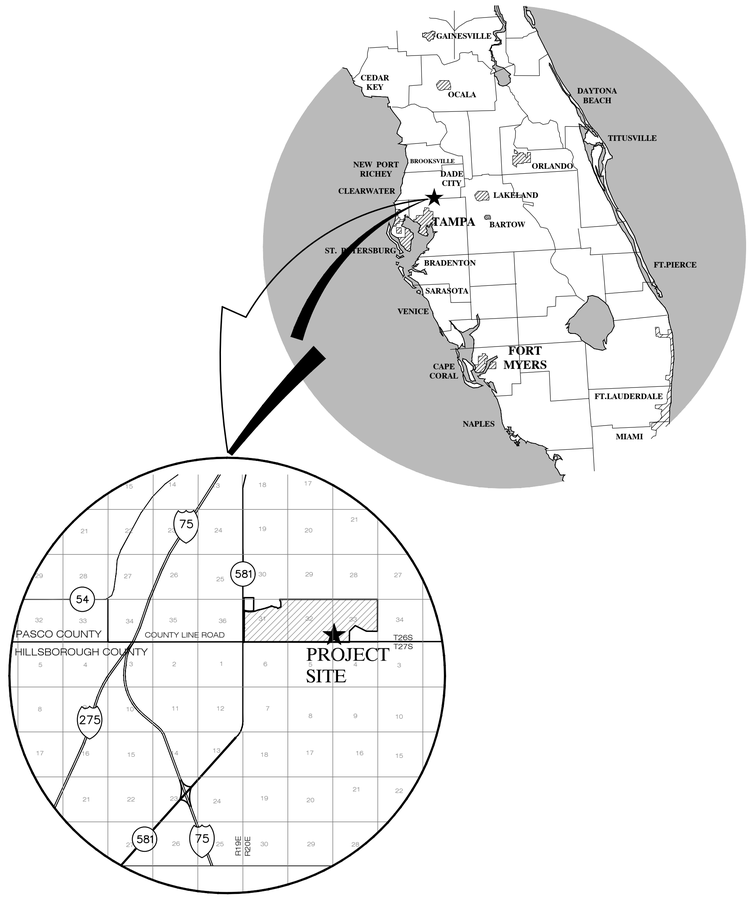
ANAND VIHAR
Redevelopment of Meadow Pointe Tract 14 Unit 3

Preliminary Development Plan / Construction Plans



VICINITY MAP
PASCO COUNTY, FLORIDA
SECTIONS 32 & 33, TOWNSHIP 26 SOUTH, RANGE 20 EAST

LEGAL DESCRIPTION:

MEADOW POINTE PARCEL 14 - UNIT 3

DESCRIPTION: A parcel of land lying in the Southeast 1/4 of Section 32, Township 26 South, Range 20 East, and the Southwest 1/4 of Section 33, Township 26 South, Range 20, Pasco County, Florida, and being more particularly described as follows:

BEGINNING at the Southeast corner of Section 32, Township 26 South, Range 20 East, Pasco County, Florida and run thence N.89°50'36"W., 1314.55 feet along the South boundary of the Southeast 1/4 of said Section 32 to the Southeast corner of MEADOW POINTE PARCEL 8 UNIT 7, according to the plat thereof as recorded in Plat Book 36, Pages 1 through 5, inclusive, Public Records of Pasco County, Florida; thence N.23°00'00"W., 948.32 feet along the Easterly boundary of said plat of MEADOW POINTE PARCEL 8 UNIT 7 to the Southwest corner of MEADOW POINTE PARCEL 11 UNIT 2, according to the plat thereof as recorded in Plat Book 36, Pages 85 through 89, inclusive, Public Records of Pasco County, Florida; thence along the Southeasterly boundary of said plat of MEADOW POINTE PARCEL 11 UNIT 2, the following three (3) courses: 1) N.67°00'00"E., 557.98 feet; 2) N.67°04'53"E., 456.36 feet; 3) N.28°00'00"E., 101.04 feet to the Southwest corner of MEADOW POINTE PARCEL 14 UNIT 1, according to the plat thereof as recorded in Plat Book 36, pages 101 through 105, inclusive, Public Records of Pasco County, Florida; thence along the Southerly boundary of said plat of MEADOW POINTE PARCEL 11 UNIT 1, the following six (6) courses: 1) S.83°40'26"E., 861.59 feet; 2) S.49°45'05"E., 25.42 feet; 3) S.65°46'46" E., 36.32 feet; 4) S.50°20'14"E., 44.10 feet; 5) S.79°30'44"E., 39.95 feet; 6) S.74°40'18"E., 78.60 feet to a point on a curve on the Westerly right-of-way line of Mansfield Boulevard as recorded in O.R. Book 4594, page 415, Public Records of Pasco County, Florida; thence along the Westerly right-of-way line of said Mansfield Boulevard, the following four (4) courses: 1) Southerly, 159.81 feet along the arc of a curve to the right having a radius of 1960.00 feet and a central angle of 04°40'18" (chord bearing S.17°39'51"W., 159.76 feet) to a point of tangency; 2) S.20°00'00"W., 300.00 feet to a point of curvature; 3) Southerly, 541.05 feet along the arc of a curve to the left having a radius of 1240.00 feet and a central angle of 25°00'00" (chord bearing S.07°30'00"W., 536.77 feet) to a point of tangency; 4) S.05°00'00"E., 213.85 feet to the South boundary of the aforesaid Section 33, Township 26 South, Range 20 East; thence along the South boundary of the Southwest 1/4 of said Section 33, N.89°52'26"W., 151.70 feet to the POINT OF BEGINNING.

Containing 47.844 acres, more or less.

INDEX OF CONSTRUCTION PLANS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES
3	PRELIMINARY DEVELOPMENT PLAN
4–7	DEMOLITION PLAN
8–11	GRADING & DRAINAGE PLAN
12–14	PAVEMENT & DRAINAGE DETAILS
15–18	WATER & SEWER PLAN
19	POTABLE WATER SYSTEM DETAILS
20	SANITARY SEWER SYSTEM DETAILS
	LANDSCAPE PLANS
	SIGNING & PAVEMENT MARKING PLAN

PERMIT / FILE NOS.	
SITE ADDRESS	
WATER COMMITMENT	
SEWER COMMITMENT	
SWFWMD	
WATER DEP	
SEWER DEP	
PARCEL ID NO.	
RELATED PASCO COUNTY APPROVAL NUMBERS	

CALL 48 HOURS BEFORE YOU DIG
IT'S THE LAW! DIAL 811
811 Know what's below. Call before you dig.
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

ANAND VIHAR

Prepared For:

Anand Vihar, LLC,
a Delaware LLC

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DAVID G. FUXAN LICENSED No. 33133 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE	SHEET NO.	BY
REVISIONS		

Fuxan Engineering, Inc.
15018 Maurine Cove Ln.
Odessa, Florida 33556
Phone: 813-244-6194
email: dfuxan@fuxaneng.com
Engineering Business Certificate of Authorization No.: 26548

DAVID G. FUXAN FLORIDA PROFESSIONAL ENGINEER 33133

DATE: DECEMBER 18, 2015 JOB NO. 2015–MP–01

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.83 Feet

DESIGNED BY: FUXAN DRAWN BY: SOMERVILLE

FILE: CV

STORM WATER POLLUTION PREVENTION PLAN

Contained on these plans and within the following notes is a Storm Water Pollution Prevention Plan (SWPPP) which has been developed by Fuxan Engineering, Inc. in accordance with the Florida Department of Environmental Protection's (FDEP) "National Pollutant Discharge Elimination System" (NPDES) Generic Permit for Stormwater Discharge from Large and Small Construction Activities.

