FLOW STREAM.
16. PROPERLY SHAPED SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS TO PROVIDE FOR SMOOTH FLOWS.

STANDARD NOTES PRECAST MANHOLES — 10/2021
HILLSBOROUGH COUNTY, FLORIDA — SCALE: N.T.S.

SPECIFICATION 333006

Exhibit No. S-5



NOTES:
1. VERTICAL DIMENSIONS TYPICAL FOR CASINGS
2. WITH CURB: 6' STATE & 2' COUNTY ROADS MINIMUM WITHOUT CURB: 8' STATE & 4' COUNTY ROADS MINIMUM
3. STEEL CASING PIPE SHALL CONFORM TO THE REQUIREMENTS OF AWWA C-200 AND ASTM A-139, GRADE B.
4. WHEN CASING IS INSTALLED WITHOUT BENEFIT OF A PROTECTIVE COATING, AND SAID CASING IS NOT CATHODICALLY PROTECTED, THE WALL THICKNESS SHOWN SHALL BE INCREASED TO THE NEAREST STANDARD SIZE WHICH IS A MINIMUM OF 0.063" GREATER THAN THE THICKNESS SHOWN EXCEPT FOR DIAMETERS LESS THAN 12.75".
5. FOR REFERENCE ONLY.

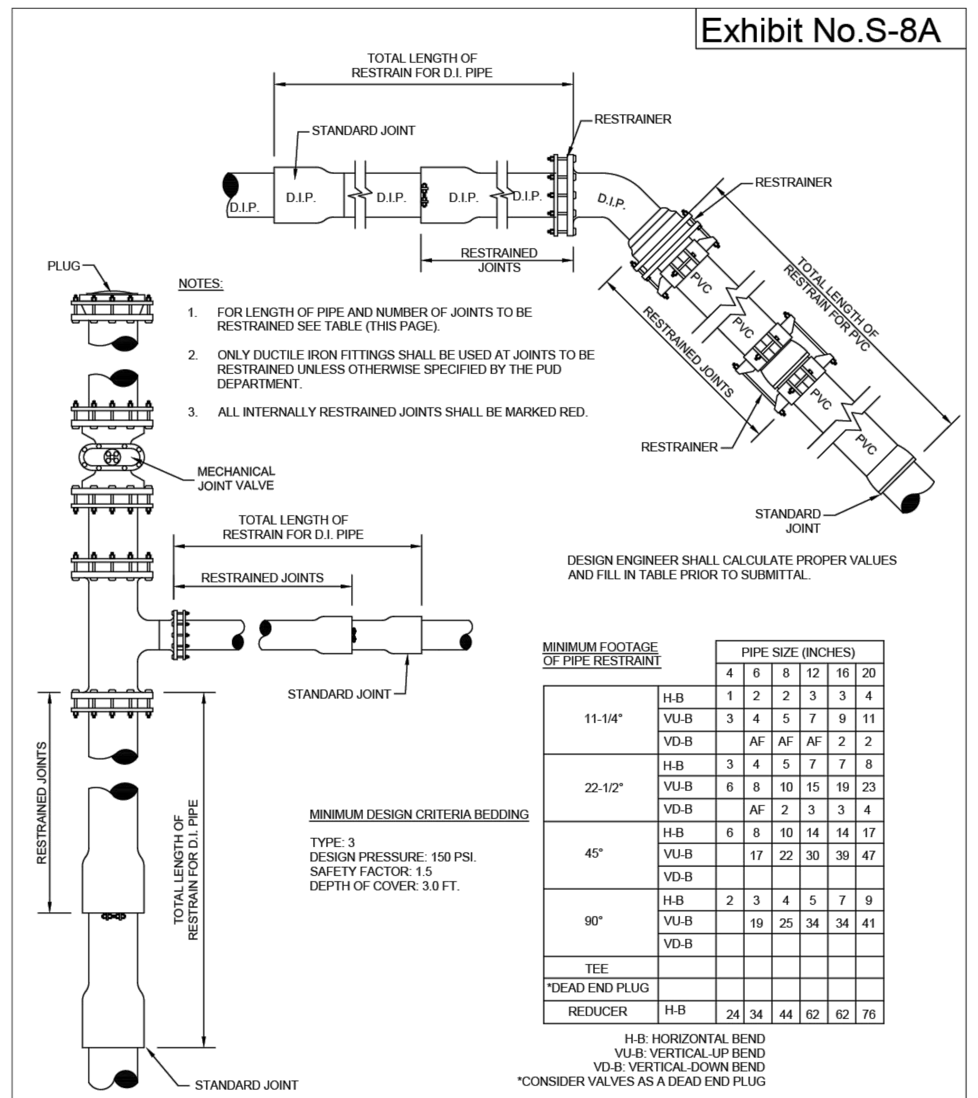
PRESSURE MAIN TO BE RESTRAINED WITH MANUFACTURER'S RESTRAINED JOINTS THROUGH CASING. USE (3) SS CASING SPACER CENTERED ON EACH PIPE LENGTH.

MINIMUM CASING SIZE AND THICKNESS

	D.I.P.-M.J.	—	—	4"	6"	—	8"	10"	12"	—	—	14"	16"	18"	20"	—	24"	30"	36"	42"	48"
	D.I.P.-P.O.	—	4"	—	6"	8"	10"	12"	—	—	—	14"	16"	18"	20"	24"	—	30"	36"	42"	48"
	PVC	—	4"	6"	—	8"	10"	12"	—	—	—	—	—	—	—	—	—	—	—	—	—
	PVC FUSIBLE	4"	6"	8"	10"	12"	14"	16"	—	18"	20"	—	—	—	—	—	—	—	—	—	—
(3)	STEEL CASING PIPE (D2)	10" (5)	12"	14"	16"	18"	20"	24"	24"	26"	28"	30"	30"	30"	36"	36"	42"	48"	54"	60"	66"
	WALL THICKNESS (T) ROADS	.188"	.188"	.250"	.250"	.250"	.250"	.250"	.250"	.312"	.312"	.312"	.312"	.312"	.375"	.375"	.500"	.500"	.500"	.500"	.500"
(4)	WALL THICKNESS (T) R.R.	.188"	.188"	.188"	.219"	.250"	.281"	.312"	.312"	.406"	.406"	.406"	.406"	.406"	.469"	.469"	.562"	.625"	.719"	.781"	.875"

CASING DETAILS JACK & BORE — 10/2021
HILLSBOROUGH COUNTY, FLORIDA — SCALE: N.T.S.

Exhibit No. S-8A



NOTES:
1. FOR LENGTH OF PIPE AND NUMBER OF JOINTS TO BE RESTRAINED SEE TABLE (THIS PAGE).
2. ONLY DUCTILE IRON FITTINGS SHALL BE USED AT JOINTS TO BE RESTRAINED UNLESS OTHERWISE SPECIFIED BY THE PUD DEPARTMENT.
3. ALL INTERNALLY RESTRAINED JOINTS SHALL BE MARKED RED.

DESIGN ENGINEER SHALL CALCULATE PROPER VALUES AND FILL IN TABLE PRIOR TO SUBMITTAL.

MINIMUM DESIGN CRITERIA BEDDING

TYPE: 3
DESIGN PRESSURE: 150 PSI.
SAFETY FACTOR: 1.5
DEPTH OF COVER: 3.0 FT.

MINIMUM FOOTAGE OF PIPE RESTRAINT

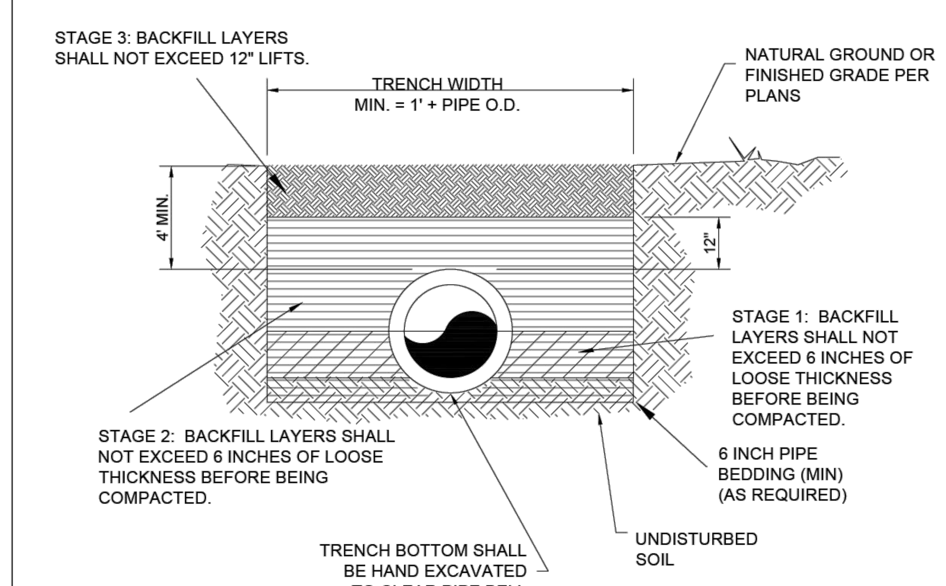
		PIPE SIZE (INCHES)					
		4	6	8	12	16	20
11-1/4°	H-B	1	2	2	3	3	4
	VU-B	3	4	5	7	9	11
	VD-B		AF	AF	AF	2	2
22-1/2°	H-B	3	4	5	7	7	8
	VU-B	6	8	10	15	19	23
	VD-B		AF	2	3	3	4
45°	H-B	6	8	10	14	14	17
	VU-B		17	22	30	39	47
	VD-B						
90°	H-B	2	3	4	5	7	9
	VU-B		19	25	34	34	41
	VD-B						
TEE							
*DEAD END PLUG							
REDUCER	H-B	24	34	44	62	62	76

H-B: HORIZONTAL BEND
VU-B: VERTICAL-UP BEND
VD-B: VERTICAL-DOWN BEND
*CONSIDER VALVES AS A DEAD END PLUG

RESTRAINED JOINT-STANDARD — 10/2021
HILLSBOROUGH COUNTY, FLORIDA — SCALE: N.T.S.

SPECIFICATION 333006

Exhibit No. S-15



NOTES:
1. TESTING: SEE 333001 or 333002, PART 4.11 FOR TESTING REQUIREMENTS.
2. BEDDING: 6 INCH BEDDING (MIN) AS REQUIRED. IN THE EVENT UNSUITABLE OR UNSTABLE SOIL IS ENCOUNTERED, REMOVE IT AND REPLACE WITH MATERIAL MEETING AASHTO SOIL CLASSIFICATION A-1, A-2, OR A-3. SEE 333001 or 333002 SECTION 4.4.
3. STAGE 1: ADEQUATE COMPACTED FILL SHALL BE PLACED ABOVE THE BEDDING MATERIAL AND BENEATH THE HAUNCHES OF THE PIPE. BACKFILL LAYERS SHALL NOT EXCEED 6 INCHES OF LOOSE THICKNESS BEFORE BEING COMPACTED.
4. STAGE 2: BACKFILL LAYERS SHALL NOT EXCEED 6 INCH OF LOOSE THICKNESS BEFORE BEING COMPACTED. COMPACTION SHALL BE 98% OF THE MAXIMUM DENSITY (AASHTO T-180/ASTM D1557) TO A POINT 1 FT ABOVE THE PIPE (OR AS STATED IN THE SPECIFICATION).
5. STAGE 3: BACKFILL LAYERS SHALL NOT EXCEED 12 INCH LIFTS. COMPACTION SHALL BE 98% OF THE MAXIMUM DENSITY (AASHTO T-180/ASTM D1557) OR AS STATED IN THE SPECIFICATION

TRENCH DETAIL BACKFILL & COMPACTION — 10/2021
HILLSBOROUGH COUNTY, FLORIDA — SCALE: N.T.S.

LevelUp Consulting, LLC
LVLUP
505 E. Jackson Street
Suite 200
Tampa, Florida 33602
Office: 813-375-0616
www.levelupflorida.com

NOT TO SCALE

CONSTRUCTION PLAN REVISIONS

WINDHORST COMMONS

CLIENT: HABITAT FOR HUMANITY

SANITARY DETAILS

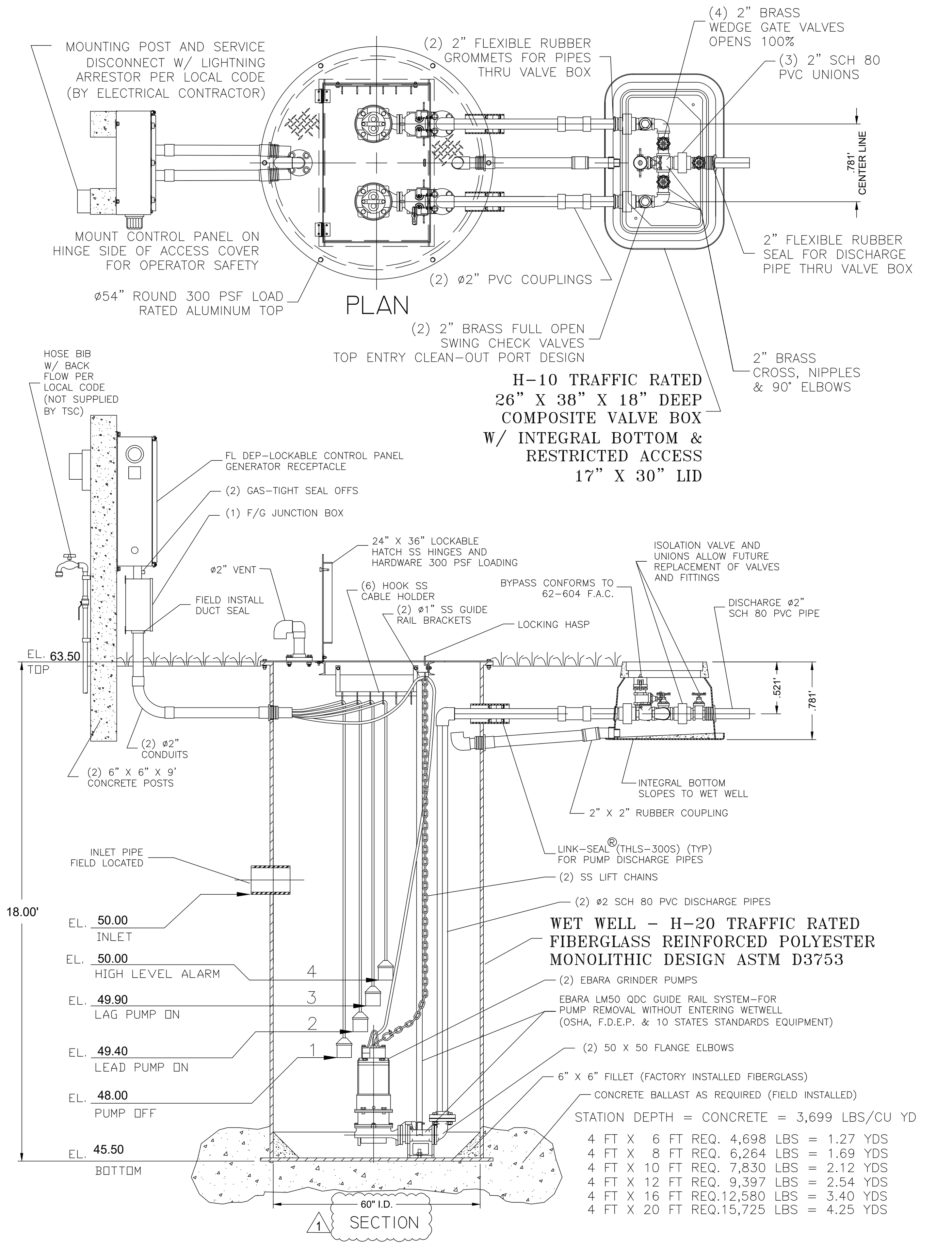
Engineering Business Certificate of Authorization No. 32771
Florida Certificate of Authorization No. LC26000638

KYLE GLORIOSO LICENSE NO. 88699 STATE OF FLORIDA PROFESSIONAL ENGINEER

KYLE GLORIOSO
FLORIDA LICENSED PROFESSIONAL ENGINEER
REGISTRATION NUMBER 88699

PROJECT No. 194-01-02
SHEET C 11.0

T:\Projects\194-01 Windhorst Commons\Drawings\194-01-02 Construction Plan\Current Plans\194010211.0-SSDTLS.dwg
1/29/2024 4:55:30 PM PLOTTED BY: ethan sellers



EBARA SEWAGE GRINDER PUMP
60" DUPLEX STATION - 2" PIPING
WITH SLIDE RAIL SYSTEM, V.B. AND F.D.E.P. PANEL
TSC PRE-FAB PUMP SOLUTIONS©

MODEL
TSC2-48.0 R21.dwg ©

2. GROUT FILLET (1 TO 1 SLOPE TO "HOPPER" BOTTOM)
1. HOSE BIBB WITH REDUCED PRESSURE BACK FLOW PREVENTER
FIELD INSTALL BY CONTRACTOR

JOB: ______________________

QS: ______________________

NOTE:
LIFT STATION TO BE PRIVATELY OWNED AND MAINTAINED

GENERAL NOTES

FURNISH AND INSTALL EBARA SUBMERSIBLE GRINDER PUMPS:

DESIGN CONDITION:

MODEL	50 DGFU	5	HP
GPM	85	68	FT/TDH
VOLTAGE	230	THREE	PHASE
DISCHARGE	2"	146mm (5-3/4")	IMPELLER

SEWAGE GRINDER PUMP: RATED FOR TWENTY (20) STARTS PER HOUR.

AIR FILLED MOTOR DESIGNED FOR SEWAGE APPLICATION WITH CLASS F INSULATION.

DUAL MECHANICAL SHAFT SEALS (SILICON CARBIDE / SILICON CARBIDE) LOCATED OUT OF THE PUMPAGE, IN A SEPARATE OIL FILLED CHAMBER.

HIGH TEMPERATURE BALL BEARINGS B-10 RATING OF 60,000 HOURS, UPPER BEARING - SINGLE ROW AND LOWER BEARINGS - DOUBLE ROW TYPE.

PUMP SHAFT HORSEPOWER (BHP) SHALL NOT EXCEED MOTOR RATED HORSEPOWER THROUGHOUT THE ENTIRE OPERATING RANGE OF THE PUMP PERFORMANCE CURVE.