The following entities are identified as team members of "SWPPP": Fuxan Engineering, Inc., the Developer as identified in the title box of these plans, and the site contractor and his sub-contractors. Each team member has specific responsibilities and obligations. In general, all team members, with regard to their involvement and responsibilities on the project, are to implement all necessary storm water management controls to assure compliance with the NPDES Generic Permit for Storm Water Discharges from Construction Activities, the Southwest Florida Water Management District Permit, the applicable local governing agency (i.e. Hillsborough County, City of Tampa, etc) and the guidelines listed in the SWPPP. The duties and responsibilities of the team members as they pertain to the SWPPP are as follows:

Fuxan Engineering, Inc.

A. Develop SWPPP including, but not limited to, retention/detention ponds, control structures, erosion control methods and locations and stabilization criteria. This design is included within these construction plans and the following notes and instructions.

B. Submit and obtain the necessary design related storm water permits from the Florida Department of Environmental Protection, the Southwest Florida Water Management District and other applicable governmental bodies.

C. Upon notification by the developer of his intent to commence construction, submit a Notice of Intent to the FDEP on behalf of the developer and copy the contractor including SWPPP certification and copy of the permit.

D. Submit to SWFWMD and the operator of the municipal separate storm water system, if applicable, a letter of construction commencement.

E. Complete and submit a Notice of Termination and certification for developer. The NOT's shall be submitted no more than 30 days after
(a) completion of the project and final stabilization of the site or
(b) when responsibility for the site has ended. Final stabilization as defined by EPA is when all soil disturbing activities at the site have been completed and a uniform (e.g. evenly distributed, without large bare areas) perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures. As an alternative, equivalent permanent stabilization measures (such as riprap, gabions, or geotextiles) may be employed. The client shall notify Fuxan Engineering, Inc. when one of these criteria has been met.

Contractor

A. Sign and return to Fuxan a Contractractors Certification Form certifying your understanding of and willingness to comply with the Storm Water Pollution Prevention Plan no later than 48 hours prior to commencement of construction. Also, each subcontractor affected by the SWPPP must certify to the contractor that they understand and shall comply with the NPDES permit and SWPPP. A record of these certifications shall be maintained by the contractor on site.

B. During construction, assure compliance with the designed Storm Water Pollution Prevention Plans prepared by Fuxan Engineering, Inc. and the NPDES Generic Permit for Storm Water Discharges from Large and Small Construction Activities.

C. Maintain a copy of the construction plans, which include the Storm Water Pollution Prevention Plan,the NOI, and all inspection reports and certifications on site.

D. Undertake all reasonable Best Management Practices (BMP's) to assure that silted or otherwise polluted storm water is not allowed to discharge from the site during all phases of construction. Stabilization BMP's that may be used include: temporary or permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees and preservation of mature vegetation. Structural erosion and sediment control BMP's that may be used include: straw bale dikes, silt fences, earth dikes, brush barriers, drainage swales, check dams, subsurface drain, pipe slope drain, level spreaders, storm drain inlet protection, outlet protection, sediment traps, and temporary sediment basins. Detention ponds may also be used as temporary sediment basins. Additional BMP's that may need to be implemented include: providing protected storage areas for chemicals, paints, solvents, fertilizers, and other potentially toxic materials. Providing waste receptacles at convenient locations and providing regular collection of wastes, including building material wastes. Minimizing off-site tracking of sediments. Making adequate preparations, including training and equipment to contain spills of oil and hazardous materials. Complying with applicable state or local waste disposal, sanitary sewer or septic system regulations and the use of appropriate pollution prevention measures for allowable non-storm water components of discharge.

E. Notify Fuxan Engineering, Inc. and the developer in writing of any non-storm water pollution sources which are being stored, or otherwise used during the construction of the project, i.e., fertilizers, fuels, pesticides, other chemicals. This notification should be accompanied with the contractor's design and methods to prevent pollution run-off from these sources.

F. Develop a maintenance and inspection plan which includes, but is not limited to the following:

A. The specific areas to be inspected and maintained that includes all the disturbed areas and material storage areas of the site.

B. The erosion and sediment controls identified in the SWPPP to be maintained and inspected and those additional controls that the contractor deems necessary.

C. Maintenance procedures.

D. The procedure to follow if additional work is required or whom to call.

E. Inspections and maintenance forms.

F. The personnel assigned to each task.

The following shall be inspected a minimum of once a week or within 24 hours after 0.50 inches of rainfall:

Stabilization measures (once a month if fully stabilized).

Structural controls.

Discharge points.

Construction entrances and exits.

Areas used for storage of exposed materials.

An inspection form shall be completed for each inspection. Any permit violations should be noted and corrective measures shall be taken no later than 7 days after the inspection occurred. If revisions to the SWPPP are needed, a report form for changes in the SWPPP shall be completed and a copy sent to Fuxan Engineering, Inc. The original shall be kept on-site as documentation of the change. If the inspection passes, a certification that the facility is in compliance with the SWPPP and the NPDES permit must be signed by a duly authorized representative of the principal executive official of the operator of the SWPPP with one of the following qualifications:

1. Has successfully completed the Florida Stormwater, Erosion and Sediment Control Inspector Training Program.

2. Successfully completed a similar training program.

3. Has enough practical on the job training to be qualified to perform the inspections.

Retain inspection reports and certifications for at least three years.

G. Site stabilization measures shall be initiated as soon as practical but in no case more than 7 days, in portions of the site where construction activities have temporarily or permanently ceased.

H. Releases in Excess of Reportable Quantities.

1. The discharge of hazardous substances or oil in the stormwater discharge(s) from a facility or activity shall be prevented or minimized in accordance with the applicable stormwater pollution prevention plan for the facility or activity. This permit does not relieve the operator of the reporting requirements of 40 CFR part 117 and 40 CFR part 302. Where a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity established under either 40 CFR 117 or 40 CFR 302, occurs during a 24 hour period:

a. The operator is required to notify the State Warning Point (800-210-0519 or 850-413-9911) as soon as he or she has knowledge of the discharge;

b. The operator shall submit within 14 calendar days of knowledge of the release a written description of: the release (including the type and estimate of the amount of material released), the date that such release occurred, the circumstances leading to the release, and remedial steps to be taken, to the Florida Department of Environmental Protection, NPDES Stormwater Section, Mail Station 2500, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and

c. The stormwater pollution prevention plan required under Part V of this permit must be modified within 14 calendar days of knowledge of the release to: provide a description of the release, the circumstances leading to the release, and the date of the release. In addition, the plan must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

2. This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

Developer

A. Notify Fuxan Engineering, Inc. of your intent to commence construction. Sign the Notice of Intent form as operator of the storm water discharge facility and permittee and return to Fuxan Engineering, Inc.

B. Sign a Certification of Storm Water Pollution Prevention Plan and return to Fuxan Engineering, Inc.

C. Notify Fuxan Eng. when it is time to submit a Notice of Termination as defined under Part E of the Fuxan Engineering, Inc. section of the SWPPP. Sign and return to Fuxan Engineering, Inc. for submittal to FDEP a Notice of Termination form and certification.