SINGLE PHASE MOTORS SHALL BE DUAL WOUND, CAPACITOR START-RUN AND CAPABLE OF OPERATING ON 208/230 VOLT WITH A 10% TOLERANCE VOLTAGE (190 TO 260). THREE PHASE MOTORS SHALL BE DUAL WOUND AND CAPABLE OF OPERATING ON 208/230 VOLT WITH A 10% TOLERANCE VOLTAGE (190 TO 260) OR OPERATE ON 460 VOLT BY CHANGING THE MOTOR LEADS INSIDE THE PUMP.

FIBERGLASS WET WELL: SHALL BE A ONE PIECE UNIT WITH INTEGRAL BOTTOM, WALL AND UPPER FLANGE. THE ENTIRE FIBERGLASS WET WELL SHALL HAVE A DYNAMIC LOAD RATING OF 16,000 FT/LBS. EACH UNIT MUST BE SERIAL NUMBERED TO IDENTIFY THE TEST PROCEDURE. ASTM D 3753 & H-20 SPECIFICATIONS SHALL BE REQUIRED AS MINIMUM.

ALUMINUM HATCH: TSC MODEL-54R (54") ROUND WITH 24" X 36" LOCKABLE HATCH, REINFORCED FOR LOAD RATING OF 300 LBS/FT WITH HOLD OPEN SAFETY ARM, LOCKING DEVICE FOR HASP TYPE PADLOCK AND STAINLESS STEEL HARDWARE.

VALVE BOX: FIBERGLASS COMPOSITE (H-10 TRAFFIC RATED) WITH INTEGRAL BOTTOM. (FOR 1 1/4" AND 2" DISCHARGE PIPING SXS HEADER SYSTEM) SHALL BE 26" X 38" X 18" WITH 17" X 30" LIMITED ACCESS LID

ACCESSORIES: #304 S/S - GUIDE RAILS, UPPER GUIDE RAIL BRACKETS, CABLE HOLDER, ANCHOR BOLTS AND PUMP LIFTING CHAINS.

VALVES : SHALL BE SEWAGE SERVICE DESIGN BRASS SWING CHECK VALVES WITH TOP ENTRY CLEAN-OUT PORT AND BRASS WEDGE GATE VALVES OPEN 100%.

PIPING: 2" SCHEDULE 80 PVC.

FLOAT SWITCHES: UL LISTED SJ ELECTRO MODEL (SJ 30 SWENO).

PUMP SUPPLIER SHALL PROVIDE SUBMERSIBLE PUMPS, SLIDE RAIL ASSEMBLIES, CONTROL PANEL, JUNCTION BOX, FLOAT SWITCHES, ALUMINUM HATCH AND ACCESSORIES TO INSURE PROPER OPERATION AND WARRANTY.

THE COMPLETE PACKAGE PUMPING STATION SHALL HAVE PUMP BASES, SLIDE RAIL ASSEMBLIES AND DISCHARGE PIPING ASSEMBLED BY TECHNICAL SALES CORPORATION READY TO SHIP FOR FIELD INSTALLATION.

THE MANUFACTURER OF PRE-FAB PUMP SOLUTIONS©:

TECHNICAL SALES CORPORATION, 4621 N. HALE AVE TAMPA, FL 33614 (813)876-9256

CONTROL PANEL -SHALL CONFORM TO FL DEP 62-604 F.A.C.

CONTROL PANEL SHALL BE TSC MODEL # 38-D IN NEMA 4X FIBERGLASS ENCLOSURE. THE PANEL SHALL MEET STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP), ENVIRONMENTAL PROTECTION COMMISSION (EPC) AND LOCAL CODE REQUIREMENTS GOVERNING PRIVATE LIFT STATIONS.

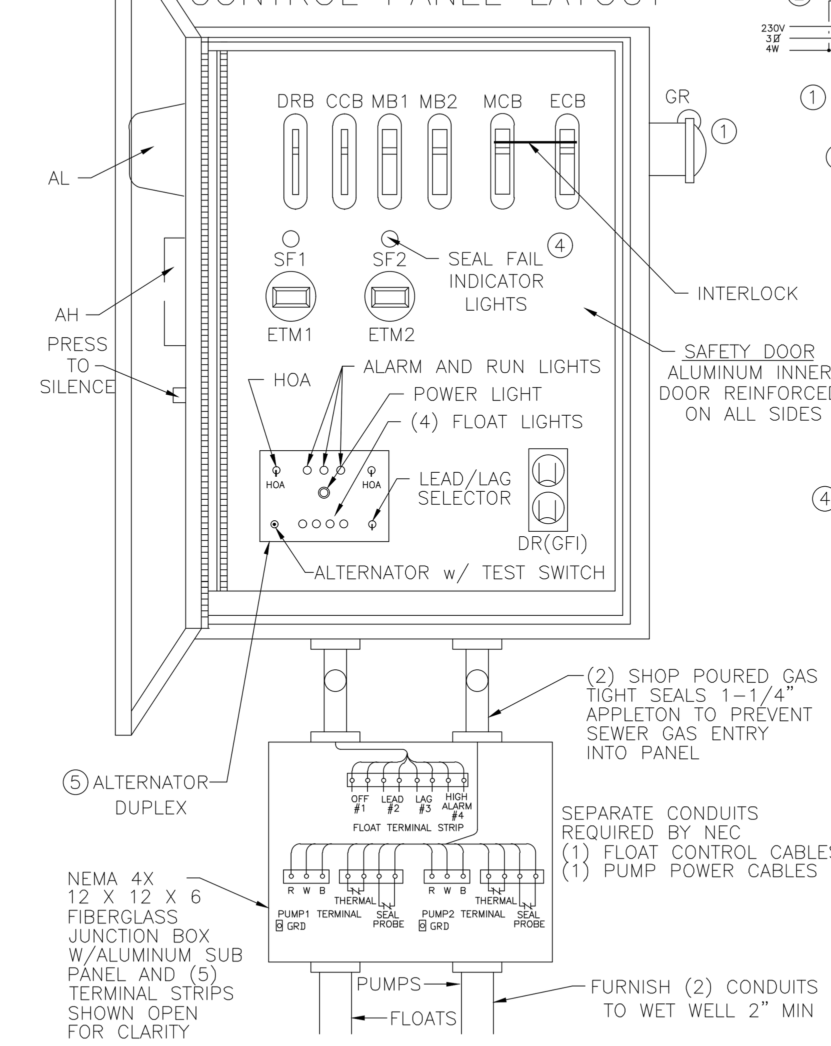
FLOAT SWITCHES AND CONTROL SYSTEM SHALL BE UL LISTED AND INTRINSICALLY SAFE. ALL COMPONENTS SHALL BE UL LISTED.

A JUNCTION BOX IS REQUIRED, WITH SHOP POURED SEALS BETWEEN BOX AND CONTROL PANEL TO PREVENT SEWER GAS ENTRY INTO CONTROL PANEL.

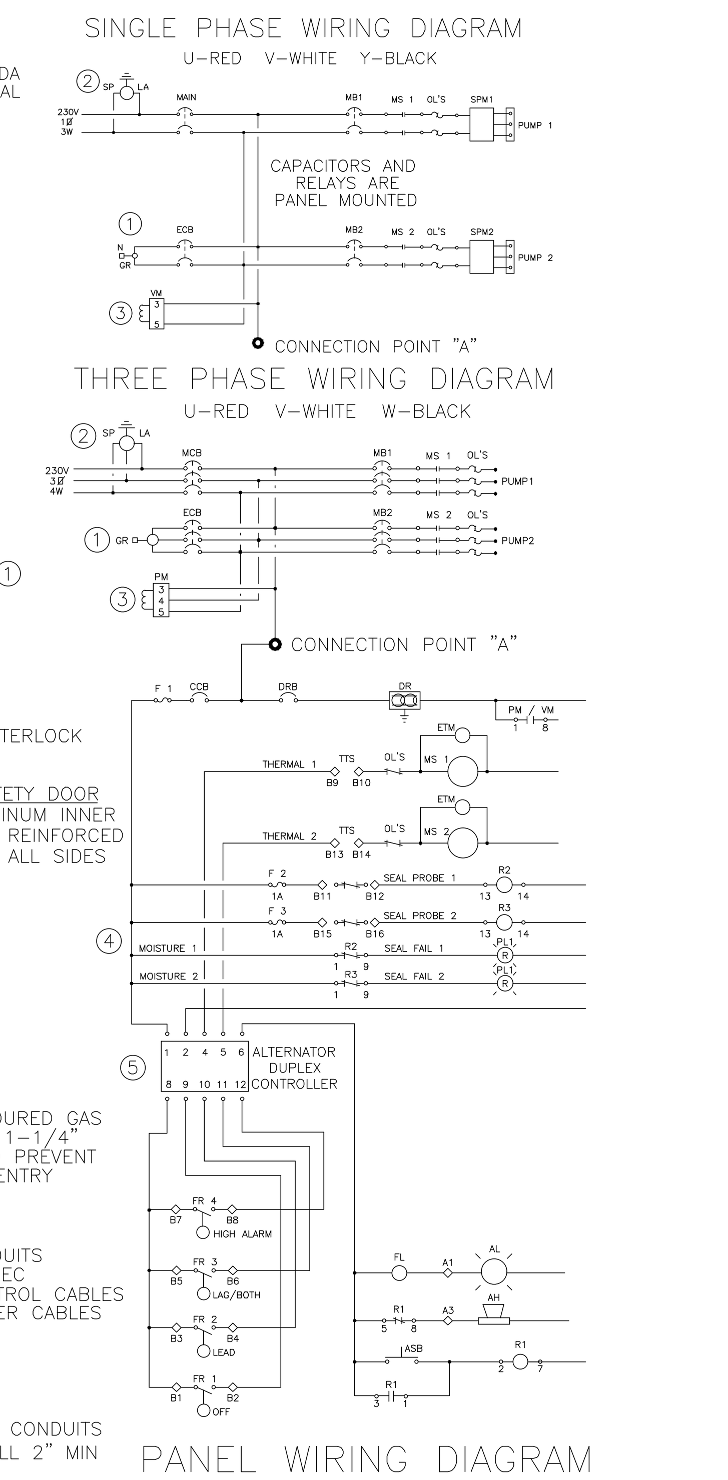
ELECTRICAL CONTRACTOR TO PROVIDE SERVICE DISCONNECT WITH LIGHTNING ARRESTOR MOUNTED PER LOCAL CODES.

THE CONTROL PANEL SHALL BE SUITABLY INSTALLED TO PREVENT SETTLING OR TIPPING.

CONTROL PANEL LAYOUT



SINGLE PHASE WIRING DIAGRAM



LEGEND

	AH	ALARM HORN	MCB	MAIN CIRCUIT BREAKER
	AL	ALARM LIGHT	MS	MOTOR STARTER
	ASB	ALARM SILENCE BUTTON	N	NEUTRAL
(5)	ATS	ALTERNATOR W/ TEST SWITCH	OL'S	OVERLOAD HEATERS
	CCB	CONTROL CIRCUIT BREAKER	(3) PM	PHASE MONITOR
	DR	DUPLEX RECEPTACLE	PTS	PUMP TERMINAL STRIP
	DRB	DUPLEX RECEPTACLE BREAKER	R	RELAY
	ECB	EMERGENCY CIRCUIT BREAKER	RC	RUN CAPACITOR
	ETM	ELAPSED TIME METER	RD	DISCHARGE RESISTOR
	F	FUSE	RL	PUMP RUN INDICATORS
	FL	FLASHER	RTS	REGULATOR TERMINAL STRIP
	FS	FLOAT SWITCH (REGULATOR)	SC	START CAPACITOR
(1)	GR	GENERATOR RECEPTACLE	(4) SF	SEAL FAIL (SHAFT)
	GRD	GROUND	SR	START RELAY
	HOA	HAND-OFF-AUTOMATIC SELECTOR	(2) SP	SURGE PROTECTOR
	LA	LIGHTNING ARRESTOR	TTS	THERMAL TERMINAL STRIP
	MB	MOTOR BREAKER		

PANELS SHALL CONFORM TO FLORIDA DEP 62-604 F.A.C.

1. GENERATOR RECEPTACLE FOR EMERGENCY POWER CONNECTION WITH INTERLOCK
2. SURGE PROTECTION AND LIGHTNING PROTECTION ON ALL INCOMING LEGS
3. PHASE PROTECTION SHALL BE PROVIDED
4. SHAFT SEAL FAIL DETECTION
5. ALTERNATOR w/ TEST SWITCH

PANEL MANUFACTURER SHALL BE A "UL" LISTED SHOP.

OPERATED BY:
"OWNER NAME"
IN CASE OF EMERGENCY CALL
"OWNER PHONE NUMBER"

1. PROJECT LOCATION: HILLSBOROUGH COUNTY

2. DESIGN CAPACITY CALCULATIONS

A. Average Daily Flow (ADF):

23	x 200 GPD/UNIT (Single Family Units)=	4,600.0	GPD
0	x 140 GPD/UNIT (Multi Family Units)=		GPD
0	x 0.15 GPD per Square Foot (Office/Retail)=		GPD
	ADF Total=	4,600.0	GPD

B. Peak Influent Rate:

Peak Factor = 3.00 (Per Utility Manual, Appexdix 5)
Peak Flow = (ADF x Peak Factor) / 1440 = 9.6 GPM

C. Design Minimum Flow:

(ADF x 0.20) / 1440= 0.6 GPM

D. Design Pump Capacity (Minimum Required): 80.0 GPM

E. Velocity in Force Main at Max. Pumping Rate: 2.00 fps

3. WETWELL DESIGN (DUPLEX SYSTEM)

A. Design Criteria:
1. Maximum Pump Motor Cycle Rate = 6 Starts Per Hour
2. Maximum Detention Time at Minimum Flow = 30 Minutes

B. Pump Control Level Settings:
1. Pump Cycling Rates are at a minimum when inflow equals one-half the design pumping rate of 80.0 gpm.
2. Wetwell volume required between Lead Pump Start and Pump Shut Off Level = 0.5 x Cycle Period x 1/2 Pumping Rate= 200.00 Gallons
3. Wetwell Diameter (D)= 5 feet
Wetwell Volume = 146.87 gals / ft. depth
4. Wetwell level change between pump stop and lead pu 1.36 feet
Desgin For: 1.40 feet (2.00' max)

4. SYSTEM CURVE CALCULATIONS

PUMP STATION PIPING:

A. Friction Loss
1. Pump Station Piping

	Size (in)	Quantity	Friction Loss (ea.)	Total
Tee	2	0		
22.5° Bend	2	0		
45° Bend	2	0		
90° Bend	2	2	11	22
Check Valve	2	1	13	13
Gate Valve	2	1	1.3	1.3
			Total=	36.30
			Pipe Length=	25.00
			Total Equivelent Length=	61.30

Design For: 100.0

FORCE MAIN PIPING:

2. Force Main Piping

	Size (in)	Quantity	Friction Loss (ea.)	Total
Tee	4	0		
22.5° Bend	4	0		
45° Bend	4	0		
90° Bend	4	0		
Cross	4	0		
Gate Valve	4	1	2.5	2.5
			Total=	2.50
			Pipe Length=	69.00
			Total Equivelent Length=	71.50

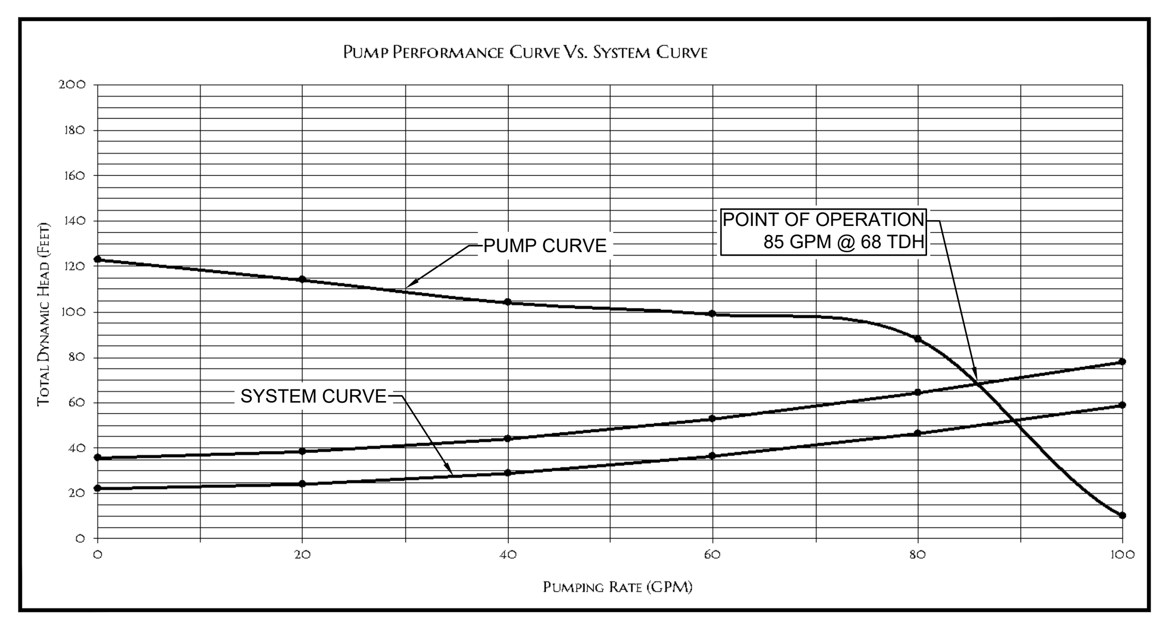
Design For: 100.0

STATIC HEAD:

1. Pipe Center Line at Discharge Point:	65.08	ft.
2. Low Water Level (All Pumps Off):	48.00	ft.
3. Total Static Head (B.1.-B.2.):	17.08	ft.

SYSTEM HEAD COMPUTATION:

Item	Flow (GPM) 0	20	40	60	80	100	120	140	160	180	200
Pump Station Piping (Equivelent Length)											
100 LF 2 " DIP	0.00	1.81	6.54	13.87	23.62	35.71	50.05	66.59	85.28	106.06	128.92
Force Main Piping (Equivelent Length)											
100 LF 4 " PVC	0.00	0.04	0.16	0.34	0.58	0.87	1.22	1.62	2.08	2.59	3.15
Static Head	17.08	17.08	17.08	17.08	17.08	17.08	17.08	17.08	17.08	17.08	17.08
Low (County Provided)	5.00	5.00	5.00	5.10	5.10	5.20	5.30	5.40	5.50	5.60	5.70
(Design Pressure @ POC)											
High (County Provided)	18.50	19.50	20.40	21.60	23.00	24.40	25.90	27.40	29.00	30.60	32.20
Low System Losses (System Curve)	22.08	23.94	28.79	36.39	46.38	58.87	73.66	90.70	109.94	131.33	154.84
High System Losses	35.58	38.44	44.19	52.89	64.28	78.07	94.26	112.70	133.44	156.33	181.34



V. Floatation Calculations - Concrete Wet Well

(1) Barrel Weight = $(A^2 - B^2) \times (\pi/4) \times E \times (W_c)$ =	0	lb
(2) Bottom Slab Weight = $C^2 \times \pi/4 \times D \times W_c$ =	4,698	lb
(3) Soil Weight = $(C^2 - A^2) \times \pi/4 \times E \times (120 - 62.4)$=	18,638	lb
(4) Total Weight =	23,336	lb
(5) H_2O Displaced = $((A^2 \times \pi/4 \times E) + (C^2 \times \pi/4 \times D)) \times 6$	21,033	lb

Safety Factor = Total Weight / H_2O Displaced = 1.11

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FIBERGLASS WET WELL

TECHNICAL SALES
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TAMPA, FL 33614
PH (813)876-9256
FAX (813)874-1194
EMAIL: Sales@TSCTampa.com
REV-9 SCALE: N.T.S.