PRE-DEVELOPED SITE INFORMATION:

1. Total site acreage: 47.8
2. Land use: Partially Developed
3. Vegetation: BAHIA GRASS
4. Receiving waters or municipal separate storm water system: CLAY GULLY
5. 2 Year/24 Hour rainfall depth: 4.3
6. Soil types: EAU GALLIE FINE SAND

PROJECT INFORMATION:

1. Project type: COMMERCIAL
2. Anticipated construction sequence is as follows:
   1. Complete erosion control installation
   2. Clearing and grubbing
   3. Earthwork activities
   4. Storm water system construction
   5. Utility construction
   6. Base and pavement construction
   7. Final stabilization

   The BMP's listed in Part D of the Contractor section of the SWPPP shall be considered during all phases of construction.
3. Anticipated start date: MARCH 2016
4. Anticipated completion date: OCTOBER 2017
5. Total acres disturbed: 10
6. Pre-developed "C" factor: 0.20
7. Post-developed "C" factor: 0.65
8. The storm water management system, upon completion of construction and appropriate certification and as-built submittals will be operated and maintained by Anand Vihar Condo Assoc.
9. The potential source of pollution from this project is on-site development and construction activity.

OWNER'S INSTRUCTIONS FOR MAINTENANCE
AND INSPECTION OF STORMWATER FACILITIES

The entire stormwater system should be inspected on at least a semi-annual basis. This should include a visual inspection of the pond, pond banks, bleed-down orifices, other control structures, and discharge pipes. These should be kept free of debris and cleaned on a frequency as required to keep them functional, as designed. Mowing/clearing around the structures may be required to prevent vegetation from clogging them.

Wetland plants, if intentionally installed, should be monitored and maintained as required on the approved construction plans. Areas of littoral shelving, which are required to be vegetated but not intentionally planted, should not be cleared of the wetland plants. These areas should have as high a plant coverage as possible, for maximum water filtration.

Sediment sumps, if designed and installed, should have sediment removed as necessary to allow them to efficiently remove suspended particles. They should be re-dug to the original design specifications, if silted in.

For percolation treatment ponds/swales, the owner of the facility shall inspect the pond bottom periodically after heavy rainfall events to check for persistent ponding or pooling of water. All large debris shall be removed and disposed of elsewhere. If prolonged ponding persists, i.e., in excess of 72 hours, the owner shall rake or scarify the surface. If required, the soil in the area of ponding shall be removed and replaced with clean sandy, non-cohesive soils.

Please check the construction plans to see if written reports on monitoring or plant survival rates are required to be sent to any reviewing agencies. Written notes should always be kept which describe maintenance activities undertaken during each inspection.

Specific conditions of all permits may require additional maintenance activities above and beyond those outlined above. Please be aware of all permit conditions as issued by regulatory agencies to ensure permit compliance.

WETLAND NOTES:

1. Before beginning any construction activities, including site preparation, the applicant shall clearly field-demarcate, in two different manners, both the wetland jurisdictional line and the 25' offset upland buffer line, as shown on the final, approved site plans.
2. All construction activities, including but not limited to, clearing, digging, ditching, grading, grubbing, trenching or installing erosion or sediment controls, shall occur upslope from the clearly field-demarcated 25' offset upland buffer line; no construction activities shall occur within the 25' offset upland buffer.

SINKHOLE NOTES:

Should any noticeable soil slumping or sinkhole formation become evident, the applicant/developer shall immediately notify the County, Tampa Bay Water, and the Southwest Florida Water Management District (SWFWMD) and adopt one (1) or more of the following procedures as determined to be appropriate by the County and SWFWMD:

1. If the slumping or sinkhole formation becomes evident before or during construction activities, stop all work (except for mitigation activities) in the affected area and remain stopped until the County and SWFWMD approve resuming construction activities.
2. Take immediate measures to ensure no surface water drains into the affected areas.
3. Visually inspect the affected area.
4. Excavate and backfill or grout, as required, to fill the affected area and prevent further subsidence.
5. Use soil reinforcement materials in the backfilling operation when appropriate.
6. If the affected area is in the vicinity of a water-retention area, maintain a minimum distance of two (2) feet from the bottom of the retention pond to the surface of the limerock or karst connection.
7. If the affected area is in the vicinity of a water-retention area and the above methods do not stabilize the collapse, relocate the retention area.