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Consulting, LLC
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Suite 200
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Office: 813-375-0616
www.levelupflorida.com

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CONSTRUCTION PLAN REVISIONS

WINDHORST COMMONS
CLIENT: HABITAT FOR HUMANITY
LIFT STATION DETAILS

Engineering Business Certificate of Authorization No. 32771
Florida Certificate of Authorization No. LC26000638
KYLE GLORIOSO LICENSE NO. 88699 STATE OF FLORIDA PROFESSIONAL ENGINEER
KYLE GLORIOSO
FLORIDA LICENSED PROFESSIONAL ENGINEER
REGISTRATION NUMBER 88699

PROJECT No. 194-01-02
SHEET C 11.1

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LEGEND

- PROPERTY LINE
- TRACT LINE
- LOT LINE
- RIGHT OF WAY LINE
- FEMA FLOOD LINE
- WETLAND LINE
- WETLAND SETBACK LINE
- EASEMENT LINE
- EXISTING CONTOUR
- SILT FENCE
- MITERED END SECTION
- MANHOLE
- GRATE INLET/CONTROL STRUCTURE

GENERAL NATURAL RESOURCE NOTES

1. IMPACTS TO STATE AND FEDERALLY PROTECTED SPECIES AS LISTED IN THE MOST CURRENT VERSION OF "FLORIDA'S ENDANGERED SPECIES, THREATENED SPECIES AND SPECIES OF SPECIAL CONCERN: OFFICIAL LISTS" PREPARED BY THE FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC) ARE NOT AUTHORIZED BY THIS PERMIT. THESE SPECIES MAY INCLUDE, BUT ARE NOT LIMITED TO, FLORIDA SCRUB JAY, AMERICAN BALD EAGLE, SHERMAN'S FOX SQUIRREL, BURROWING OWL, GOPHER TORTOISE , GOPHER FROG, AND EASTERN INDIGO SNAKE. PROTECTION EXTENDS TO THE NESTS, BURROWS AND HABITAT UTILIZED BY THESE SPECIES. IF A LISTED SPECIES (OR ITS EVIDENCE, SUCH AS BURROWS, NESTS, SCAT, TRACKS) THAT WAS NOT ADDRESSED IN THIS PERMIT IS OBSERVED PRIOR TO OR DURING CONSTRUCTION, ALL CLEARING AND EARTHMOVING ON-SITE SHALL CEASE. THE PERMITTEE SHALL CONSULT WITH THE FWC REGIONAL OFFICE AND/OR THE U.S. FISH AND WILDLIFE SERVICE REGIONAL OFFICE REGARDING NECESSARY PROTECTION MEASURES AND PROVIDE EVIDENCE OF SUCH CONSULTATION TO RESOURCE PROTECTION SERVICES PRIOR TO RESUMING WORK.

2. IF ANY TYPE A FILL (CLEAN EARTHEN MATERIAL) IS TO BE HAULED OFF-SITE, AN EARTHMOVING PERMIT OR LETTER OF EXEMPTION IS REQUIRED FROM RESOURCE PROTECTION SERVICES. IF ANY TYPE A FILL HAULED OFF-SITE IS TO BE STOCKPILED OR FILLED UPON PRIVATE PROPERTIES WITHIN THE UNINCORPORATED AREAS OF HILLSBOROUGH COUNTY, THE RECEIVING PROPERTY(S)SHALL POSSESS AUTHORIZATION IN THE FORM OF AN EARTHMOVING PERMIT, A WRITTEN EARTHMOVING EXEMPTION, A BUILDING PERMIT, OR CONSTRUCTION PLAN APPROVAL PRIOR TO RECEIVING SAID FILL. NO TYPE B (CONCRETE, BROKEN ASPHALT, ROCKS), TYPE C (VEGETATIVE LAND CLEARING DEBRIS), OR TYPE D (GARBAGE, REFUSE, WOOD, METAL, PLASTIC, ETC.) FILL MAY BE BURIED WITHIN OR OUTSIDE APPROVED CONSTRUCTION LIMITS. TYPE D FILL MUST BE DISPOSED AT AN APPROVED LANDFILL OR RECYCLING FACILITY. TYPE B, C, AND D FILLS GENERATED ON-SITE SHALL NOT BE STOCKPILED ON-SITE FOR GREATER THAN SIX MONTHS. TYPE B, C, AND D FILLS SHALL NOT BE HAULED TO THE SITE FROM OFF-SITE SOURCES. FOR INFORMATION ABOUT EARTHMOVING PERMITS OR EXEMPTIONS, CONTACT HILLSBOROUGH COUNTY. IF FILL MATERIAL IS TO BE STOCKPILED WITHIN THE APPROVED CONSTRUCTION LIMITS, THE PROJECT ENGINEER MUST PROVIDE DETAILED DRAWINGS TO LAND DEVELOPMENT SERVICES FOR REVIEW AND APPROVAL

BEST MANAGEMENT PRACTICES GUIDELINES

1.) INSTALL EROSION CONTROL DEVICES AROUND THE PROJECT BOUNDARY AND AS NEEDED TO PREVENT SOIL FROM LEAVING THE SITE.

2.) EROSION CONTROL DEVICES WILL BE BUILT TO PREVENT SOIL FROM LEAVING THE SITE AND SHALL BE INSTALLED PRIOR TO ANY SITE GRUBBING AND/OR DEMOLITION.

3.) STABILIZE ALL PERIMETER BERMS AND SLOPES TO PROTECT AGAINST EROSION.

4.) WRAP INLET GRATES WITH FILTER FABRIC UNTIL THE DRAINAGE AREA DRAINING TO EACH INLET IS STABILIZED WITH EITHER PAVEMENT OR SOD.

5.) MAINTAIN SILT FENCE, HAY BALES, FILTER FABRIC, AND ALL OTHER EROSION CONTROL DEVICES UNTIL STABILIZATION IS ESTABLISHED TO PREVENT SOIL FROM LEAVING THE SITE.

6.) INSTALL ALL EROSION CONTROL DEVICES AS PER F.D.O.T. STANDARD INDEX 102 SERIES.

7.) IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, STABILIZE THE EFFECTIVE AREA BY USING WETTING OR OTHERACCEPTABLE METHODS.

8.) REMOVE ALL SILTATION ACCUMULATIONS GREATER THAN THE LESSER OF 12 INCHES OR ONE-HALF THE DEPTH OF THE SILTATION CONTROL DEVICE.

9.) REMOVE SILTATION ACCUMULATIONS IN ANY DRAINAGE PIPE AFFECTED BY CONSTRUCTION ACTIVITIES ON THE SITE PRIOR TO COMPLETION OF CONSTRUCTION.

10.) MAINTAIN ALL BERM ELEVATIONS DURING CONSTRUCTION.

11.) LOCATION OF EROSION CONTROL DEVICES MAY BE ADJUSTED DUE TO FIELD CONDITIONS.

12.) THE CONTRACTOR SHALL BE RESPONSIBLE TO SAFELY STORE EQUIPMENT, FUEL, OIL, AND OTHER HAZARDOUS DEVICES IN AMANNER TO PREVENT GREASE, OILS, FUEL, AND OTHER HAZARDOUS SUBSTANCES FROM CONTAMINATING THE STORMWATER MANAGEMENT AND COLLECTION.

13.) SILT FENCE SHOWN ON THESE PLANS SHALL BE INSTALLED ALONG THE URISDICTIONAL LINE. IF THERE IS A BUFFER IMPACT,ALL SILT FENCE SHALL BE INSTALLED AT THE TOE OF SLOPE AS SHOWN ON THESE PLANS.NO SILT FENCE SHALL BE INSTALLEDIN PRESERVED WETLANDS EXCEPT AS PROTECTION AROUND TEMPORARY IMPACTS.

14.) ALL LAKES SHALL BE SOD FROM CONTROL ELEVATION TO 2' BACK OF LAKE CONTROL LINE (TOP OF BANK).

15.) SOD A 2' WIDE STRIP BEHIND ALL CURBING AND EDGE OF PAVEMENT WHERE CURB IS NOT PRESENT.

16.) SOD AROUND ALL INLETS, JUNCTION BOXES, ETC. AND GRASS ALL SWALES.

17.) TO PROTECT OPERATOR / RESPONSIBLE AUTHORITY SHALL BE RESPONSIBLE FOR THE ROUTINE INSPECTION, MAINTENANCE, REPAIR AND REMOVAL OF BMP DEVICES IN ACCORDANCE WITH CURRENT RULES AND REGULATIONS OF HILLSBOROUGH COUNTY, THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT AND THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT PROGRAM.

18.) SOIL TRACKING PREVENTION DEVICES TO BE LOCATED AS SHOWN ON PLANS AT ROADWAYS THAT CONNECT TO THE PROJECT.

19.) AT ALL TIMES DURING CONSTRUCTION, PROPER MEASURES MUST BE TAKEN TO PROTECT THE SURFACE WATER MANAGEMENT SYSTEM. ALL ROADWAY INLETS THAT RECEIVE SURFACE WATER RUN-OFF FROM CONSTRUCTION AREAS MUST BE PROTECTED FROM SILT AND OTHER MATERIALS PER THE DETAILS ON SHEET #13

20.) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM:

- a.) NPDES CONSTRUCTION GENERIC PERMIT COVERAGE SHALL BE OBTAINED AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION COMMENCEMENT.
- b.) A COPY OF THE CERTIFIED NPDES NOI, OR A COPY OF THE FDEP COVERAGE CONFIRMATION LETTER SHALL BE POSTED AT THE SITE IN ACCORDANCE WITH HILLSBOROUGH COUNTY CODE.
- c.) A COPY OF THE CERTIFIED NPDES NOI, OR A COPY OF THE FDEP COVERAGE CONFIRMATION LETTER SHALL BE PROVIDED TO WATER RESOURCES IN ACCORDANCE WITH HILLSBOROUGH COUNTY CODE.
- d.) THE SWPPP SHALL BE CERTIFIED AND A COPY OF THE CERTIFIED DOCUMENT SHALL BE SUBMITTED TO WATER RESOURCES AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION IN ACCORDANCE WITH HILLSBOROUGH COUNTY CODE.
- e.) A COPY OF THE SWPPP AND COPIES OF THE INSPECTION AND MAINTENANCE RECORDS SHALL BE MAINTAINED AT THE PROJECT SITE, AND SHALL BE READILY AVAILABLE TO COUNTY OR STATE INSPECTORS PER HILLSBOROUGH COUNTY CODE.

21.) THE DISCHARGE OF GROUNDWATER PRODUCED THROUGH DEWATERING, TO SURFACE WATERS, OR TO ANY PORTION OF THE MS4 WILL REQUIRE SEPARATE PERMITTING FROM THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP).PERMIT(S) SHALL BE OBTAINED PRIOR TO THE COMMENCEMENT OF DEWATERING.

22.) DEWATERING DISCHARGES SHALL BE DIRECTED TO ONSITE WET DETENTION LAKES UNLESS OTHERWISE APPROVED BY S.W.F.W.M.D.

23.) EROSION AND SEDIMENTATION CONTROL BMPS IN ADDITION TO THOSE PRESENTED ON THE PLANS AND OUTLINED IN THE EROSION AND SEDIMENTATION CONTROL PLAN (ECP) OR STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE IMPLEMENTED AS NECESSARY TO PREVENT TURBID DISCHARGES FROM FLOWING ONTO ADJACENT PROPERTIES OR ROADWAYS, OFFSITE STORMWATER CONVEYANCES, OR OFFSITE RECEIVING WATERS. BMPS SHALL BE DESIGNED, INSTALLED,AND MAINTAINED BY THE SITE OPERATOR TO ENSURE THAT OFF SITE SURFACE WATER QUALITY REMAINS CONSISTENT WITH STATE AND LOCAL REGULATIONS. [THE OPERATOR IS THE ENTITY THAT OWNS OR OPERATES THE CONSTRUCTION ACTIVITY AND HAS AUTHORITY TO CONTROL THOSE ACTIVITIES AT THE PROJECT NECESSARY TO ENSURE COMPLIANCE.

24.) OFF SITE SURFACE WATER DISCHARGES WITH TURBIDITY IN EXCESS OF 29 NEPHELOMETRIC TURBIDITY UNITS (NTUS) ABOVE BACKGROUND LEVEL SHALL BE IMMEDIATELY CORRECTED. SUCH INCIDENTS SHALL BE REPORTED TO HILLSBOROUGH COUNTY EPC WITHIN 24 HOURS OF THE OCCURRENCE. THE REPORT SHALL INCLUDE THE CAUSE OF THE DISCHARGE AND CORRECTIVE ACTIONS TAKEN.

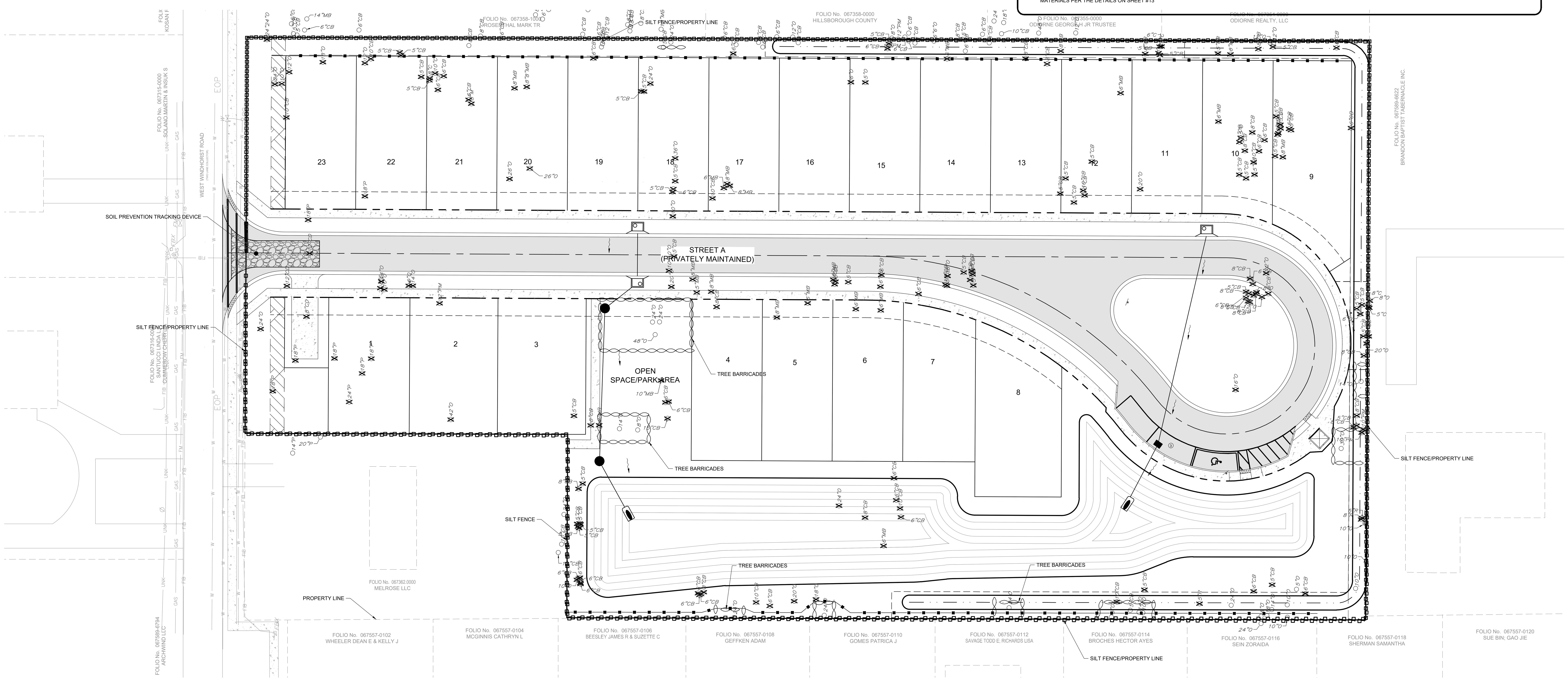
25.) THE OPERATOR SHALL ENSURE THAT ADJACENT PROPERTIES ARE NOT IMPACTED BY WIND EROSION, OR EMISSIONS OF UNCONFINED PARTICULATE MATTER IN ACCORDANCE WITH RULE (62-296.320(4)(c)1, F.A.C., BY TAKING APPROPRIATE MEASURES TO STABILIZE AFFECTED AREAS.

26.) FUEL AND OTHER PETROLEUM PRODUCT SPILLS THAT ENTER STORMWATER DRAINS OR WATERBODIES, OR FUEL AND OTHER PETROLEUM PRODUCT SPILLS THAT ARE IN EXCESS OF 25 GALLONS SHALL BE CONTAINED, CLEANED UP, AND IMMEDIATELY REPORTED TO HILLSBOROUGH COUNTY EPC AT(PH: 813-627-2600: FAX:813-627-2601). SMALLER GROUND SURFACE SPILLS SHALLBE CLEANED UP AS SOON AS PRACTICAL.

27.) IF CONTAMINATED SOIL OR AND/OR GROUNDWATER IS DISCOVERED DURING DEVELOPMENT OF THE SITE, ALL ACTIVITY IN THE VICINITY OF THE CONTAMINATION SHALL IMMEDIATELY CEASE, AND HILLSBOROUGH COUNTY EPC SHALL BE CONTACTED AT (PH; 813-627-260; FAX: 813-627-2601).

28.) PRIOR TO THE START OF CLEARING AND GRUBBING, OR ANY SOIL DISTURBANCE, HILLSBOROUGH COUNTY STORMWATER MANAGEMENT SHALL BE CONTACTED AT (813) 307-1868 FOR A SOIL EROSION AND SEDIMENT CONTROL PRE-INSPECTION MEETING.