GENERAL EROSION AND TURBIDITY CONTROL NOTES

1. The Site Subcontractor shall be responsible for installation and maintenance of all erosion and turbidity controls and the quality and quantity of offsite or wetland discharges.
2. Prior to construction, the Site Subcontractor is responsible for having his dewatering plan and turbidity control plan approved by the applicable reviewing agencies. Refer to the project's permit approvals and permit conditions for agencies requiring such review and approval. Questions concerning appropriate techniques should be addressed to those agencies and/or discussed with the project engineer and owner.
3. The appropriate turbidity and erosion control methodologies selected by the Site Subcontractor for this project should be made following assessment of the plans and project site specific factors and after consultations as needed with the project engineer and appropriate agencies. The Site Subcontractor will be responsible for obtaining any and all necessary permits for such activity; several factors to consider are listed below:
   A. Clay content in excavated materials and/or permeabilities rates
   B. Depth of cut in ponds, trenches, or utility lines
   C. Ambient ground water levels
   D. Actual rainfall amounts and time of year relative to normal rainy season
   E. Proximity to wetlands, water bodies or offsite properties
   F. 'Class' designation of receiving water bodies (i.e., Outstanding Florida Waters, shellfish harvesting areas, etc.)
   G. Density, type, and proximity of upland vegetation to be retained during construction (for use as possible filtration areas)
   H. Fill height relative to natural grade and length and steepness of the proposed slopes
   I. Existing topography and directions of surface flow
   J. Type of equipment used
   K. Project type
   L. Duration of construction activities
   M. Separation distance of onsite ponds
   N. Ambient quality of surface and groundwater
   O. Temporary stockpile locations and heights
4. At the onset of construction, the Site Subcontractor, as the party responsible for implementation of the erosion and sediment control plan, shall assess the above described conditions and factors with respect to relative cost effectiveness and select the appropriate methods of protection. A fairly extensive list of techniques are presented below but it must be stressed that any or all of the following may be necessary to maintain water quality and quantity standards. The construction sequencing should be thought out in advance of initiation to provide adequate protection of water quality.
5. Discharges which exceed 29 N.T.U.'s over the background levels are in violation of state water quality standards. Discharges of water quantities which affect offsite properties or may damage wetlands are also prohibited by regulating agencies.
6. The erosion and turbidity control measures shown hereon are the minimum required for agency approval. Additional control and measures may be required due to the Site Subcontractor's construction sequence & unforeseen weather conditions. Any additional measures deemed necessary by the Site Subcontractor shall be included in the lump sum bid with no extras for materials and labor allowed.
7. Hay bales or silt screens shall be installed prior to land clearing to protect water quality and to identify areas to be protected from clearing activities and maintained for the duration of the project until all soil is stabilized.
8. Floating turbidity barriers shall be in place in flowing systems or in open water lake edges prior to initiation of earthwork and maintained for the duration of the project until all soil is stabilized.
9. No clay material shall be left exposed in any stormwater storage facility. If clay or sandy-clays are encountered during stormwater storage excavation, the Site Subcontractor shall notify the Engineer immediately before proceeding with further excavation. If the Engineer of Record has determined that such soils are non-confining and must be excavated to meet permit and design conditions, excavation may proceed after obtaining written authorization from the appropriate governing agency. If said soils are left exposed at the permitted and designed depth, the Site Subcontractor shall over-excavate the pond's bottom and side slopes by a minimum of twelve (12") inches and backfill with clean sands to help prevent suspension of fine particles in the water column.
10. The installation of temporary erosion control barriers shall be coordinated with the construction of the permanent erosion control features to the extent necessary to assure effective and continuous control of erosion and water pollution throughout the life of the construction phase.
11. The type of erosion control barriers used shall be governed by the nature of the construction operation and soil type that will be exposed. Silty and clayey material may require solid sediment barriers to prevent turbid water discharge, while sandy material may need only silt screens or hay bales to prevent erosion. Floating turbidity curtains should generally be used in open water situations. Diversion ditches or swales may be required to prevent turbid stormwater runoff from being discharged to wetlands or other water bodies. It may be necessary to employ a combination of barriers, ditches, and other erosion/turbidity control measures if conditions warrant.
12. Where pumps are to be used to remove turbid waters from construction areas, the water shall be treated prior to discharge to the wetlands. Treatment methods include, for example, turbid water being pumped into grassed swales or appropriate upland vegetated areas (other than upland preservation areas and wetland buffers), sediment basins, or confined by an appropriate enclosure such as turbidity barriers or low berms, and kept confined until turbidity levels meet State Water Quality Standards.
13. The Permittee shall schedule his operations such that the area of unprotected erodible earth exposed at any one time is not larger than the minimum area necessary for efficient construction operation, and the duration of exposed, uncompleted construction to the elements shall be as short as practicable. Clearing and grubbing shall be so scheduled and performed such that grading operations can follow immediately thereafter. Grading operations shall be so scheduled and performed that permanent erosion control features can follow immediately thereafter if conditions on the project permit.
14. Water derived from various dewatering methods should be passed through sufficiently wide areas of existing upland vegetation to filter out excess turbidity. If this is not sufficient, the water shall be retained in previously constructed permanent stormwater ponds or else retained in temporary sedimentation basins until the clarity is suitable to allow for its discharge. Plugging the outfalls from completed stormwater ponds may be needed to avoid discharge. However, such situations should be monitored closely to preclude berm failure if water levels rise too high.
15. Water can be transported around the site by the use of internal swales or by pumps and pipes.
16. Sheet flow of newly filled or scraped areas may be controlled or contained by the use of brush barriers, diversion swales, interceptor ditches or low berms. Flow should be directed toward areas where sediments can sufficiently settle out.
17. Exposed soils shall be stabilized as soon as possible, especially slopes leading to wetlands. Stabilization methods include solid sod, seeding and mulching or hydromulching to provide a temporary or permanent grass cover mulch blankets, filter fabrics, etc., can be employed to provide vegetative cover.
18. Energy dissipaters (such as rip rap, a gravel bed, hay bales, etc.) shall be installed at the discharge point of pipes or swales if scouring is observed.
19. Attempt to install roadway curb and gutters as soon as possible to reduce the surface area for erosion to occur.
20. Implement storm drain inlet protection (hay bales or gravel) to limit sedimentation within the stormwater system. Perform inspections and periodic cleaning of sediments which wash out into the streets until all soil is stabilized.
21. Water discharge velocities from impounded areas and temporary sedimentation basins shall be restricted to avoid scouring in receiving areas.
22. If water clarity does not reduce to state standards rapidly enough in holding ponds, it may be possible to use chemical agents such as alum to flocculate or coagulate the sediment particles.
23. Hay bales, silt screens, or gravel beds can be added around the pipe or swale discharge points to help clarify discharges. Spreader swales may help dissipate cloudy water prior to contact with wetlands.
24. All fuel storage areas or other hazardous storage areas shall conform to accepted state or federal criteria for such containment areas.
25. Vehicle or equipment washdown areas will be sufficiently removed from wetlands or offsite areas.
26. Fugitive dust controls (primarily by using water spray trucks) shall be employed as needed to control windborn emissions.
27. If the above controls remain ineffective in precluding release of turbid water, especially during pond or utility line dewatering, then the contractor may be compelled to use a vertical dewatering system such as well points or sock drains to withdraw groundwater which may already be clear enough to allow for direct discharge to wetlands.
28. Ongoing inspections and periodic maintenance by the Site Subcontractor shall occur throughout construction as necessary to insure the above methods are working suitably. This may be needed daily, if conditions so warrant. Site Subcontractors are encouraged to obtain and thoroughly review The Florida Development Manual: A Guide to Sound Land and Water Management, which was developed by the State of Florida Department of Environmental Protection in 1988. This provides fairly in-depth discussions of recommended techniques and also provides specific design and technical standards. A copy of this document is available for review at Fuxan Engineering, Inc.
29. The contractor will perform daily inspections of all on-site wetlands within the construction area to ensure that water levels within those wetlands are not excessively impounded prior to the time when the permitted control structure or outfall is built. Water levels significantly above normal should be corrected at a frequency that prevents a change in the vegetative character or health of any wetlands.

WATER, SEWER & RECLAIMED WATER CONSTRUCTION NOTES:

1. Prior to construction, the Contractor shall obtain from the Engineer or Owner a copy of all pertinent permits related to this project. It is the Contractor's responsibility to assure that all construction activities are in compliance with the conditions of all permits and approvals.
2. Grass and mulch, or solid sod, all areas in existing rights-of-way disturbed by construction.
3. Contractor is to coordinate all work within, but not limited to, Pasco County rights-of-way with utility companies in order to prevent damage to utility lines and the making of adjustments to same, if required.
4. All utility system-design materials and workmanship shall comply with Standards for Design and Construction of Water, Wastewater and Reclaimed Water Facilities Specs., Latest Edition.
5. Contractor shall be responsible for obtaining any and all road crossing or utility permits.
6. The existing underground utility lines shown hereon were taken from documents furnished by others and not field verified, therefore, the Engineer cannot guarantee the accuracy of same nor that all are shown. The Contractor shall expose all underground utility lines in coordination with the Owners to his satisfaction and make adjustments to same in the event there are conflicts with new construction.
7. Contractor shall verify locations and depths of existing water and sewer lines prior to beginning construction.
8. The locations and elevation of all service lines are to be determined in the field by Owner and/or Contractor prior to construction of same.
9. Fire hydrant, gate valve and blow-off valve assemblies shall consist of all pipe, valves, tees, fittings, and any and all other appurtenances comprising a complete, working unit.
10. All fire hydrants shall be flow tested and color coded based on flow results.
11. All 4"-12" PVC water main pipe shall be C-900 DR 18, conforming to the requirements found in AWWA Standard, latest edition at the time of plan approval. 16" water main shall be C-905 DR 25 PVC. All service pipe less than 4" in diameter shall be PVC Pressure Pipe; Pressure Rate 200; DR 21 per ASTM Standard D-2241. Water mains smaller than 2" in diameter shall be Class 1120 or 1220 ; Schedule 80 and meet the requirements of ASTM D-1785.
12. All water main pipe and fittings installed under this project shall be color coded or marked in accordance with subparagraph 62-555.320(21)(b)3, Florida Administrative Codes, using blue as the predominant color.
13. Reclaimed water mains, valves, and services shall include the following to avoid confusion with potable system:
   A. Purple pigmented C-900, DR-18 PVC piping for 4"-12" reclaimed water mains, except 2" which shall be SDR 21 PVC piping.
   B. Square top valve boxes for isolation valves in system, with covers marked "Effluent."
   C. Purple stripe on curb to identify reclaimed water services.
   D. One inch services for reclaimed water services.
   E. Purple magnetic locating tape, stating "REUSE MAIN BURIED BELOW" over all reclaimed water mains (18 inches below grade).
   F. Reclaimed water service on opposite lot line from potable service.
   G. 16" reclaimed main shall be C-905 DR 25 PVC.
14. All aspects of reclaimed water system must comply with Chapter 17-610, F.A.C., latest edition.
15. All 8" sanitary sewer pipe shall be constructed at a 0.40% minimum slope unless otherwise noted.
16. Force mains shall be constructed of C-900 DR 18 PVC pigmented green.
17. Adjusting manhole tops to match grade and slope of the finish paving shall be included in the respective contract unit price for manholes, payment of which will constitute full compensation for the construction and completion of the manhole, and no additional payment will be allowed or made for adjusting manhole tops.
18. Bends shall be installed in force main or water main to avoid unforeseen conflicts in existing or proposed structures.
19. The joint deflection method shall be used where practical in lieu of installing bends.
20. All valve box assemblies located within roadways or parking areas shall be protected from truck traffic by use of 6" thick reinforced concrete pads poured around valve boxes (see detail).
21. Connections into existing county-owned systems shall be via wet tap. Wet taps shall be performed by the Pasco County Utilities Services Branch at the developer's expense. Material for wet taps larger than 2" shall be provided and installed by the project contractor. Excavation, backfill and surface restoration shall be the contractor's responsibility. Material for wet taps larger than 2" shall be provided and installed by the project contractor.
22. Gate valves installed for phasing shall be restrained per current Pasco County standards.
23. Off-road utility easements shall be "stabilized" for access by maintenance vehicles.
24. Stub-out lines on the water main, force main, and reclaimed main shall have restrained joints from the main line to the stub-out.
25. All PVC pressure pipe shall have a minimum 36" cover.
26. Maintain 5' minimum horizontal separation between reclaimed mains and water mains or force mains.
27. All water mains shall be deflected vertically where crossing storm sewer pipe to obtain a minimum vertical distance of 18 inches between the outside of the water main and the outside of the storm sewer. Joints shall be located such that the distance from the storm sewer and water main joint is as far as practical.
28. Water mains should be laid at least 10 feet horizontally from any existing or proposed storm sewer.
29. At no time should vertical clearance between force main or gravity sewer and water main be less than 18" at crossing of same.
30. At no time should horizontal clearance between force main or gravity sewer and water main be less than 10' when same are paralleling each other.
31. Sanitary sewers, force and reclaimed mains and storm sewers should cross under water mains. Sanitary sewers, force and reclaimed 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.
32. When sanitary sewers, force and reclaimed 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 pipe (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.
33. Where there is no alternative to sewer and reclaimed pipes crossing over a water main, the criteria for minimum separation of 18 inches between lines and 10 feet between joints shall be required.
34. All crossings shall be arranged so that the sewer and reclaimed pipes joints and the water main pipe joints are equidistant from the point of crossing (pipes centered on the crossing).
35. 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.
36. A minimum 10-foot horizontal separation shall be maintained in parallel installations between any type of sewer (including drainage inlets) and water main whenever possible. A minimum 5-foot horizontal separation shall be maintained in parallel installation between reclaimed water mains and water mains, and between reclaimed water mains and sanitary sewers whenever possible.
37. In cases where it is not possible to maintain a 10-foot horizontal separation between any type of parallel sewer and water main, or a 5-foot separation between reclaimed main and water main, the water main must be laid in a separate trench or on an undisturbed earth shelf located on one side of the sewer, reclaimed main, 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.
38. Where it is not possible to maintain a vertical distance of 18 inches or a horizontal distance of 10 feet in parallel installations, the water main shall be constructed of DIP and the sewer, reclaimed main 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 be above the sewer, reclaimed main, or force main. Joints on the water main shall be located as far apart as possible from joints on the sewer, reclaimed main, or force main (staggered joints).
39. All subsurface construction shall comply with the "Trench Safety Act." The Contractor shall insure that the method of trench protection and construction is in compliance with the Occupational Safety and Health Administration (OSHA) Regulations.
40. Fire Hydrants must be flow tested and color-coded based on flow results.
41. The Utilities Services Branch shall not own or maintain onsite water lines, sewer lines, or facilities.

STREET & DRAINAGE CONSTRUCTION NOTES:

1. Prior to construction, the Contractor shall obtain from the Engineer or Owner a copy of all pertinent permits related to this project. It is the Contractor's responsibility to assure that all construction activities are in compliance with the conditions of all permits and approvals. Contractor is also responsible for having his dewatering plan approved by SWFWMD.
2. All construction, materials and workmanship are to be in accordance with Pasco County Land Development Code and DOT Specifications, latest editions.
3. Grass and mulch, or solid sod, all areas in existing rights-of-way disturbed by construction. In the proposed rights-of-way a 16" wide area behind the back of curb shall be solid sodded. The remainder of the proposed rights-of-way to be seeded and mulched if the slope is greater than 6:1.
4. Contractor is to coordinate all work within, but not limited to Pasco County rights-of-way with utility companies in order to prevent damage to utility lines and making of adjustments to same, if required.
5. (For Miami, Valley, Type "V", etc. Gutter Type Sections Only) Prior to curb inlet construction, the Engineer shall lay out the back of the curb in the vicinity of the respective inlet for alignment and grade, and the Contractor shall construct the inlet allowing for an 18" concrete throat between the back of the curb and the face of the inlet. The top of the inlet shall be constructed to an elevation of 3/8" above the top of curb. Any inlets constructed incorrectly by deviating from this sequence of inlet construction shall be the sole responsibility of the Contractor and no additional payment shall be made or allowed for removing and/or correcting the inlet.
6. Suitable fill obtained through excavation of streets and detention ponds shall be placed on lots and adjacent land in accordance with the Master Drainage and Grading Plan as directed by the Engineer.
7. Sod/Seed & Mulch shall be placed in accordance with applicable City/County standards as well as in accordance with standard and specific conditions in the SWFWMD permit, if applicable. At a minimum this shall include sodding of all pond embankments of a slope 4:1 or greater to the NW line, as well as seeding and mulching of the balance of the pond tracts (including pond berms, excluding the area below NW), sodding at a minimum of 16" from the back of curb, and seeding and mulching of any project area with a slope of 4:1 or steeper.
8. Roadway underdrain has been located on these plans to ensure adequate base protection. Prior to curb construction, the Geotechnical Engineer shall review the predesign borings and, along with their field inspection, make a recommendation regarding additional underdrain requirements.
9. Site clearing shall be performed per the approved construction plans and in accordance with Pasco County Land Development Code. Installation and maintenance of the required barricading and erosion control shall be the responsibility of the site development contractor unless otherwise designated.
10. Prior to beginning construction, Contractor shall expose all existing utility inverts to which a tie-in is proposed and have Engineer verify the elevation and adequacy of these inverts.
11. All subsurface construction shall comply with the "Trench Safety Act." The Contractor shall ensure that the method of trench protection and construction is in compliance with the Occupational Safety and Health Administration (OSHA) regulations.
12. Siltation accumulations greater than the lesser of 12 inches or one-half the depth of the siltation barrier shall be immediately removed and placed in upland areas.
13. 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.
14. All erosion control installation and installation coordination shall be the responsibility of the Contractor. Be advised that the construction approval and maintenance of the erosion control shall be the sole responsibility of the Site Contractor.