29.) PROVIDE MEASURES TO CONTROL DUST GENERATION, AND MOVEMENT.



0 15 30 60
SCALE IN FEET

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Suite 200
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www.levelupflorida.com

CONSTRUCTION PLAN REVISIONS

WINDHORST COMMONS

CLIENT: HABITAT FOR HUMANITY

BEST MANAGEMENT PRACTICES PLAN

Engineering Business Certificate of Authorization No. 32771
Florida Certificate of Authorization No. LC26000638

KYLE GLORIOSO LICENSE NO. 88699 STATE OF FLORIDA PROFESSIONAL ENGINEER

KYLE GLORIOSO
FLORIDA LICENSED PROFESSIONAL ENGINEER
REGISTRATION NUMBER 88699

PROJECT No.	194-01-02
SHEET	C 12.0

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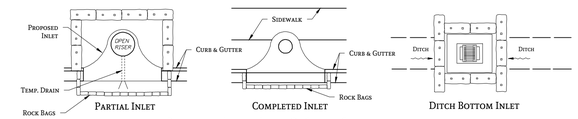
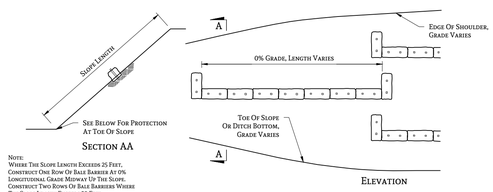
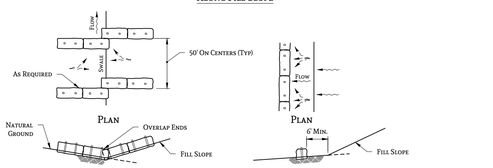


Protection Around Inlets Or Similar Structures



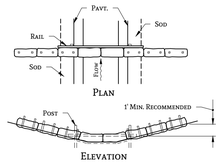
Note:
Where The Slope Length Exceeds 25 Feet, Construct One Row Of Bale Barrier At 0% Longitudinal Grade Midway Up The Slope. Construct Two Rows Of Bale Barriers Where The Slope Length Exceeds 50 Feet.

Along Fill Slope

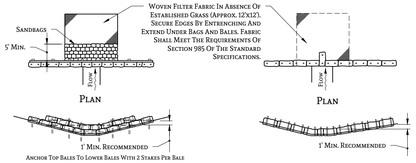


At Toe Of Slope

Barriers For Fill Slopes



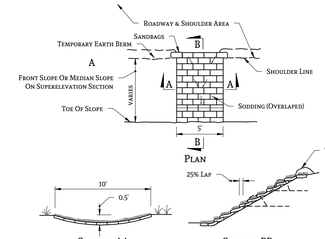
Synthetic Bales Or Bale Type Barriers For Paved Ditches



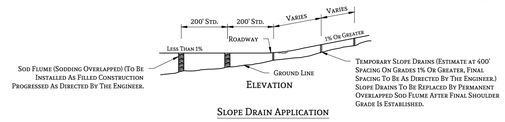
Synthetic Bales Or Bale Type Barriers For Unpaved Ditches

Notes For Synthetic Bales Of Bale Type Bariers

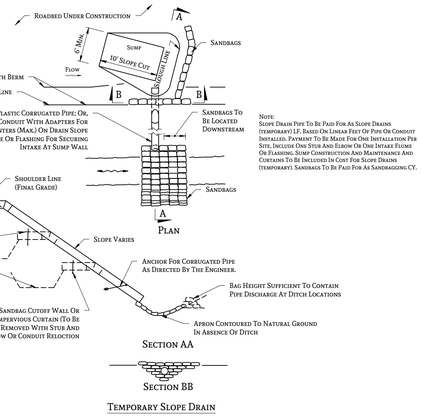
1. Type I And II Synthetic Barrier Should Be Spaced In Accordance With Chart 1, Sheet 1
2. Bales Shall Be Trenched 3" To 4" And Anchored With 2-1" X 2" (or 1" Dia.) X 4' Wood Stakes. Stakes Of Other Material Or Share Providing Equivalent Strength May Be Used If Approved By The Engineer. Stakes Other Than Wood Shall Be Removed Upon Completion Of The Project.
3. Rails And Posts Shall E 2" X 4" Wood. Other Material Providing Equivalent Strength May Be Used If Approved By The Engineer.
4. Adjacent Bales Shall Be Butted Firmly Together.
5. Where Used In Conjunction With Silt Fence, Bales Shall Be Placed On The Upstream Side Of The Fence.
6. Bales To Be Paid For Under Contract Unit Price For Synthetic Bales. Lf. The Unit Price Shall Include The Cost Of Filter Fabric For Type I And I; Barriers, Sandbags Shall Be Paid For Under The Unit Price For Sandbagging, CY. Rock Bags To Be Paid For Under The Contract Unit Price For Rock Bags, EA.



Sod Flume (Sodding Overlapped)



Slope Drain Application

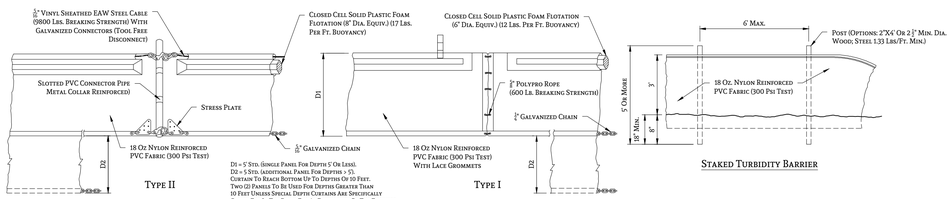


Note:
Slope Drain Pipe To Be Paid For As Slope Drains (Temporary) Lf. Based On Linear Feet Of Pipe Or Conduit Installed. Payment To Be Made For One Installation Per Site. Include One Stub And Elbow Or One Intake Flume Or Flashing. Sump Construction And Maintenance And Curtains To Be Included In Cost For Slope Drains (Temporary). Sandbags To Be Paid For As Sandbagging CY.

Temporary Slope Drain

Temporary Slope Drain And Sod Flume

N.T.S.

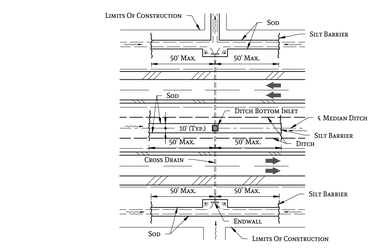


Staked Turbidity Barrier

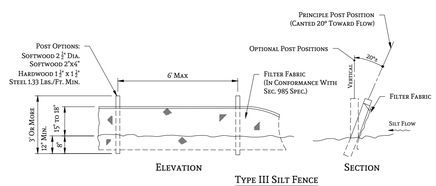
Notice:
Components Of Types I And II May Be Similar Or Identical To Proprietary Designs. Any Infringement On The Proprietary Rights Of The Designer Shall Be The Sole Responsibility Of The User. Substitutions For Types I And Types II Shall Be As Approved By The Engineer.

D1 = 5' Std. (Single Panel For Depth 5' Or Less).
D2 = 5 Std. (additional Panel For Depths > 5'). Curtain To Reach Bottom Up To Depths Of 10 Feet. Two (2) Panels To Be Used For Depths Greater Than 10 Feet Unless Special Depth Curtains Are Specifically Called For In The Plans For As Determined By The Engineer.

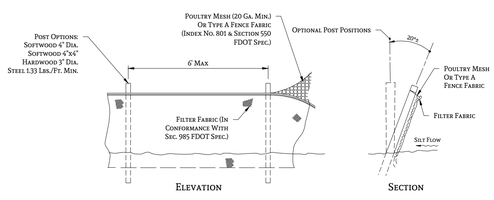
Floating Turbidity Barrier



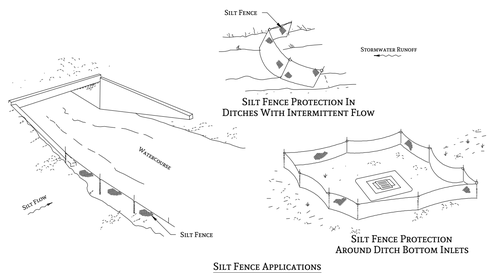
Ditch Installations At Drainage Structures



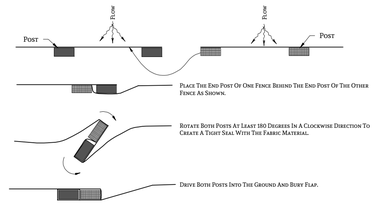
Type III Silt Fence



Type IV Silt Fence



Silt Fence Applications



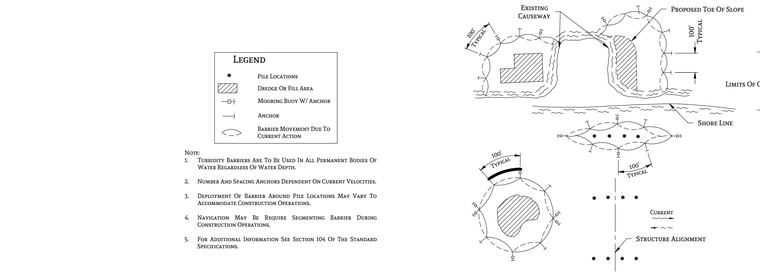
Plan View Joining Two Silt Fences

Notes For Silt Fences

1. Type III Silt Fence To Used At Most Locations. Where Used In Ditches, The Spacing For Type Isilt Fence Shall Be In Accordance With Chart 1, Sheet 1.
2. Type IV Silt Fence To Be Used Where Large Sediment Loads Are Anticipated. Suggested Use Is Where Fill Slope Is 12' Or Steeper And Length Of Slope Exceeds 25 Feet. Avoid Use Where The Detained Water May Back Into Travel Lanes Or Off The Right Of Way.
3. Do Not Construct Silt Fences Across Permanent Flowing Watercourses. Silt Fences Are To Be Upland Locations And Turbidity Barriers Used At Permanent Bodies Of Water.
4. Where Used As Slope Protection, Silt Fence Is To Be Constructed On 0% Longitudinal Grade To Avoid Channeleizing Runoff Along The Length Of The Fence.
5. Silt Fence To Be Paid For Under The Contract Unit Price For Stacked Silt Fence, (Lf)

Temporary Erosion And Sediment Control

N.T.S.



Note:
1. Turbidity Barriers Are To Be Used In All Permanent Bodies Of Water Regardless Of Water Depth.
2. Number And Spacing Anchors Dependent On Current Velocities.
3. Deployment Of Barrier Around Pile Locations May Vary To Accommodate Construction Operations.
4. Navigation May Be Require Segmenting Barrier During Construction Operations.
5. For Additional Information See Section 104 Of The Standard Specifications.

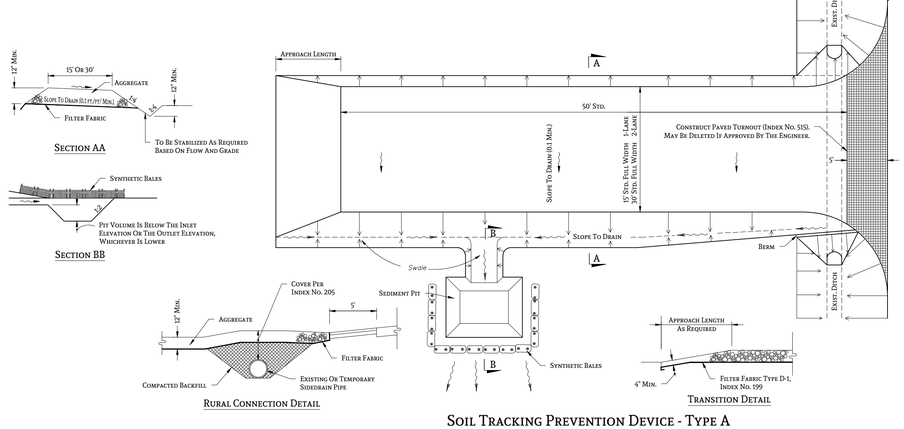
Turbidity Barrier Applications

General Notes

1. floating Turbidity Barriers Are To Be Paid For Under The Contract Unit Price For Floating Turbidity Barrier, Lf.
2. stacked Turbidity Barriers Are To Be Paid For Under The Contract Unit Price For Staked Turbidity Barrier, Lf.

Turbidity Barriers

N.T.S.



Rural Connection Detail

Transition Detail

Soil Tracking Prevention Device - Type A

N.T.S.

General Notes

1. A Soil Tracking Prevention Device (STPD) shall be constructed at locations designated by the engineer for points of egress from unstabilized areas of the project to public roads where off-site tracking of mud could occur. Traffic from unstabilized areas of the construction project shall be directed thru a STPD. Barriers, flagging, or other positive means shall be used as required to limit and direct vehicular egress across the STPD.
2. The Contractor may propose an alternative technique to minimize off-site tracking of sediment. The alternative must be reviewed and approved by the Engineer prior to its use.
3. All materials spilled, dropped, or tracked onto public roads (including the STPD aggregate and construction mud) shall be removed daily, or more frequently if so directed by the Engineer.
4. Aggregates shall be as described in Section 901 excluding 901-2.3. Aggregates shall be FDOT size #1. If this size is not available, the next available smaller size aggregate may be substituted with the approval of the Engineer. Sizes containing excessive small aggregate will track off the project and are unsuitable.
5. The sediment pit should provide a retention volume of 3600 cubic feet/acre of surface area draining to the pit.
   Where the STPD is isolated from other drainage areas, the following pit volumes will satisfy this requirement:
   15' X 50'=100 ft. 3 30' X 50'=200 ft. 3
   As an option to this sediment pit, the width of the swale bottom can be increased to obtain the volume. When the sediment pit or swale volume has been reduced to one half, it shall be cleaned. When a swale is used, synthetic bales or silt fence shall be placed along the entire length.
6. The swale ditch draining the STPD shall have a 0.02% minimum and a 1.0% maximum grade along the STPD and to the sediment pit.
7. Mitered end sections are not required when the sidedrain pipe satisfies the clear zone requirements.
8. The STPD shall be maintained in a condition that will allow it to perform its function. To prevent off-site tracking, the STPD shall be rinsed daily when in use) to move accumulated mud downward thru the stone. Additional stabilization of the vehicular route leading to the STPD may be required to limit the mud tracked.
9. A STPD shall be paid for under the contract unit price for Soil Tracking Prevention Device, EA. The unit price shall constitute full compensation for construction, maintenance, replacement of materials, removal, and restoration of the area utilized for the STPD, including but not limited to excavation, grading, temporary pipe (including MES when required), filter fabric, aggregate, paved turnout (including asphalt and base construction), ditch stabilization, approach route stabilization, sediment removal and disposal, water, rinsing and cleaning of the STPD and cleaning of public roads, grassing and sod. Synthetic Bale or Bale Type Barrier shall be paid for under the contract unit price for Synthetic Bales, LF. Silt fence shall be paid for under the contract unit price for Staked Silt Fence, LF.
10. The nominal size of a standard STPD is 15' x 50' unless otherwise shown in the plans. If the volume of entering and exiting vehicles warrant, a 30' width STPD may be used if approved by the Engineer. When a double width (30) STPD is used, the pay quantity shall be 2 for each location.

LevelUp Consulting, LLC
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Suite 200
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NOT TO SCALE

Construction Plan Revisions	

WINDHORST COMMONS

CLIENT: HABITAT FOR HUMANITY

BEST MANAGEMENT PRACTICES DETAILS

Engineering Business Certificate of Authorization No. 32771
Florida Certificate of Authorization No. LC26000638

KYLE GLORIOSO LICENSE NO. 88699 STATE OF FLORIDA PROFESSIONAL ENGINEER

KYLE GLORIOSO
FLORIDA LICENSED PROFESSIONAL ENGINEER
REGISTRATION NUMBER 88699

PROJECT No.	194-01-02
SHEET	C 12.1

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02/23/2024 5:50:48 PM PLOTTED BY: eriten saleiro

UTILITY AND UTILITY SCREENING NOTES:

THE CONSTRUCTION OF ALL ABOVE GROUND UTILITY APPURTENANCES VISIBLE FROM THE PUBLIC RIGHT-OF-WAY SUCH AS PEDESTALS, UTILITY METERS, TRANSFORMERS, BACK-FLOW PREVENTION DEVICES, ETC. FOR NEW DEVELOPMENT OR REDEVELOPMENT ACTIVITIES SHALL CONFORM TO SCREENING REQUIREMENTS AS OUTLINED IN SECTION 6.06.06.C.10 OF THE LAND DEVELOPMENT CODE. PLANT LOCATION OR OTHER SCREENING MUST BE CONSIDERATE OF REQUIRED SPATIAL SEPARATIONS FROM A FIRE FLOW PROTECTION APPLIANCE IN ACCORDANCE TO THE UNIFORM FIRE CODE, AND PER WATER, WASTEWATER AND RECLAIMED WATER TECHNICAL SPECIFICATIONS SPEC 331001, PART 2.6.4.2, MUST BE LOCATED A MINIMUM OF 5' FROM UTILITY SLABS AND 3' FROM UNDERGROUND VALVES. TREES MUST BE LOCATED A MINIMUM OF 8' FROM UTILITY SLABS.

FOR ABOVE GROUND UTILITY APPURTENANCES ILLUSTRATED ON THE PLANS, THE TYPE OF SCREENING MUST BE CLEARLY NOTED TO MATCH THE OVERALL HEIGHT FOR THE TYPE OF ABOVE GROUND UTILITY SPECIFIED ON THE PLANS. UTILIZATION OF EVERGREEN PLANT MATERIAL MUST BE DESCRIBED BY SPECIES, SPACING AND OVERALL HEIGHT FOR THE TYPE OF UTILITY TO BE SCREENED.

UTILIZATION OF OPAQUE FENCING OR OTHER SCREENING MATERIAL IS PERMITTED. THE METER ASSEMBLY MUST BE ACCESSIBLE BY BOOM TRUCK OFF A COUNTY RIGHT-OF-WAY OR AN INTERIOR PAVED ACCESS ROAD AT LEAST 12' IN WIDTH PER SPEC 331001, PART 2.6.4. DO NOT INSTALL ANY SCREENING THAT WILL HINDER ACCESS IN THE FUTURE TO THE METER ASSEMBLY FROM THE INTERIOR OF THE SITE.

TREE NOTES:

PRUNING OF A GRAND OAK, WITH THE EXCEPTION OF MINOR PRUNING, IS PROHIBITED UNLESS CONDUCTED IN ACCORDANCE WITH THE ANSI-A-300 PRUNING STANDARDS, AND PERFORMED BY AN ARBORIST CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) OR A REGISTERED CONSULTING ARBORIST WITH THE AMERICAN SOCIETY OF CONSULTING ARBORISTS (ASCA). MINOR PRUNING IS THE PRUNING OF A TREE BY THE REMOVAL OF BRANCHES NO GREATER THAN THREE INCHES IN DIAMETER AT THE POINT OF CONNECTION TO A SUPPORTING BRANCH AND SHALL BE IN ACCORDANCE WITH THE ANSI A-300 PRUNING STANDARDS. A NOTARIZED AFFIDAVIT (ATTACHED) AFFIRMING AN ISA CERTIFIED ARBORIST OR AN ASCA REGISTERED CONSULTING ARBORIST WILL CONDUCT OR PROVIDE ONSITE SUPERVISION OF THE PRUNING SHALL BE SUBMITTED TO THE COUNTY PRIOR TO THE PRUNING OF A GRAND OAK. AN ISA CERTIFIED ARBORIST OR AN ASCA REGISTERED CONSULTING ARBORIST CONTRACTED BY A PROPERTY OWNER TO PRUNE A GRAND OAK SHALL ASSUME FULL RESPONSIBILITY FOR ALL PRUNING ACTIVITIES DETERMINED IN NONCOMPLIANCE WITH STANDARDS SPECIFIED WITHIN THE LAND DEVELOPMENT CODE.

TREE REMOVAL & REPLACEMENT CHART

A TOTAL OF 172 D.B.H. INCHES OF EXISTING TREES 24"-34" (0.5:1 REPLACEMENT) ARE BEING REMOVED FROM THE SITE BASED ON INITIAL SITE CONDITIONS, CIVIL DESIGN & ARBORISTS REPORT.	D.B.H. =	86 "
A TOTAL OF 78 D.B.H. INCHES OF EXISTING TREES 34" — 48" DBH (0.5:1 REPLACEMENT) & 0 D.B.H. INCHES OF EXISTING TREES 34" — 48" DBH (1:1 REPLACEMENT) ARE BEING REMOVED FROM THE SITE BASED ON INITIAL SITE CONDITIONS, CIVIL DESIGN & ARBORISTS REPORT.	D.B.H. =	78 "
A TOTAL OF 48 D.B.H. INCHES OF EXISTING TREES 48" — < 60" DBH (1.5:1 REPLACEMENT) ARE BEING REMOVED FROM THE SITE BASED ON INITIAL SITE CONDITIONS, CIVIL DESIGN & ARBORISTS REPORT.	D.B.H. =	48 "
A TOTAL OF 0 D.B.H. INCHES OF EXISTING TREES 60+" DBH (2:1 REPLACEMENT) ARE BEING REMOVED FROM THE SITE BASED ON INITIAL SITE CONDITIONS, CIVIL DESIGN & ARBORISTS REPORT.	D.B.H. =	0 "
TOTAL REPLACEMENT INCHES REQUIRED =		212 "

Qty	Species	Common Name	Note		
9	Quercus virginiana AS REQUIRED/REPLACEMENT TREES	Live Oak 3 " DBH= 27	(Only 2 " COUNT TOWARD REPLACEMENT)	D.B.H. =	18 "
18	Magnolia grandiflora AS REQUIRED/REPLACEMENT TREES	Magnolia grandiflora `D.D. Blanchard` 3 " DBH= 54	(Only 2 " COUNT TOWARD REPLACEMENT)	D.B.H. =	36 "
8	Acer floridanum AS REQUIRED/REPLACEMENT TREES	Florida Maple 3 " DBH= 24	(Only 2 " COUNT TOWARD REPLACEMENT)	D.B.H. =	16 "
11	Ulmus americana floridana AS REQUIRED/REPLACEMENT TREES	Florida Elm 3 " DBH= 33	(Only 2 " COUNT TOWARD REPLACEMENT)	D.B.H. =	22 "

TOTAL REPLACEMENT DBH =	92 "
TOTAL INCHES BELOW REQUIREMENT =	(120) "
X	$ 65.00 PER INCH
TOTAL TREE FUND PAYMENT DUE =	$7,800.00

TREE BANK NOTE:

PROPERTY OWNER OR DEVELOPER SHALL PAY INTO THE HILLSBOROUGH COUNTY TREE BANK AT $65.00 PER INCH FOR EACH REPLACEMENT INCH UNACCOUNTED FOR ON THE TREE PLANTING PLAN.

TREE LEGEND

O --- OAK TREE
P --- PINE TREE
C --- CAMPHOR TREE
PM --- PALM TREE
CD --- CEDAR TREE
R --- RAIN TREE
MB --- MULLBERRY TREE
CB --- CHINA BERRY TREE
M --- MAPLE TREE
DIA --- DIAMETER
DBH --- DIA AT BREAST HEIGHT
11"O --- 11" OAK TREE
X --- TREE TO BE REMOVED
O --- TREE TO REMAIN

HILLSBOROUGH COUNTY
PLANNING AND DEVELOPMENT MANAGEMENT DEPARTMENT
PROTECTIVE BARRIER REQUIREMENTS AND SPECIFICATIONS FOR EXISTING TREES TO REMAIN

PROTECTIVE BARRIERS ARE USED DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES TO PROTECT TREES AND NATURAL AREAS TO BE RETAINED ON A SITE.

PROTECTIVE BARRIERS MUST BE ERECTED AROUND TREES TO BE RETAINED WITHIN AN AREA WHERE LAND ALTERATION AND CONSTRUCTION ACTIVITIES WILL OCCUR AS WELL AS ALONG NATURAL AREAS WHERE SUCH AREAS ARE ADJACENT TO PERMITTED LAND ALTERATION OR CONSTRUCTION ACTIVITIES. A PROTECTIVE BARRIER MUST REMAIN IN PLACE UNTIL THE LAND ALTERATION AND CONSTRUCTION ACTIVITIES ARE COMPLETED OR UNTIL COMMENCEMENT OF GRADE FINISHING AND SODDING. NO GROUND DISTURBANCE MUST OCCUR WITHIN THE BARRICADED AREA. THE FOLLOWING REPRESENTS THE COUNTY'S MINIMUM PROTECTIVE BARRIER SPECIFICATIONS.

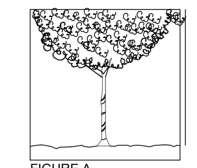


FIGURE A.

1. TREES - TO RESTRICT ACCESS INTO THE AREA WITHIN THE CANOPY DRIPLINE OF A TREE, A PHYSICAL STRUCTURE NOT LESS THAN 3 FEET IN HEIGHT, COMPRISED OF WOOD OR OTHER SUITABLE MATERIAL, IS PLACED AROUND THE TREE AT THE CANOPY DRIPLINE, EXCEPT WHERE LAND ALTERATION OR CONSTRUCTION ACTIVITIES ARE APPROVED WITHIN THE CANOPY DRIPLINE. SEE ORDINANCE 90-6, SEC. 4.B.3.M.

THE CANOPY DRIPLINE OF A TREE IS THE IMAGINARY, VERTICAL LINE THAT EXTENDS DOWNWARD FROM THE OUTERMOST TIPS OF THE TREE'S BRANCHES TO THE GROUND. FIG. A.

BARRIER SPECIFICATIONS FOR TREES:
FOUR CORNER UPRIGHT STAKES OF NO LESS THAN 2" X 2" LUMBER CONNECTED BY HORIZONTAL MEMBERS OF NO LESS THAN 1" X 4" LUMBER, OR UPRIGHT STAKES SPACED AT 5' INTERVALS OF NO LESS THAN 2" X 2" LUMBER CONNECTED BY A SILT SCREEN FABRIC OR MATERIAL OF COMPARABLE DURABILITY. FIG. B

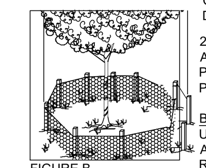


FIGURE B.

2. NATURAL AREAS - TO RESTRICT ACCESS INTO AREAS WHERE LAND ALTERATION AND CONSTRUCTION ACTIVITIES ARE NOT AUTHORIZED, A PHYSICAL STRUCTURE NOT LESS THAN 3 FEET IN HEIGHT IS PLACED ALONG THE PERIMETER OF SUCH AREAS.

BARRIER SPECIFICATIONS FOR NATURAL AREAS:
UPRIGHT STAKES OF NO LESS THAN 2" X 2" LUMBER SPACED NO MORE THAN 25' APART AND CONNECTED BY TWINE FLAGGED WITH PLASTIC SURVEYING TAPE AT REGULAR INTERVALS OF 5-10'. FIG. C. OTHER METHODS OF DEMARCATION WILL BE CONSIDERED DEPENDING UPON THE CHARACTERISTICS OF THE SITE.

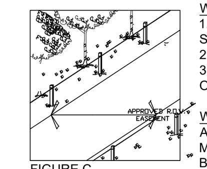
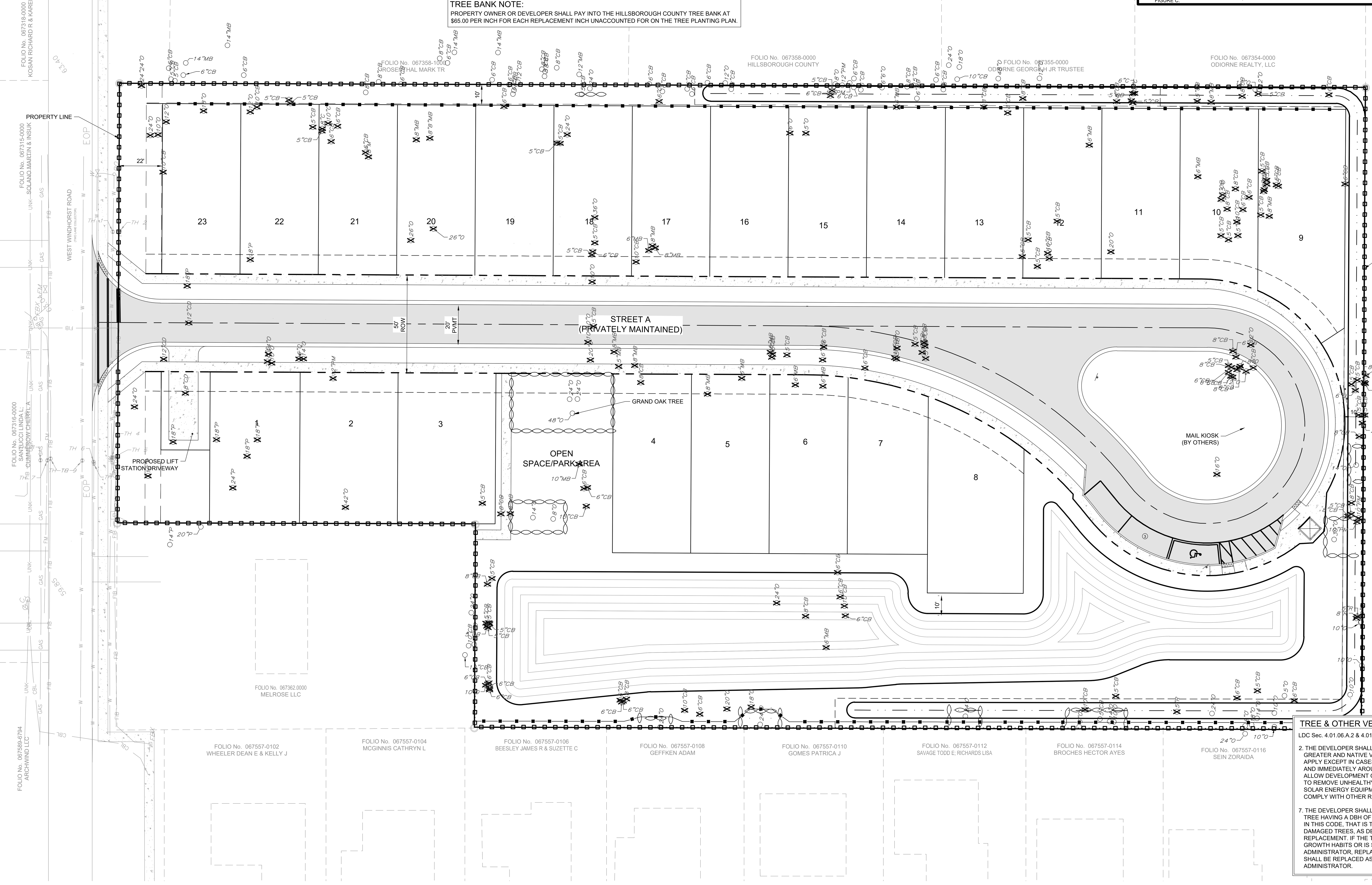


FIGURE C.

WHY A BARRIER
1. TO PROTECT ALL ABOVE GROUND PORTIONS OF TREES AND OTHER SIGNIFICANT VEGETATION FROM MECHANICAL DAMAGE.
2. TO PROTECT ROOT SYSTEMS FROM COMPACTION.
3. TO PROVIDE AWARENESS OF PROTECTED AREAS TO EQUIPMENT OPERATORS.

WHY IT WORKS:
A TREE'S CHANCE FOR SURVIVAL IS GREATLY ENHANCED IF NO CONSTRUCTION MATERIAL, HEAVY EQUIPMENT OR STOCKPILING OF SOIL IS ALLOWED INSIDE THE BARRIER, ONLY HAND LABOR.



LEGEND

- PROPERTY LINE
- RIGHT OF WAY LINE
- FEMA FLOOD LINE
- WETLAND LINE
- WETLAND SETBACK LINE
- EXISTING CONTOUR
- SILT FENCE
- TURBIDITY BARRIER

TREE & OTHER VEGETATION ~ DESIGN STANDARDS NOTES:

LDC Sec. 4.01.06.A.2 & 4.01.05.A.7

2. THE DEVELOPER SHALL PRESERVE ALL TREES HAVING A DBH OF FIVE INCHES OR GREATER AND NATIVE VEGETATION AS DESCRIBED BELOW. THIS PROVISION SHALL APPLY EXCEPT IN CASES WHERE REMOVAL IS NECESSARY TO ALLOW ACCESS TO AND IMMEDIATELY AROUND PROPOSED STRUCTURES OR OTHER IMPROVEMENTS, TO ALLOW DEVELOPMENT OF RECREATIONAL OPEN SPACE REQUIRING CLEARED AREAS, TO REMOVE UNHEALTHY OR DAMAGED VEGETATION, TO INSTALL A UTILITY OR SOLAR ENERGY EQUIPMENT THAT COULD NOT OTHERWISE BE INSTALLED, OR TO COMPLY WITH OTHER REGULATIONS OF HILLSBOROUGH COUNTY.

7. THE DEVELOPER SHALL BE REQUIRED TO REPLACE 50 PERCENT OF THE TOTAL DBH OF ANY TREE HAVING A DBH OF 24 INCHES OR GREATER OR ANY CLUMP OF TREES, AS DEFINED IN THIS CODE, THAT IS TO BE REMOVED FROM THE SITE. IRREPARABLY UNHEALTHY OR DAMAGED TREES, AS DETERMINED BY THE ADMINISTRATOR, SHALL NOT REQUIRE REPLACEMENT. IF THE TREE REMOVED IS A SPECIES WHICH EITHER HAS UNDESIRABLE GROWTH HABITS OR IS SUSCEPTIBLE TO FREEZE DAMAGE, AS DETERMINED BY THE ADMINISTRATOR, REPLACEMENT SHALL NOT BE REQUIRED. A GRAND OAK, HOWEVER, SHALL BE REPLACED AS INDICATED BELOW IF AUTHORIZED FOR REMOVAL BY THE ADMINISTRATOR.

LevelUp Consulting, LLC
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SCALE IN FEET

CONSTRUCTION PLAN REVISIONS		
1	05/18/23	REVISED PER COUNTY COMMENTS

WINDHORST COMMONS
CLIENT: HABITAT FOR HUMANITY
TREE REPLACEMENT PLAN

Engineering Business Certificate of Authorization No. 32771
Florida Certificate of Authorization No. LC26000638

REGISTERED LANDSCAPE ARCHITECT JAMES C. EISELE LA 6667529 STATE OF FLORIDA

JAMES C. EISELE
REGISTERED LANDSCAPE ARCHITECT
REGISTRATION NUMBER 6667529

PROJECT No. 194-01-02
SHEET L 1.0

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LANDSCAPE AREA NOTE:

PROJECT CONTAINS 47,231 SF OF LANDSCAPED AREA. SQUARE FOOTAGE OF SHALLOW-ROOTED TURF GRASS VARIETIES SHALL BE NO GREATER THAN 14,169 SF. THE REMAINDER OF THE LANDSCAPED AREA SHALL BE GROUND COVER, SHRUBS, MULCH, OR OTHER COUNTY APPROVED LANDSCAPE TREATMENT.

STREET TREE LOCATION & PLACEMENT NOTES:

STREET TREES SHALL COMPLY WITH HILLSBOROUGH COUNTY LDC 6.06.05.A. & LDC 6.06.05.C WHERE POSSIBLE.

SANITARY UTILITY EASEMENT NOTE:

NO TREES ARE TO BE PLANTED WITHIN THE 30-FOOT SANITARY SEWER UTILITY EASEMENT, AND NO TREES ARE TO BE PLANTED WITHIN 15 FEET OF A SANITARY SEWER LATERAL LINE.

UTILITY AND UTILITY SCREENING NOTES:

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TREE & OTHER VEGETATION ~ DESIGN STANDARDS NOTES:

LDC Sec. 4.01.06.A

- THE TREE REPLACEMENT INCHES ARE CALCULATED FOR TREES THAT DO NOT FALL WITHIN BUILDING ENVELOPE, AND IMMEDIATE ADJACENCY PER SECTION 4.01.06.A.2 (AS NOTED BELOW).
- TREES THAT WERE NOTED AS 24" OR LARGER THAT WERE REMOVED AND NOT GRAND OAKS ARE INDICATED AS BEING REPLACED 50% OF TOTAL INCHES REMOVED PER SECTION 4.01.06.A.7. (AS NOTED BELOW).
- GRAND OAKS ON THIS PROPERTY TO NOT EXCEED THE 48" THRESHOLD FOR REPLACEMENT BEYOND 1:1 AS PER SECTION 4.01.06 GRAND OAK REPLACEMENT RATIO TABLE.