STANDARD FIRE PROTECTION NOTES:

a. All projects must comply with Pasco County Fire Hydrant Ordinance No. 46-51.

b. Fire hydrants shall be installed and in service prior to the accumulation of combustibles.

c. Per the National Fire Protection Association, NFPA-1, 16.4.3.1.3: Where underground water mains and hydrants are to be provided, they shall be installed, completed, and in service prior to construction work.

d. Per NFPA-1, 18.3.4.1: Clearances of 7 1/2 feet in front of and to the sides of the fire hydrant with a 4 foot clearance to the rear must be maintained at all times.

e. Fire detector and smoke alarm are required in the sleeping rooms.

SPECIFICATIONS FOR DESIGN AND INSTALLATION
OF TRAFFIC CONTROL DEVICES ON PRIVATE ROADS

1. All traffic control devices shall be installed in conformance with the Manual on Uniform Traffic Control Devices and the Florida Department of Transportation standards.
2. Street name signs shall be 9-inch on all road classfifcations. All signs shall have 6-inch series B letters. All street name signs on private roads shall be standard D3 street name signs with the colors reversed; white background with green letters and border. At intersections with county or state maintained roads; the county of state maintained road shall be green background with white letters and border.
3. Any traffic control device for a private roadway placed in a county or state Right-of-Way shall be installed on the appropriate breakaway post assembly.
4. All parking spaces shall be striped in white.

PASCO COUNTY STANDARD SITE PLAN NOTES:

1. Owner/Developer: Anand Vihar, LLC, a Delaware LLC
   3119 Mossvale Lane
   Tampa, FL 33607
   Ph. (561) 755-3635
2. Engineer/Surveyor: Fuxan Engineering, Inc.
   15018 Maurine Cove Ln.
   Odessa, Florida 33556
   (813) 244-6194
3. Existing zoning: MPUD
4. Existing Land Use Classification: RES-3
5. The original MPUD Plan was approved on September 18, 1999, with last MPUD amendment GM 99-375 on October 24, 1973.
6. Water service to be provided by Pasco County Utilities.
7. Sewage disposal service to be provided by Pasco County Utilities.
8. Electrical power to be provided by TECO.
9. Telephone service to be provided by Verizon Florida, Inc..
10. Fire protection to be provided by the existing Pasco County Fire Station on the west side of Meadow Pointe.
11. The site is currently partially developed.
12. Predominant soil types on-site consist of Eau Gallie Sands within upland areas.
13. Detention ponds will be owned and maintained by the Anand Vihar Condo Association.
14. Contours shown are based on National Geodetic Vertical Datum 1929 (NGVD 29).
15. All roadway standards to comply with the Manual of Uniform Minimum Standards, State of Florida.
16. All utility lines shall be installed underground and designed/ approved by the respective utilities.
17. Project lies within Flood Zones "X & AE" as shown on FIRM Panel No. 12101C0437F, dated September 26, 2014.
18. Unless otherwise shown, all sidewalks shall be five (5) feet wide, 4½" thick concrete, and 3000 p.s.i.
19. All easements to be a minimum of five (5) feet in width.
20. Medians and roadside clear zones shall be sodded or seeded & mulched.
21. All landscape and sodded areas along collector roads will be irrigated.
22. If during construction activities any evidence of historic resources, including but not limited to aboriginal or historic pottery, prehistoric stone tools, bone or shell tools, historic trash pits, or historic building foundation, are discovered, work shall come to an immediate stop and the Florida Department of Historic Resources (State Historic Preservation Officer) and Pasco County shall be notified within two working days of the resources found on the site.
23. The Anand Vihar Condo Association shall inspect and maintain the water detention system on a regular basis.
24. All sodded slopes over 4 to 1, shall be installed with sod pegs.
25. All demolition debris shall be removed from the sire and legally disposed of.
26. The buildings shall have the finish floor elevation a minimum of 1' above the base flood elevation or as required by the Land Development Code.
27. Street lighting shall be provided per state and county regulations.
28. Fugitive dust shall be controlled by water trucks.
29. Onsite burning shall require fire marshal's approval.
30. The project drains into a proposed pond which drains to the Clay Gully.
31. Maximum building height per LDC is 45 feet. Proposed building height is 45 feet.
32. Project will be completed in one phase.
33. Installation of fuel storage tanks requires review and approval by the Fire Marshal and the issuance of a separate building permit. Approval of the site plan does not constitute approval of the location of the fuel tanks.
34. All proposed signs must be applied for, approved, and permitted on an individual basis apart from any ultimately approved site plan. Approval of this site plan does not constitute approval of any signage.
35. Handicap parking spaces will be properly signed and striped in accordance with Florida Statute 316, the Manual on Uniform Traffic Control Devices, or other applicable standards.
36. The architect/engineer certifies that the site has been designed in accordance with the Americans with Disabilities Act.
37. All on-site parking spaces will be striped and signed in accordance with the Manual on Uniform Traffic Control Devices, latest edition. Parking spaces, directional arrows, and stop bars shall be striped in WHITE. It shall be the owner/developer's responsibility to properly sign and stripe in accordance with applicable standards.
38. The owner/developer acknowledges that this approval does not include any work in the County right-of-way. All right-of-way work shall be a function of an approved Pasco Right-of-way Use Permit.
39. 20 feet by 20 feet clear site triangles shall be kept free of any signage plantings, trees, etc. in excess of three-and-a-half (3-1/2) feet in height.
40. No irrigation system or landscaping shall be installed in any County or State right-of-way without issuance of appropriate Right-of-Way Use Permit.
41. The owner/developer acknowledges that the site and its subsequent building permits shall comply with all rezoning/MPUD/PUD conditions.
42. Existing compactor will be used for refuse disposal.
43. Site triangle shall be unobstructed and shall be inspected and maintained in conformance with FDOT Index 546.
44. No trees will be removed for development.
45. Sidewalk/multiuse path clear zone shall be free of obstacles, including but not limited to shrubs, trees, fences, above ground utilities i.e. power poles, street lights, guy anchors, fire hydrants, mail boxes, street signs and utility markers etc.
46. All the trees overhanging public Right Of Way/or trees within the ROW shall be trimmed and pruned to maintain a minimum vertical clear height of 8' from the finished ground surface of the sidewalk to the bottom of Canopy/ 16.6' clear height above the roadway paths.
47. If during construction activities any evidence of the presence of State and Federally protected plant and/or animal species is discovered, work shall come to an immediate stop and Pasco County shall be notified within two working days of the plant and/or animal species found on the site.
48. In consideration of Pasco County's agreement to provide potable water and/or reclaimed water to the subject property, Developer/Owner, and its successors and assigns, agree to the following:
   (a) In the event of Production Failure or Shortfall by Tampa Bay Water, as set forth in section 3.19 of the Interlocal Agreement creating Tampa Bay Water, Developer/Owner shall transfer to Pasco County any and all water use permits or water use rights the Developer/Owner may have to use or consume surface or ground water within Pasco County.
   (b) Prior to Developer/Owner selling water or water use permits or water use rights, Developer/Owner shall notify Pasco County, and Pasco County shall have a right of first refusal to purchase such water or water use permits or water use rights.
49. The existing condo plats and subdivision plats will be vacated. A new condo plat will be processed for approval.