LDC Sec. 4.01.06.A.2 & 4.01.05.A.7

2. THE DEVELOPER SHALL PRESERVE ALL TREES HAVING A DBH OF FIVE INCHES OR GREATER AND NATIVE VEGETATION AS DESCRIBED BELOW. THIS PROVISION SHALL APPLY EXCEPT IN CASES WHERE REMOVAL IS NECESSARY TO ALLOW ACCESS TO AND IMMEDIATELY AROUND PROPOSED STRUCTURES OR OTHER IMPROVEMENTS, TO ALLOW DEVELOPMENT OF RECREATIONAL OPEN SPACE REQUIRING CLEARED AREAS, TO REMOVE UNHEALTHY OR DAMAGED VEGETATION, TO INSTALL A UTILITY OR SOLAR ENERGY EQUIPMENT THAT COULD NOT OTHERWISE BE INSTALLED, OR TO COMPLY WITH OTHER REGULATIONS OF HILLSBOROUGH COUNTY.

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HILLSBOROUGH COUNTY
PLANNING AND DEVELOPMENT MANAGEMENT DEPARTMENT
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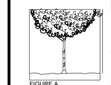


FIGURE A.

1. TREES - TO RESTRICT ACCESS INTO THE AREA WITHIN THE CANOPY DRIPLINE OF A TREE, A PHYSICAL STRUCTURE NOT LESS THAN 3 FEET IN HEIGHT, COMPRISED OF WOOD OR OTHER SUITABLE MATERIAL, IS PLACED AROUND THE TREE AT THE CANOPY DRIPLINE, EXCEPT WHERE LAND ALTERATION OR CONSTRUCTION ACTIVITIES ARE APPROVED WITHIN THE CANOPY DRIPLINE. SEE ORDINANCE 90-6, SEC. 4.B.3.M.

THE CANOPY DRIPLINE OF A TREE IS THE IMAGINARY, VERTICAL LINE THAT EXTENDS DOWNWARD FROM THE OUTERMOST TIPS OF THE TREE'S BRANCHES TO THE GROUND. FIG. A.

BARRIER SPECIFICATIONS FOR TREES:
FOUR CORNER UPRIGHT STAKES OF NO LESS THAN 2" X 2" LUMBER CONNECTED BY HORIZONTAL MEMBERS OF NO LESS THAN 1" X 4" LUMBER, OR UPRIGHT STAKES SPACED AT 5' INTERVALS OF NO LESS THAN 2" X 2" LUMBER CONNECTED BY A SILT SCREEN FABRIC OR MATERIAL OF COMPARABLE DURABILITY. FIG. B

FIGURE B.

2. NATURAL AREAS - TO RESTRICT ACCESS INTO AREAS WHERE LAND ALTERATION AND CONSTRUCTION ACTIVITIES ARE NOT AUTHORIZED, A PHYSICAL STRUCTURE NOT LESS THAN 3 FEET IN HEIGHT IS PLACED ALONG THE PERIMETER OF SUCH AREAS.

BARRIER SPECIFICATIONS FOR NATURAL AREAS:
UPRIGHT STAKES OF NO LESS THAN 2" X 2" LUMBER SPACED NO MORE THAN 25' APART AND CONNECTED BY TWINE FLAGGED WITH PLASTIC SURVEYING TAPE AT REGULAR INTERVALS OF 5-1/2'. FIG. C. OTHER METHODS OF DEMARCATION WILL BE CONSIDERED DEPENDING UPON THE CHARACTERISTICS OF THE SITE.

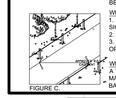


FIGURE C.

WHY A BARRIER
1. TO PROTECT ALL ABOVE GROUND PORTIONS OF TREES AND OTHER SIGNIFICANT VEGETATION FROM MECHANICAL DAMAGE.
2. TO PROTECT ROOT SYSTEMS FROM COMPACTION.
3. TO PROVIDE AWARENESS OF PROTECTED AREAS TO EQUIPMENT OPERATORS.

WHY IT WORKS:
A TREE'S CHANCE FOR SURVIVAL IS GREATLY ENHANCED IF NO CONSTRUCTION MATERIAL, HEAVY EQUIPMENT OR STOCKPILING OF SOIL IS ALLOWED INSIDE THE BARRIER, ONLY HAND LABOR.

8' URBAN SCENIC CORRIDOR BUFFER
1 STREET TREE PER 40 LINEAR FEET OF FRONTAGE- 174 L.F.
1 CANOPY TREE PER 50 LINEAR FEET OF FRONTAGE- 174 L.F.

	Required	Provided
STREET TREE	Yes	Yes
CANOPY TREE	Yes	Yes

EASTERN PROPERTY BUFFER
10' ~ TYPE "A" SCREENING - 604 L.F.

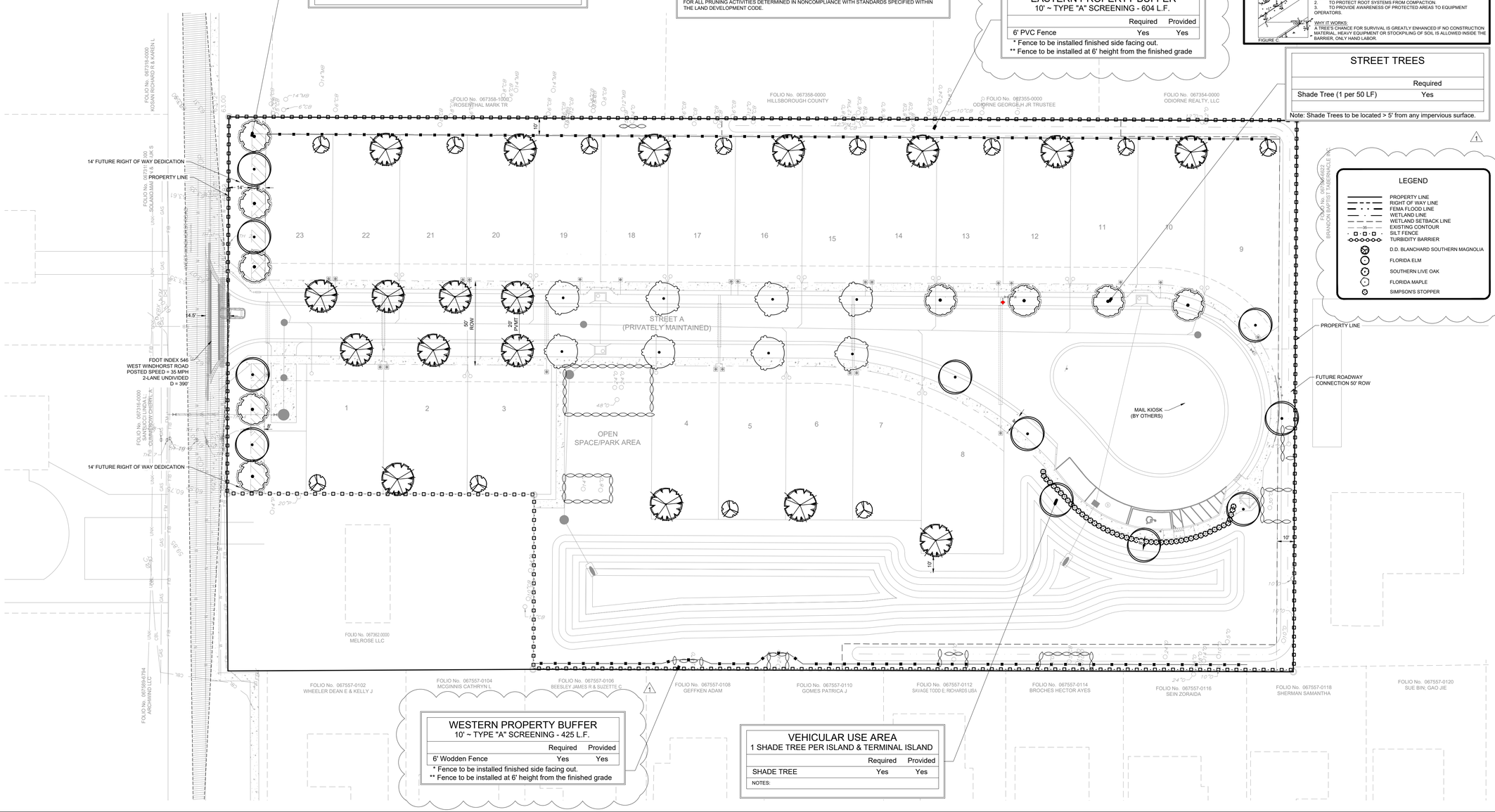
	Required	Provided
6' PVC Fence	Yes	Yes

* Fence to be installed finished side facing out.
** Fence to be installed at 6' height from the finished grade

STREET TREES

	Required
Shade Tree (1 per 50 LF)	Yes

Note: Shade Trees to be located > 5' from any impervious surface.



LEGEND

- PROPERTY LINE
- RIGHT OF WAY LINE
- FEMA FLOOD LINE
- WETLAND LINE
- WETLAND SETBACK LINE
- EXISTING CONTOUR
- SILT FENCE
- TURBIDITY BARRIER
- D.D. BLANCHARD SOUTHERN MAGNOLIA
- FLORIDA ELM
- SOUTHERN LIVE OAK
- FLORIDA MAPLE
- SIMPSON'S STOPPER

WESTERN PROPERTY BUFFER
10' ~ TYPE "A" SCREENING - 425 L.F.

	Required	Provided
6' Wodden Fence	Yes	Yes

* Fence to be installed finished side facing out.
** Fence to be installed at 6' height from the finished grade

VEHICULAR USE AREA
1 SHADE TREE PER ISLAND & TERMINAL ISLAND

	Required	Provided
SHADE TREE	Yes	Yes
NOTES:		

LEVELUP CONSULTING, LLC
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WWW.LEVELUPFLORIDA.COM

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SCALE IN FEET

CONSTRUCTION PLAN REVISIONS		
1	05/18/23	REVISED PER COUNTY COMMENTS

WINDHORST COMMONS

CLIENT: HABITAT FOR HUMANITY

LANDSCAPE PLAN

Engineering Business Certificate of Authorization No. 32771
Florida Certificate of Authorization No. LC26000638

REGISTERED LANDSCAPE ARCHITECT
JAMES C. EISELE
LA 6667529
STATE OF FLORIDA

JAMES C. EISELE
REGISTERED LANDSCAPE ARCHITECT
REGISTRATION NUMBER 6667529

PROJECT No.	194-01-02
SHEET	L 2.0

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LANDSCAPE AREA NOTE:

PROJECT CONTAINS 47,231 SF OF LANDSCAPED AREA, SQUARE FOOTAGE OF SHALLOW-ROOTED TURF GRASS VARIETIES SHALL BE NO GREATER THAN 14,169 SF. THE REMAINDER OF THE LANDSCAPED AREA SHALL BE GROUND COVER, SHRUBS, MULCH, OR OTHER COUNTY APPROVED LANDSCAPE TREATMENT.

STREET TREE LOCATION & PLACEMENT NOTES:

STREET TREES SHALL COMPLY WITH HILLSBOROUGH COUNTY LDC 6.06.05.A. & LDC 6.06.05.C WHERE POSSIBLE.

SANITARY UTILITY EASEMENT NOTE:

NO TREES ARE TO BE PLANTED WITHIN THE 30-FOOT SANITARY SEWER UTILITY EASEMENT, AND NO TREES ARE TO BE PLANTED WITHIN 15 FEET OF A SANITARY SEWER LATERAL LINE.

UTILITY AND UTILITY SCREENING NOTES:

THE CONSTRUCTION OF ALL ABOVE GROUND UTILITY APPURTENANCES VISIBLE FROM THE PUBLIC RIGHT-OF-WAY SUCH AS PEDESTALS, UTILITY METERS, TRANSFORMERS, BACK-FLOW PREVENTION DEVICES, ETC. FOR NEW DEVELOPMENT OR REDEVELOPMENT ACTIVITIES SHALL CONFORM TO SCREENING REQUIREMENTS AS OUTLINED IN SECTION 6.06.06.C.10 OF THE LAND DEVELOPMENT CODE. PLANT LOCATION OR OTHER SCREENING MUST BE CONSIDERATE OF REQUIRED SPATIAL SEPARATIONS FROM A FIRE FLOW PROTECTION APPLIANCE IN ACCORDANCE TO THE UNIFORM FIRE CODE, AND PER WATER, WASTEWATER AND RECLAIMED WATER TECHNICAL SPECIFICATIONS SPEC 331001, PART 2.6.4.2. MUST BE LOCATED A MINIMUM OF 5' FROM UTILITY SLABS AND 3' FROM UNDERGROUND VALVES. TREES MUST BE LOCATED A MINIMUM OF 8' FROM UTILITY SLABS.

FOR ABOVE GROUND UTILITY APPURTENANCES ILLUSTRATED ON THE PLANS, THE TYPE OF SCREENING MUST BE CLEARLY NOTED TO MATCH THE OVERALL HEIGHT FOR THE TYPE OF ABOVE GROUND UTILITY SPECIFIED ON THE PLANS. UTILIZATION OF EVERGREEN PLANT MATERIAL MUST BE DESCRIBED BY SPECIES, SPACING AND OVERALL HEIGHT FOR THE TYPE OF UTILITY TO BE SCREENED.

UTILIZATION OF OPAQUE FENCING OR OTHER SCREENING MATERIAL IS PERMITTED. THE METER ASSEMBLY MUST BE ACCESSIBLE BY BOOM TRUCK OFF A COUNTY RIGHT-OF-WAY OR AN INTERIOR PAVED ACCESS ROAD AT LEAST 12' IN WIDTH PER SPEC 331001, PART 2.6.4. DO NOT INSTALL ANY SCREENING THAT WILL HINDER ACCESS IN THE FUTURE TO THE METER ASSEMBLY FROM THE INTERIOR OF THE SITE.

TREE & OTHER VEGETATION ~ DESIGN STANDARDS NOTES:

LDC Sec. 4.01.06.A

- THE TREE REPLACEMENT INCHES ARE CALCULATED FOR TREES THAT DO NOT FALL WITHIN BUILDING ENVELOPE, AND IMMEDIATE ADJACENCY PER SECTION 4.01.06.A.2 (AS NOTED BELOW)
- TREES THAT WERE NOTED AS 24" OR LARGER THAT WERE REMOVED AND NOT GRAND OAKS ARE INDICATED AS BEING REPLACED 50% OF TOTAL INCHES REMOVED PER SECTION 4.01.06.A.7. (AS NOTED BELOW).
- GRAND OAKS ON THIS PROPERTY TO NOT EXCEED THE 48" THRESHOLD FOR REPLACEMENT BEYOND 1:1 AS PER SECTION 4.01.06 GRAND OAK REPLACEMENT RATIO TABLE.

LDC Sec. 4.01.06.A.2 & 4.01.05.A.7

2. THE DEVELOPER SHALL PRESERVE ALL TREES HAVING A DBH OF FIVE INCHES OR GREATER AND NATIVE VEGETATION AS DESCRIBED BELOW. THIS PROVISION SHALL APPLY EXCEPT IN CASES WHERE REMOVAL IS NECESSARY TO ALLOW ACCESS TO AND IMMEDIATELY AROUND PROPOSED STRUCTURES OR OTHER IMPROVEMENTS, TO ALLOW DEVELOPMENT OF RECREATIONAL OPEN SPACE REQUIRING CLEARED AREAS, TO REMOVE UNHEALTHY OR DAMAGED VEGETATION, TO INSTALL A UTILITY OR SOLAR ENERGY EQUIPMENT THAT COULD NOT OTHERWISE BE INSTALLED, OR TO COMPLY WITH OTHER REGULATIONS OF HILLSBOROUGH COUNTY.
7. THE DEVELOPER SHALL BE REQUIRED TO REPLACE 50 PERCENT OF THE TOTAL DBH OF ANY TREE HAVING A DBH OF 24 INCHES OR GREATER OR ANY CLUMP OF TREES, AS DEFINED IN THIS CODE, THAT IS TO BE REMOVED FROM THE SITE. IRREPARABLY UNHEALTHY OR DAMAGED TREES, AS DETERMINED BY THE ADMINISTRATOR, SHALL NOT REQUIRE REPLACEMENT. IF THE TREE REMOVED IS A SPECIES WHICH EITHER HAS UNDESIRABLE GROWTH HABITS OR IS SUSCEPTIBLE TO FREEZE DAMAGE, AS DETERMINED BY THE ADMINISTRATOR, REPLACEMENT SHALL NOT BE REQUIRED. A GRAND OAK, HOWEVER, SHALL BE REPLACED AS INDICATED BELOW IF AUTHORIZED FOR REMOVAL BY THE ADMINISTRATOR.

TREE NOTES:

PRUNING OF A GRAND OAK, WITH THE EXCEPTION OF MINOR PRUNING, IS PROHIBITED UNLESS CONDUCTED IN ACCORDANCE WITH THE ANSI-A-300 PRUNING STANDARDS, AND PERFORMED BY AN ARBORIST CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) OR A REGISTERED CONSULTING ARBORIST WITH THE AMERICAN SOCIETY OF CONSULTING ARBORISTS (ASCA). MINOR PRUNING IS THE PRUNING OF A TREE BY THE REMOVAL OF BRANCHES NO GREATER THAN THREE INCHES IN DIAMETER AT THE POINT OF CONNECTION TO A SUPPORTING BRANCH AND SHALL BE IN ACCORDANCE WITH THE ANSI A-300 PRUNING STANDARDS. A NOTARIZED AFFIDAVIT (ATTACHED) AFFIRMING AN ISA CERTIFIED ARBORIST OR AN ASCA REGISTERED CONSULTING ARBORIST WILL CONDUCT OR PROVIDE ONSITE SUPERVISION OF THE PRUNING SHALL BE SUBMITTED TO THE COUNTY PRIOR TO THE PRUNING OF A GRAND OAK. AN ISA CERTIFIED ARBORIST OR AN ASCA REGISTERED CONSULTING ARBORIST CONTRACTED BY A PROPERTY OWNER TO PRUNE A GRAND OAK SHALL ASSUME FULL RESPONSIBILITY FOR ALL PRUNING ACTIVITIES DETERMINED IN NONCOMPLIANCE WITH STANDARDS SPECIFIED WITHIN THE LAND DEVELOPMENT CODE.

LEGEND

- PROPERTY LINE
- RIGHT OF WAY LINE
- FEMA FLOOD LINE
- WETLAND LINE
- WETLAND SETBACK LINE
- 35 EXISTING CONTOUR
- SILT FENCE
- TURBIDITY BARRIER

IRRIGATION LEGEND

SYMBOL	DESCRIPTION
	DRIP/MICRO IRRIGATION

HILLSBOROUGH COUNTY
PLANNING AND DEVELOPMENT MANAGEMENT DEPARTMENT
PROTECTIVE BARRIER REQUIREMENTS AND SPECIFICATIONS FOR EXISTING TREES TO REMAIN

PROTECTIVE BARRIERS ARE USED DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES TO PROTECT TREES AND NATURAL AREAS TO BE RETAINED ON A SITE.

PROTECTIVE BARRIERS MUST BE ERECTED AROUND TREES TO BE RETAINED WITHIN AN AREA WHERE LAND ALTERATION AND CONSTRUCTION ACTIVITIES WILL OCCUR AS WELL AS ALONG NATURAL AREAS WHERE SUCH AREAS ARE ADJACENT TO PERMITTED LAND ALTERATION OR CONSTRUCTION ACTIVITIES. A PROTECTIVE BARRIER MUST REMAIN IN PLACE UNTIL THE LAND ALTERATION AND CONSTRUCTION ACTIVITIES ARE COMPLETED OR UNTIL COMMENCEMENT OF GRADE FINISHING AND SODDING. NO GROUND DISTURBANCE MUST OCCUR WITHIN THE BARRICADED AREA. THE FOLLOWING REPRESENTS THE COUNTY'S MINIMUM PROTECTIVE BARRIER SPECIFICATIONS.

FIGURE A.

1. TREES - TO RESTRICT ACCESS INTO THE AREA WITHIN THE CANOPY DRIPLINE OF A TREE, A PHYSICAL STRUCTURE NOT LESS THAN 3 FEET IN HEIGHT, COMPRISED OF WOOD OR OTHER SUITABLE MATERIAL, IS PLACED AROUND THE TREE AT THE CANOPY DRIPLINE, EXCEPT WHERE LAND ALTERATION OR CONSTRUCTION ACTIVITIES ARE APPROVED WITHIN THE CANOPY DRIPLINE. SEE ORDINANCE 90-6, SEC. 4.B.3.M.

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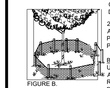

FIGURE B.

2. NATURAL AREAS - TO RESTRICT ACCESS INTO AREAS WHERE LAND ALTERATION AND CONSTRUCTION ACTIVITIES ARE NOT AUTHORIZED, A PHYSICAL STRUCTURE NOT LESS THAN 3 FEET IN HEIGHT IS PLACED ALONG THE PERIMETER OF SUCH AREAS.

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UPRIGHT STAKES OF NO LESS THAN 2" X 2" LUMBER SPACED NO MORE THAN 25' APART AND CONNECTED BY TWINE FLAGGED WITH PLASTIC SURVEYING TAPE AT REGULAR INTERVALS OF 5-10'. FIG. C. OTHER METHODS OF DEMARCATION WILL BE CONSIDERED DEPENDING UPON THE CHARACTERISTICS OF THE SITE.

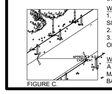

FIGURE C.

WHY A BARRIER
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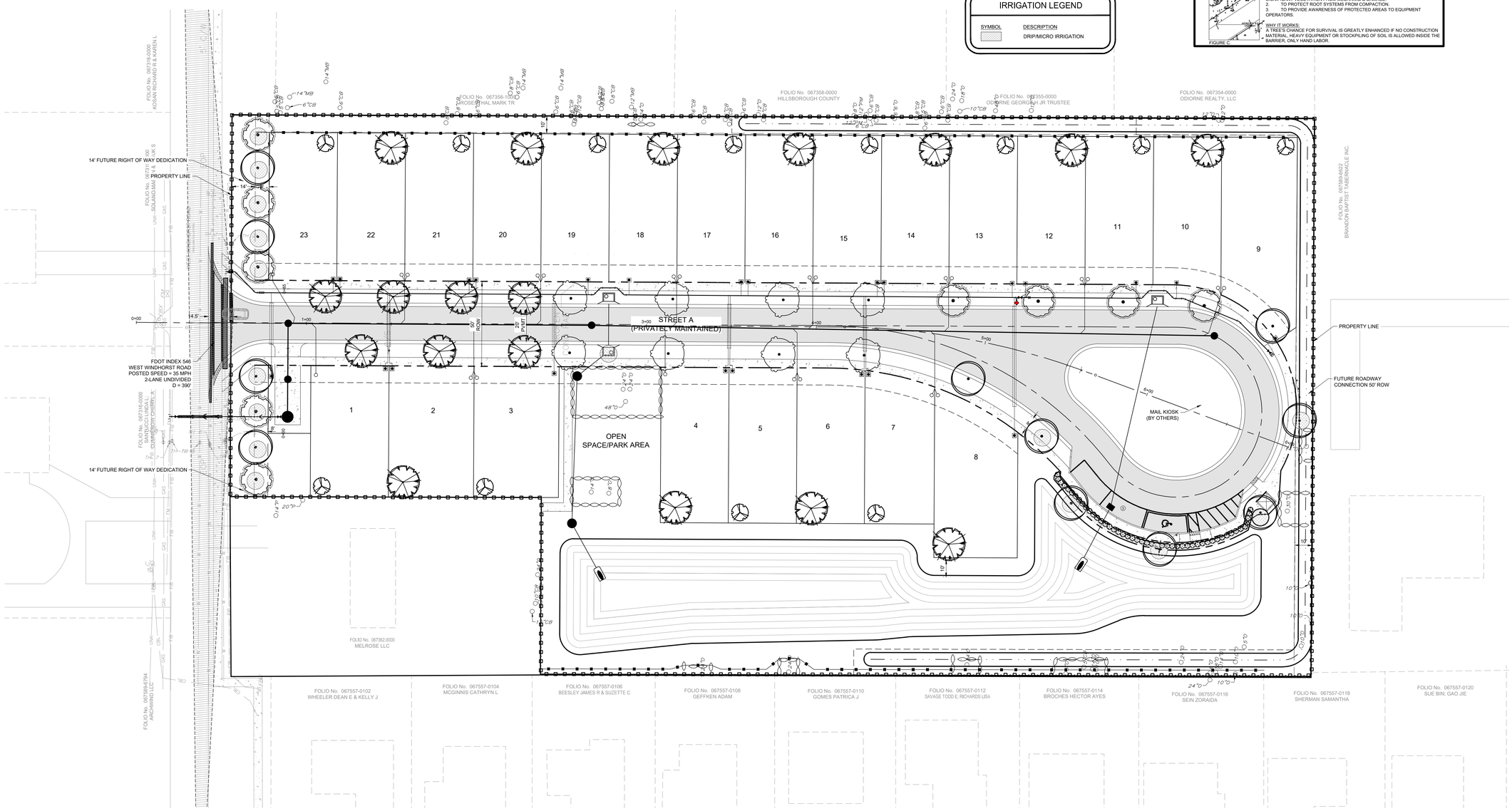

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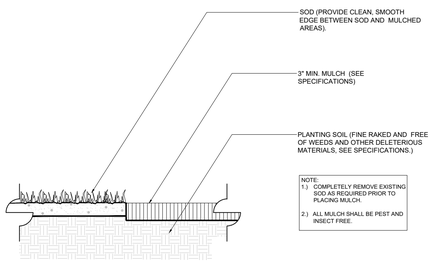

A MULCH APPLICATION

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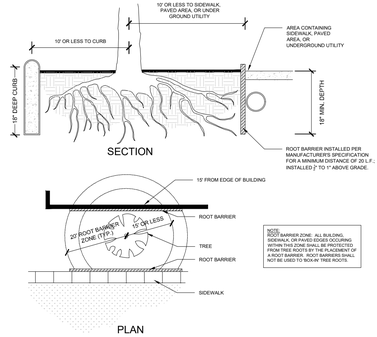

C ROOT BARRIER DETAIL

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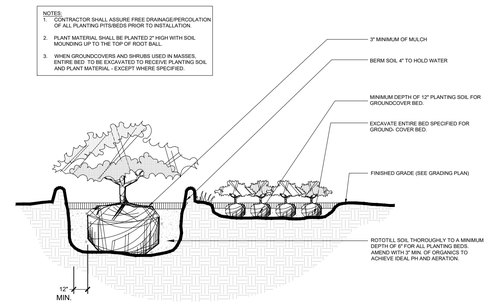

D SHRUB AND GROUNDCOVER INSTALLATION

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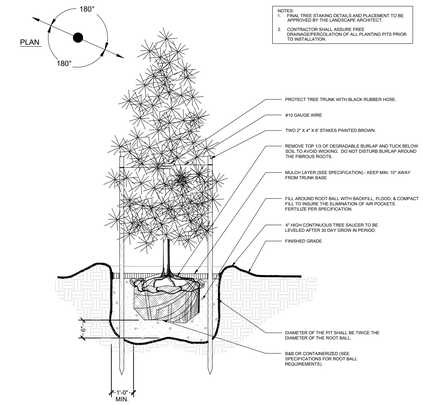

E SMALL TREE INSTALLATION

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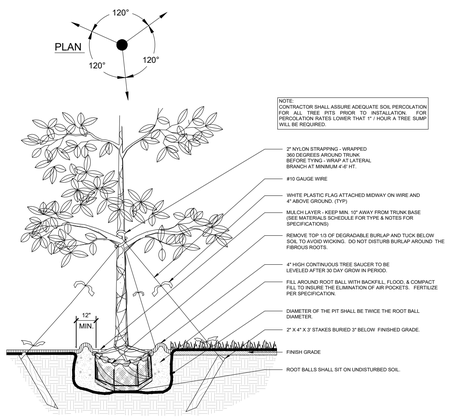

F LARGE TREE INSTALLATION & STAKING

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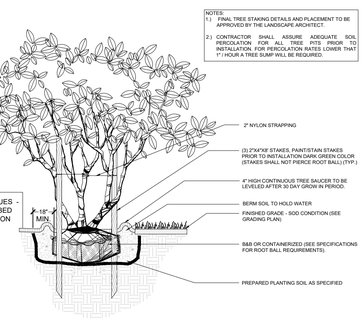

G MULTI-TRUNK TREE INSTALLATION & STAKING

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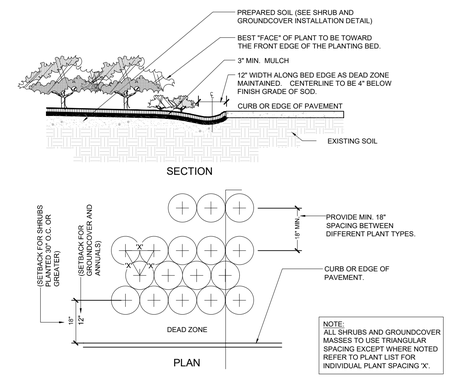

H TYPICAL PLANT SPACING DIAGRAM

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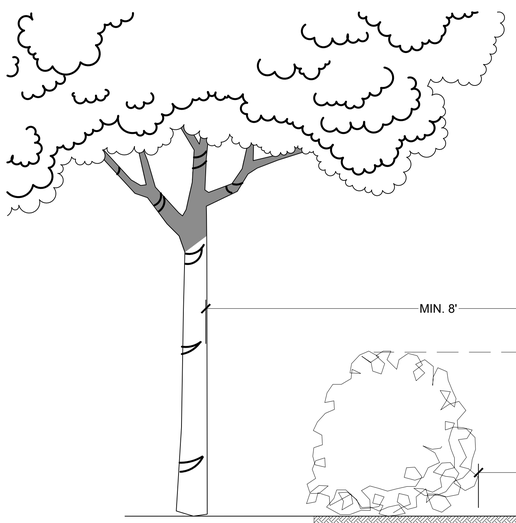
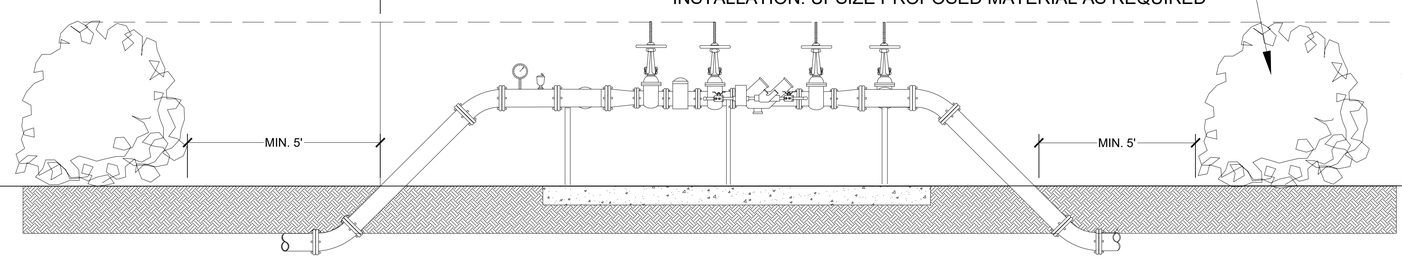


SCREENING SHRUBS SHALL MATCH HEIGHT OF UTILITY AT INSTALLATION. UPSIZE PROPOSED MATERIAL AS REQUIRED



NOTE:
1. CONTRACTOR SHALL ENSURE VEGETATION SCREENING OF ALL ABOVE GROUND APPURTENANCES MATCHES THE OVERALL HEIGHT FOR THE UTILITY TO BE SCREENED.
2. CONTRACTOR SHALL UPSIZE INSTALLED PLANT MATERIAL AS NEEDED TO MEET THIS SCREENING REQUIREMENT.

THE CONSTRUCTION OF ALL ABOVE GROUND UTILITY APPURTENANCES VISIBLE FROM THE PUBLIC RIGHT-OF-WAY SUCH AS PEDESTALS, UTILITY METERS, TRANSFORMERS, BACK-FLOW PREVENTION DEVICES, ETC. FOR NEW DEVELOPMENT OR REDEVELOPMENT ACTIVITIES SHALL CONFORM TO SCREENING REQUIREMENTS AS OUTLINED IN 6.06.06.C.10 OF THE LAND DEVELOPMENT CODE. PLANT SECTION LOCATION OR OTHER SCREENING MUST BE CONSIDERATE OF REQUIRED SPATIAL SEPARATIONS FROM A FIRE FLOW PROTECTION APPLIANCE IN ACCORDANCE TO THE UNIFORM FIRE CODE, AND PER WATER, WASTEWATER AND RECLAIMED WATER TECHNICAL SPECIFICATIONS SPEC 331001, PART 2.6.4.2, MUST BE LOCATED A MINIMUM OF 5' FROM UTILITY SLABS AND 3' FROM UNDERGROUND VALVES. TREES MUST BE LOCATED A MINIMUM OF 8' FROM UTILITY SLABS.

FOR ABOVE GROUND UTILITY APPURTENANCES ILLUSTRATED ON THE PLANS, THE TYPE OF SCREENING MUST BE CLEARLY NOTED TO MATCH THE OVERALL HEIGHT FOR THE TYPE OF ABOVE GROUND UTILITY SPECIFIED ON THE PLANS.

UTILIZATION OF EVERGREEN PLANT MATERIAL MUST BE DESCRIBED BY SPECIES, SPACING AND OVERALL HEIGHT FOR THE TYPE OF UTILITY TO BE SCREENED. UTILIZATION OF OPAQUE FENCING OR OTHER SCREENING MATERIAL IS PERMITTED. THE METER ASSEMBLY MUST BE ACCESSIBLE BY BOOM TRUCK OFF A COUNTY RIGHT-OF-WAY OR AN INTERIOR PAVED ACCESS ROAD AT LEAST 12' IN WIDTH PER SPEC 331001, PART 2.6.4. DO NOT INSTALL ANY SCREENING THAT WILL HINDER ACCESS IN THE FUTURE TO THE METER ASSEMBLY FROM THE INTERIOR OF THE SITE.

B UTILITY SCREENING DIAGRAM

SCALE: N.T.S.

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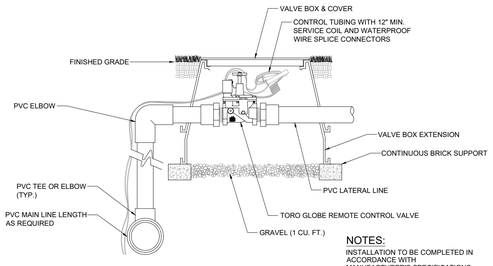
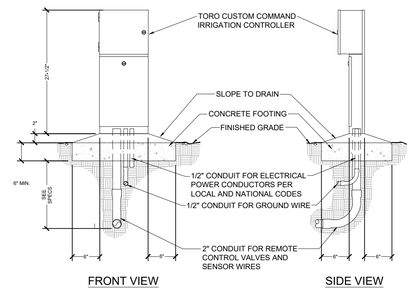


NOTES:
INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

A VALVE (TORO 220 SERIES SHOWN)

6" = 1'-0"

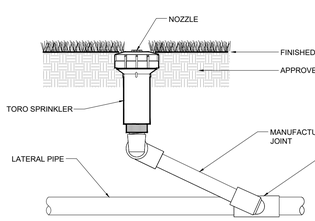


NOTE:
INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

B PEDESTAL-MOUNT CONTROLLER

6" = 1'-0"

328403-03

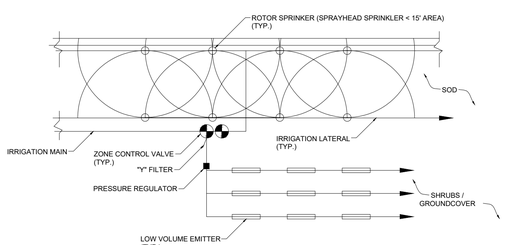


NOTES:
1.) INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2.) INSTALL SPRINKLER AT FINISHED GRADE.

C FIXED-SPRAY SPRINKLER

N.T.S.

328403-01



D TYPICAL IRRIGATION DETAIL

N.T.S.