PASCO COUNTY STANDARD NOTES:

1. Prior to the start of the clearing and grubbing, or any soil disturbance contact PC Stormwater Management at 727-834-3611 for a soil erosion and sediment control, pre-inspection meeting.
2. The soil erosion and sediment control devises shall be installed prior to construction, maintained throughout construction and until the site is permanently stabilized. (LDC 902.2)
3. All structures, including buffer walls, retaining walls, signage, etc. require building permits.
4. All demolition debris shall be removed from the site and legally disposed of.
5. Any off site disturbance shall be restored to pre or better condition.
6. As applicable, the owner/developer will provide copies of the required permits from the respective governing agencies, prior to issuance of the SDP.
7. Geotechnical notes:

   A. Should any noticeable soil slumping or sinkhole formation become evident, the applicant/developer shall immediately notify the County, Tampa Bay Water (TBW), and SWFWMD, and adopt one or more of the following procedures as determined to be appropriate by the County and SWFWMD.

   1. If the slumping or sinkhole formation becomes evident before or during construction activtes, stop all work (except for mitigation activities) in the affected area and remain stopped until the County and SWFWMD approve resuming construction activities.
   2. Take immediate measures to ensure no surface water drains into the affected areas.
   3. Visually inspect the affected area.
   4. Excavate and backfill or grout as required to fill the affected area and prevent further subsidence.
   5. Use soil reinforcement materials in the backfill operation, when appropriate.
   6. If the affected area is in the vicinity of a water-retention area, maintain a minimum distance of two feet from the bottom of the retention to the surface of the lime-rock or karst connection.
   7. If the affected area is in the vicinity of a water-retention area and the above methods do not stabilize the collapse, relocate the retention area.

   B. Discharge of storm-water into depressions with direct or demonstrated hydrologic connection to the Floridan Aquifer shall be prohibited.

   C. The site shall be graded to within 12 inches for the final grade and prepared in accordance with the geotechnical/geological engineering report. Where fill is proposed it shall be placed in compliance with the geotechnical/geological engineering report recommendations (including any lift depths recommended) and compacted to a minimum density of 95% of the modified Proctor maximum dry density. Density tests to confirm compaction shall be required with the building pad area, before the next lift is placed. Foundation subgrade shall be prepared in accordance with the geotechnical/geological engineering report. Upon completion of the land development construction, a professional engineer shall provide a certification to Pasco County that the project, including each pad area, complies with the recommendations of the geotechnical/geological engineering report.

DATE	DESCRIPTION	BY
REVISIONS		

Engineering Business Certificate of Authorization No.: 26548
Fuxan Engineering, Inc.
15018 Maurine Cove Ln.
Odessa, Florida 33556
Phone: 813-244-6194
DAVID G. FUXAN STATE OF FLORIDA PROFESSIONAL ENGINEER No. 33133
DATE:
DAVID G. FUXAN P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER

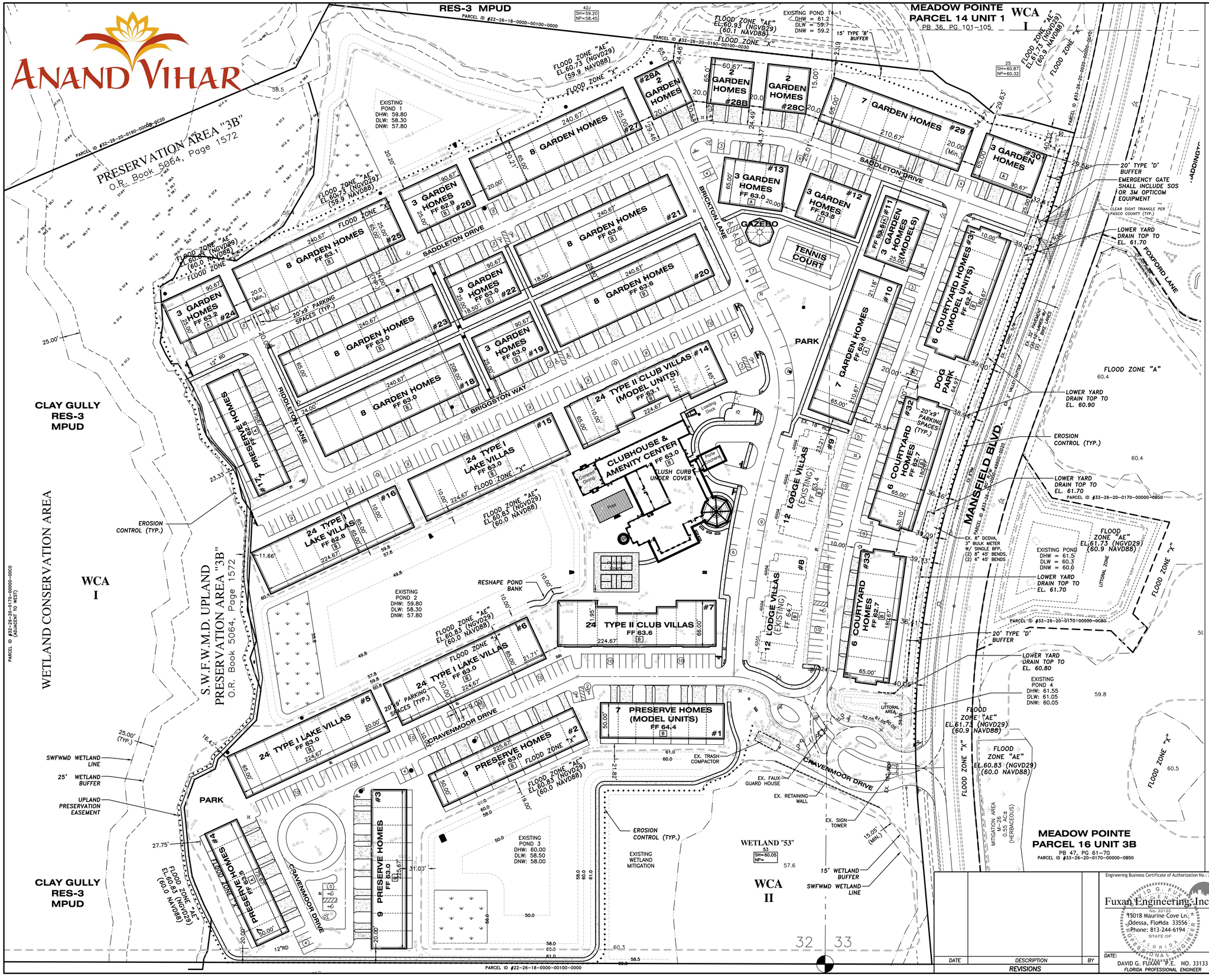
GENERAL NOTES

ANAND VIHAR
Meadow Pointe Tract 14, Unit 3

JOB NO.	2015-MP-01
DESIGN	FUXAN
DRAWN	SOMERVILLE
DATE	12-18-2015
FILE	GN

PREPARED FOR: Anand Vihar, LLC

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.83 Feet



SCALE: 1" = 60'

LEGEND

EXISTING	PROPOSED	
		STORM DRAINAGE STRUCTURE
		STAKED EROSION CONTROL
		SWFWMD WETLAND LINE
		25' OFFSET FROM SWFWMD WETLAND LINE SHOWN FOR INFORMATIONAL PURPOSES
		ASPHALT PAVEMENT 196,117± S.F. (ON-SITE PARKING) 2,640± SF (DRIVEWAY)
		CONCRETE 81,542± S.F.
		30' CLEAR SIGHT TRIANGLE PER PASCO COUNTY
		2014 FEMA FLOOD BOUNDARY

Project lies within Flood Zones "X & AE" as shown on FIRM Panel No. 12101C0437F, dated September 26, 2014

Note: The sidewalk alignment leading from the driveways and parking areas to each unit will be determined after the buyer selects the unit. Refer to the landscape plans for the typical landscaping detail between the sidewalks and the buildings.