328403-02

IRRIGATION NOTES:

1. ALL PROPOSED LANDSCAPING TO BE IRRIGATED BY A 100% AUTOMATIC SYSTEM.
2. IRRIGATION SYSTEM SHALL NOT BE INSTALLED THROUGH EXISTING PLANT COMMUNITIES.
3. IRRIGATION SPRINKLER ZONES TO BE SEPARATE FOR HIGH AND LOW WATER REQUIREMENT AREAS AND OPERATED ON DIFFERENT WATERING SCHEDULES.
4. IRRIGATION OVERTHROW TO NONPERVIOUS AND NATURAL AREA TO BE MINIMIZED.
5. A RAIN SHUT OFF TO BE INSTALLED WITH IRRIGATION CONTROLLER SYSTEM.
6. IRRIGATION PIPING TO BE LOCATED WITHIN PLANTING OR SOD AREAS WHEREVER FEASIBLE. PIPING UNDER ROADS TO BE INSTALLED WITHIN SCHEDULE 40 PVC SLEEVING.
7. ALL TREE, SHRUB AND GROUNDCOVER AREAS TO BE FULLY IRRIGATED WITH MICRO-IRRIGATION / LOW VOLUME EMITTERS. ALL SOD AREAS TO BE IRRIGATED WITH ROTOR OR SPRAY HEAD SPRINKLERS SPACED TO PROVIDE 75-100% COVERAGE.
8. A "Y" TYPE FILTER SHALL BE INSTALLED AT THE HEAD END OF LOW VOLUME LINES AND IN-LINE PRESSURE REGULATORS TO REDUCE PRESSURE TO NO MORE THAN 15 P.S.I. SHALL BE UTILIZED.
9. NON-POTABLE IRRIGATION LINES TO BE PURPLE IN COLOR.
10. IRRIGATION WATER SUPPLY TO BE PROVIDED BY THE LOWEST WATER QUALITY SOURCE AVAILABLE.
11. IRRIGATION AND PLANTINGS SHALL COMPLY WITH THE WATER EFFICIENT LANDSCAPE ORDINANCE.
12. THIS IRRIGATION PLAN IS SCHEMATIC AND IS FOR PERMITTING PURPOSES ONLY.
13. THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS, SHOWING ALL HEADS, VALVES, AND PIPE LINES TO SCALE AFTER COMPLETION OF PIPING INSTALLATION. THE OWNER SHALL PROVIDE INSTRUCTION· SHEETS AND PARTS LIST COVERING EQUIPMENT.
14. THE CONTRACTOR SHALL MAKE EVERY POSSIBLE EFFORT TO PRESERVE EXISTING PLANT MATERIAL THAT HAS BEEN TAGGED. WHERE SUCH MATERIALS FALLS IN THE PATH OF TRENCHING, THE CONTRACTOR SHALL REROUTE THE PIPE OR HAND TRENCH AS NECESSARY TO PROTECT THE DESIGNATED PLANT MATERIAL. THE CONTRACTOR MUST RESTORE ANY NEW PLANT MATERIAL OR SOD TO ITS ORIGINAL CONDITION IF IT IS DAMAGED BEFORE THE OWNER WILL GIVE FINAL ACCEPTANCE.
15. THE OWNER MUST APPROVE ANY SUBSTITUTION MADE.
16. ALL PIPE AND CONTROL LINES SHALL BE SLEEVED WITH SLEEVED SCHEDULE 40 PVC AND PLACED A MINIMUM OF 24" BELOW GRADE AND BACKFILLED WITH CLEAN SAND. NO ROCK IS TO BE IN CONTACT WITH THE PVC PIPE. THE CONTRACTOR SHALL PROVIDE MAGNETIC MARKERS AT EACH END OF THE SLEEVE. SLEEVE SHALL BE 4" MINIMUM.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING THE SYSTEM IN COMPLETE ACCORDANCE WITH ALL APPLICABLE CODES ORDINANCES AND LAWS. ANY MODIFICATIONS MADE TO CONFORM WITH SAID CODES, LAWS AND ORDINANCES SHALL BE COMPLETED AT THE CONTRACTORS EXPENSE AT NO ADDITIONAL COST TO THE CLIENT.
18. ALL CIRCUIT PIPE IS TO BE CLASS 160 PVC OR A HIGHER GRADE.
19. ALL MAIN FITTINGS SHALL BE REINFORCED WITH 2000-PSI POURED CONCRETE THRUST BLOCKS.
20. THE IRRIGATION CONTRACTOR IS FULLY RESPONSIBLE FOR THE WORK UNTIL THE OWNER GIVES FINAL ACCEPTANCE.
21. CONTRACTOR WILL GUARANTEE THE QUALITY OF HIS MATERIALS AND WORK FOR ONE (1) YEAR. THIS PERIOD BEGINS WITH THE FINAL ACCEPTANCE OF THE OWNER.
22. CONTRACTORS ARE EXPECTED TO PERSONALLY EXAMINE THE SITE AND FULLY ACQUAINT THEMSELVES WITH ALL OF THE EXISTING CONDITIONS SO THAT NO MISUNDERSTANDING MAY AFTERWARDS ARISE TO THE CHARACTER OR AS TO THE EXTENT OF THE WORK TO BE DONE. THIS WILL ALSO ENSURE THE CONTRACTOR WILL BE AWARE OF WHAT PRECAUTIONS NEED TO BE TAKEN TO AVOID INJURY TO PEOPLE OR DAMAGE TO PROPERTY.
23. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A COMPLETE AND OPERABLE SYSTEM FOR THE IRRIGATION OF ALL LANDSCAPE PLANTING ON SITE. PLANS AND SPECIFICATIONS MAY NOT INDICATE ALL ITEMS NECESSARY FOR THE PROPER IRRIGATION OF THE PROJECT AND THE CONTRACTOR HOLDS THE RESPONSIBILITY FOR FURNISHING LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR A COMPLETE AND PROPER PROJECT EVEN IF NOT IN THE INITIAL SPECIFICATIONS.
24. ALL IRRIGATION WATER MAINS SHALL BE SEPARATED FROM WATER MAINS BY A MINIMUM HORIZONTAL DISTANCE OF SIX (6') FEET MEASURED EDGE TO EDGE AND A VERTICAL DISTANCE OF TWELVE INCHES (12") BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE. WHERE MINIMUM SEPARATION CANNOT BE MAINTAINED, SEE CROSSOVER DETAIL REQUIREMENTS IN THE DETAIL SHEETS.

NOTE:
CONTRACTOR SHALL ASSURE ADEQUATE SOIL PERCOLATION FOR ALL TREE PITS PRIOR TO INSTALLATION. FOR PERCOLATION RATES LOWER THAT 1" / HOUR A TREE SUMP WILL BE REQUIRED.

HILLSBOROUGH COUNTY IRRIGATION NOTES:

1. IRRIGATION ZONES DELINEATED AS MICRO-IRRIGATION OR WITH IRRIGATION TECHNIQUES OTHER THAN MICRO-IRRIGATION.
2. TURF AREAS ARE ON SEPARATE IRRIGATION ZONES FROM OTHER LANDSCAPE PLANT ZONES.
3. IRRIGATION SPRAYS AND ROTORS ARE NOT COMBINED ON THE SAME CONTROL VALVE CIRCUIT.
4. SPRAY AND ROTORS HAVE MATCHING APPLICATION RATES WITHIN EACH IRRIGATION ZONE.
5. IRRIGATION SYSTEM AVOIDS OVER-SPRAY AND RUNOFF ONTO WALKWAYS, ROADWAYS, STRUCTURES OR OTHER NON-LANDSCAPED AREAS
6. FOUR FEET WIDE OR LESS LANDSCAPE AREAS CONTAIN MICRO-IRRIGATION ONLY.
7. SPRINKLER SPACING DOES NOT EXCEED 55% OF THE SPRINKLER'S DIAMETER OF COVERAGE.
8. IRRIGATION CONTROL EQUIPMENT CONTAINS AN AUTOMATIC IRRIGATION CONTROLLER WITH PROGRAM FLEXIBILITY UNLESS MECHANICAL. THE AUTOMATIC IRRIGATION CONTROLLER CONTAINS A BATTERY BACK UP TO RETAIN IRRIGATION PROGRAMS.
9. EACH LOT TO PROVIDE AN OPERABLE RAIN SENSOR DEVICE EXPOSED TO UNOBSTRUCTED RAINFALL

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SCALE IN FEET

CONSTRUCTION PLAN REVISIONS

1	05/18/23	REVISED PER COUNTY COMMENTS

WINDHORST COMMONS

CLIENT: HABITAT FOR HUMANITY

IRRIGATION DETAILS

Engineering Business Certificate of Authorization No. 32771
Florida Certificate of Authorization No. LC26000638

REGISTERED LANDSCAPE ARCHITECT
JAMES C. EISELE
LA 6667529
STATE OF FLORIDA

JAMES C. EISELE
REGISTERED LANDSCAPE ARCHITECT
REGISTRATION NUMBER 6667529

PROJECT No. 194-01-02

SHEET L 5.0

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PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER TYPE	HEIGHT	SPECIFICATION	DIVERSITY
	8	Acer floridanum	Florida Maple	3" D.B.H.		10` Ht.	Florida No.1 or better	17%
	12	Lot Understory Tree	Lot Understory Tree	1" D.B.H.		6` Ht.	Florida No.1 or better	
	18	Magnolia grandiflora `D.D. Blanchard`	D.D. Blanchard Southern Magnolia	3" D.B.H.		10` Ht.	Full to Ground, Florida No. 1 or better	39%
	9	Quercus virginiana	Southern Live Oak	3" D.B.H.		10` Ht.	Florida No. 1 or better	20%
	11	Ulmus americana floridana	Florida Elm	3" D.B.H.		10` Ht.	Florida No.1 or better	24%

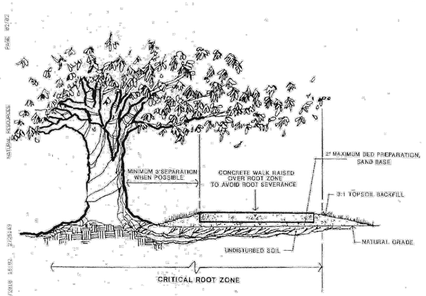
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	HEIGHT	SPACING
	48	Myrcianthes fragrans	Simpson's Stopper	3 gal.	Pot	36" Ht. Min	36" o.c.

WINDHORST COMMONS BLANKET LAL CHART - LOTS WITHOUT TREES

Lot #	Lot SF	Required Lot Tree	Provided Lot Tree	Lot Street Frontage	Required Street Tree	Provided Street Tree
1	3,555	1	1	46	1	1
2	3,863	1	1	50	1	1
3	3,861	1	1	50	1	1
4	3,651	1	1	40	1	1
5	3,657	1	1	40	1	1
6	3,637	1	1	41	1	1
7	3,522	1	1	42	1	1
8	4,326	1	1	55	1	1
9	4,761	1	1	42	1	1
10	3,531	1	1	41	1	1
11	3,480	1	1	40	1	1
12	3,480	1	1	40	1	1
13	3,480	1	1	40	1	1
14	3,480	1	1	40	1	1
15	3,480	1	1	40	1	1
16	3,480	1	1	40	1	1
17	3,480	1	1	40	1	1
18	3,480	1	1	40	1	1
19	3,480	1	1	40	1	1
20	3,480	1	1	40	1	1
21	3,480	1	1	40	1	1
22	3,480	1	1	40	1	1
23	3,480	1	1	40	1	1
Total		23	23		23	23
Grand Total						46

MISCELLANEOUS

QUANTITY	BOTANICAL NAME	COMMON NAME	SPECIFICATION
TBD	IRRIGATION		100% HEAD TO HEAD IN TURF AREAS, MICRO DRIP EMITTERS FOR ALL PLANTINGS
TBD	BAHIA SOD	BAHIA SOD	TO BE FIELD VERIFIED BY CONTRACTOR. (AREA IS FOR COMMON SPACE ONLY)
TBD	ST. AUGUSTINE SOD	ST. AUGUSTINE SOD	TO BE FIELD VERIFIED BY CONTRACTOR. (AREA IS FOR COMMON SPACE ONLY)
TBD	MULCH	PINE STRAW MULCH	MIN. 3" THICK



CONCRETE WALK OVER CRITICAL ROOT ZONE DETAIL NO SCALE

NOTE:

GROUPED PLANT SYMBOLS SHOWN ARE REPRESENTATIVE OF GENERAL TREE AND SHRUB REQUIREMENTS. ALL SUBSTITUTIONS MADE TO FOLLOW LOCAL COUNTY CODE.

TREE PLANTING NOTES:

1. ALL TREES SHALL BE GUARANTEED FOR TWO YEARS FROM DATE OF COUNTY ACCEPTANCE
2. EACH TREE SHALL RECEIVE SIX "AGRIFORM" 21 GRAM TABLETS PER MANUFACTURER'S DIRECTIONS.
3. FLEXIBILITY SHALL BE GIVEN TO THE PLACEMENT OF STREET TREES TO ACCOMMODATE IMPROVEMENTS SUCH AS DRIVEWAYS, UTILITIES, LIGHTING, ETC
4. STREET TREE SHALL HAVE A MINIMUM CLEARANCE OF 15' FROM STREET LIGHTS. SHALL NOT BE INSTALLED WITHIN 10 FT. OF ANY ABOVE GROUND UTILITY OR WITHIN 30 FT. OF THE FACE OF A STOP SIGN
5. STREET TREE PLANTINGS IN "COMMON TRACTS" TO BE INSTALLED PRIOR TO AS-BUILT INSPECTION
6. TREE PLANTING SHALL INCLUDE ROOT BARRIER PROTECTION TO PREVENT ROOT GROWTH INTO UTILITIES, DRAINAGE, SIDEWALKS AND OTHER PAVED AREAS.
7. APPLY A 3" LAYER OF MULCH LAYER TO ALL PROPOSED TREE, SHRUB, GROUND COVER AND VINE PLANTINGS
8. ALL TRIMMING UNDERTAKEN ON A TREE PROTECTED BY THE PROVISIONS OF THE LAND DEVELOPMENT CODE SHALL BE IN ACCORDANCE WITH THE AMERICAN NATIONAL STANDARD INSTITUTE (ANSI) A-300 PRUNING STANDARDS.

GENERAL NOTES:

1. NO REFERENCE TO ENGINEERING SHOULD BE MADE FROM THIS SHEET. FOR LANDSCAPE REFERENCE ONLY.
2. ANY DEVIATION FROM PLANT QUANTITY, SIZE OR GRADE MAY JEOPARDIZE THE CERTIFICATE OF OCCUPANCY.
3. THE HEALTHY, NEAT, AND ORDERLY APPEARANCE OF ALL REQUIRED LANDSCAPING MATERIALS IS THE CONTINUAL RESPONSIBILITY OF THE PROPERTY OWNER.
4. SLOPES 4:1 OR GREATER SHALL REQUIRE SODDING FOR STABILIZATION.
5. CONTRACTOR SHALL VERIFY ALL FINAL TREE LOCATIONS IN REGARD TO CONFLICTS SUCH AS UTILITIES, DRAINAGE, ETC.
6. IN ORDER TO COMPLY WITH SECTION 4.01.05.A OF THE HILLSBOROUGH COUNTY LAND DEVELOPMENT CODE TO MINIMIZE SOIL EROSION PROPOSED LAND ALTERATION ACTIVITIES SHALL NOT UNNECESSARILY REMOVE EXISTING VEGETATION AND ALTER EXISTING TOPOGRAPHY. ADEQUATE PROTECTION MEASURES (IE. HAY BALES, BAFFLES, SODDING AND SANDBAGGING) SAHLL BE PROVIDED, AS NECESSARY, TO MINIMIZE EROSION AND DOWNSTREAM SEDIMENTATION CAUSED BY SURFACE WATER RUN-OFF ON EXPOSED LAND SURFACES.
7. ANY AREAS SUBJECT TO EROSION MUST BE ADEQUATELY STABILIZED WITH VEGETATIVE MATERIAL THAT WILL, WITHIN A REASONABLE TIME FRAME, DETER SOIL DISTURBANCE. SODDING, PLUGGING, SPRIGGING OR SEEDING IS ACCEPTABLE FOR STABILIZATION; HOWEVER, SODDING MAY BE REQUIRED IN AREAS OF EROSION-PRONE SOILS OR WHERE SLOPES ARE GREATER THAN 5:1. VEGETATION OTHER THAN GRASS IS ACCEPTABLE UNLESS OTHERWISE SPECIFIED.
8. FOR COMMERCIAL SITE DEVELOPMENT PROJECTS, NO MORE THAN 50% OF THE LANDSCAPED AREA MAY BE PLANTED WITH SHALLOW-ROOTED (I.E., ST. AUGUSTINE) TURF GRASS VARIETIES. THESE TURF GRASS VARIETIES SHALL BE CONSOLIDATED IN AND LIMITED TO AREAS THAT ARE PROVIDED WITH CENTRAL AUTOMATIC IRRIGATION SYSTEMS.

GENERAL LANDSCAPE NOTES:

1. ALL PLANT MATERIAL TO BE FLORIDA GRADE # 1 OR BETTER, AS DEFINED IN "GRADES AND STANDARDS FOR NURSERY PLANTS", STATE OF FLORIDA DEPT. OF AGRICULTURE.
2. ALL SIZES SHOWN FOR PLANT MATERIAL ON THE PLAN ARE TO BE CONSIDERED MINIMUM. ALL PLANT MATERIAL MUST MEET OR EXCEED THESE MINIMUM REQUIREMENTS FOR BOTH HEIGHT AND SPREAD. ANY OTHER REQUIREMENTS FOR SPECIFIC SHAPE OR EFFECT AS NOTED ON THE PLAN SHALL ALSO BE REQUIRED FOR ACCEPTANCE. ALL TREES TO BE SINGLE TRUNKED, UNLESS OTHERWISE NOTED ON PLANS.
3. MINIMUM THREE-INCH (3") THICK LAYER OF MULCH SHALL BE PLACED AROUND ALL NEW PLANT MATERIAL AND BARE GROUND THAT WILL NOT BE COVERED BY EXISTING VEGETATION, SOD, GRAVEL, PAVEMENT OR ANY OTHER GROUND COVER TREATMENT.
4. ALL TREES TO BE HEALTHY, FULL SPECIMEN TYPES. ALL PALMS TO BE SUN GROWN.
5. ALL PLANTING BED AREAS TO HAVE 6" OF DARK, FRIABLE TOP SOIL OR BED MIXED CHURNED INTO EXISTING SOIL.
6. NEW PLANT MATERIAL TO BE INSTALLED WILL BE FIELD ADJUSTED TO ACCOMMODATE EXISTING PLANT MATERIAL SUCH AS OVERHEAD CANOPY TREES, UNDERSTORY TREES AND SHRUBS OR GROUND COVER. THIS WILL INSURE EXISTING PLANT MATERIAL TO REMAIN IN ITS NATURAL STATE. THEREFORE, NO EXISTING PLANT MATERIAL WILL BE ALTERED BY REMOVING, CUTTING TRIMMING OR DESTROYING IN ORDER TO INSTALL NEW PLANT MATERIAL.
7. ALL TREE STAKING TO BE DONE USING ARBOR TAPE AND THE DUCKBILL ANCHOR SYSTEM.
8. ALL LANDSCAPED AREAS TO BE IRRIGATED WITH A FULLY AUTOMATED IRRIGATION SYSTEM.
9. ALL TREES SHALL BE LOCATED AT LEAST SIX FEET AWAY FROM THE FLOWLINE OF PERIMETER PROPERTY SWALES AND PROPOSED STORMWATER INLETS.

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