AREA TABULATION

BUILDING COVERAGE	383,679 SF	18.4%
IMPERVIOUS SURFACES	277,738 SF	13.3%
OPENSPACE/GREENSPACE UPLAND	608,498 SF	29.1%
EXISTING WETLAND & MITIGATION	647,221 SF	31.1%
EXISTING PONDS	169,692 SF	8.1%
TOTAL (47.84 Ac.)	2,084,094 SF	100%

FAR 383,679 / 2,084,094 = 0.18

PARKING TABULATION

PARKING REQUIRED:
316 UNITS x 2.25 SPACE PER UNIT = 711 SPACES
REQUIRED (x 0.02 = 15 HANDICAP REQUIRED)

PARKING PROVIDED:
REGULAR CARS = 667 SPACES
HANDICAP SPACES = 12 SPACES

TOTAL = 679 SPACES PROVIDED

ALL SIDEWALK RAMPS TO BE CONSTRUCTED PER FDOT INDEX NO. 304

SEE SHEET 2 FOR PASCO COUNTY STANDARD SITE PLAN NOTES

Notes:
1. The original MPUD Plan was approved on October 24, 1973, with last MPUD amendment GM 99-375.

DATE	DESCRIPTION	BY

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DAVID G. FUXAN No. 33133 STATE OF FLORIDA PROFESSIONAL ENGINEER
DATE:
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FLORIDA PROFESSIONAL ENGINEER

PRELIMINARY DEVELOPMENT PLAN

JOB NO. 2015-MP-01	ANAND VIHAR
DESIGN FUXAN	Meadow Pointe Tract 14, Unit 3
DRAWN SOMERVILLE	PREPARED FOR: Anand Vihar, LLC
DATE 12-18-2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE PDP	SHEET 3 OF 20 SHEETS

SEE SHEET 6 FOR CONTINUATION

SEE SHEET 5 FOR CONTINUATION

SEE SHEET 6 FOR CONTINUATION

SEE SHEET 7 FOR CONTINUATION

NAME SIGNS

BRIGGSTON WAY

CRAVENMOOR DRIVE

RELOCATE EX. FIRE HYDRANT

CUT & REMOVE ±437 LF EX. WM W/ SERVICES, ±429 LF 8" FIRE, (1) F.H, ±128 LF SEWER MAIN W/ SERVICES (S), ±107 LF SEWER MAIN W/ SERVICES (N), (2) SEWER M.H, ±300 LF UNDERDRAIN.

107 LF TO BE REMOVED

REMOVE EX. 18" RCP

REMOVE EX. 24" RCP

REMOVE EX. 36" RCP

CUT, REMOVE, AND BRICK/CAP STORM DRAINAGE LINES SHOWN TO BE REMOVED. RE-USE MATERIALS AS CONDITION AND SPECIFICATIONS ALLOW.

FLOOD ZONE "X"

FLOOD ZONE "AE" EL.60.83 (NGVD29) (60.0 NAVD88)

REMOVE (2) EX. R1-1 30" x 30" W/ D3 STREET NAME SIGNS

SAW-CUT ASPHALT 12' FROM EXISTING CENTERLINE, REMOVE ASPHALT & CURB WITHIN BOUNDARY AS SHOWN (TYPICAL)

EXISTING TRANSFORMER (TYP.) TO REMAIN

EX. NSFORMER TO REMAIN (TYP.)

EX. FIRE HYDRANT TO REMAIN

CUT & RECONNECT UTILITY SERVICES 32' FROM CENTERLINE (TYP. FOR SERVICES TO REMAIN)

EX. WATER & SEWER SERVICES TO BE REMOVED (TYPICAL)

SAW-CUT & REMOVE

EX. 24" RCP

REMOVE EX. TOWNHOUSE BLDG.

COORDINATE WITH TECO TO RELOCATE EX. LIGHT POLE (TYP.)

EX. TRASH COMPACTOR TO REMAIN

EX. FAUX GUARD HOUSE TO REMAIN

EX. RETAINING WALL TO REMAIN

EX. SIGN TOWER TO REMAIN

EX. R1-2 TO REMAIN

EX. R4-7

EX. OM1-1 TO REMAIN

EROSION CONTROL (TYP.)

WETLAND "53"

53

SH=60.05

NP=

57.6

WCA II

15.05 (MIN.)

15' WETLAND BUFFER

SWFWMD WETLAND LINE

EX. R1-1 30" x 30" W/ D3 STREET NAME SIGNS TO REMAIN

60.3

32 33

COORDINATE WITH TECO TO RELOCATE EX. TRANSFORMER (TYP.)

POLE (TYP.)

32'(TYP)

SAW-CUT ASPHALT 12' FROM EXISTING CENTERLINE, REMOVE ASPHALT & CURB WITHIN BOUNDARY AS SHOWN (TYPICAL)

19.4'

20.0'

17.1'

20.7'

19.2'

EX. TOWNHOUSE BLDG. TO REMAIN

EXISTING TRANSFORMER (TYP.) TO REMAIN

EXISTING LIGHT POLE (TYP.) TO REMAIN

EX. FIRE HYDRANT TO REMAIN

LITTORAL AREA

EX. 4' CG

EX. 2' VALLEY GUTTER

EX. 18" RCP

EX. 8" WM

80' R/W

EROSION CONTROL (TYP.)

EX. 8" DCDVA, 3" BULK METER W/ SINGLE BFP, (2) 8" 45° BENDS, (2) 6" 45° BENDS TO REMAIN

FLOOD ZONE "AE" EL.61.73 (NGVD29) (60.9 NAVD88)

LITTORAL ZONE

REMOVE (4) EX. CASE II 18" x 18" RED REFLECTORS PER FDOT INDEX 17349

60.4 FLOOD ZONE "A"

60.4

FLOOD ZONE "X"

REMOVE (2) EX. CASE II 18" x 18" RED REFLECTORS PER FDOT INDEX 17349

EX. R1-1 30" x 30" W/ D3 STREET NAME SIGNS TO REMAIN

59.8

FLOOD ZONE "AE" EL.61.73 (NGVD29) (60.9 NAVD88)

FLOOD ZONE "AE" EL.60.83 (NGVD29) (60.0 NAVD88)

FLOOD ZONE "X"

MITIGATION AREA M-26 0.55 AC± (HERBACEOUS)

EX. W14-2P 24" x 12" (DOUBLE FACED) TO REMAIN

EX. R2-1

EX. R8-3A

EX. SUPPLEMENTAL PLAQUE TO REMAIN

EX. R1-1 30" x 30" W/ D3 STREET NAME SIGNS TO REMAIN

FLOOD ZONE "X"

60.5

CALL 48 HOURS BEFORE YOU DIG

IT'S THE LAW! DIAL 811

Know what's below. Call before you dig.

SUNSHINE STATE ONE CALL OF FLORIDA, INC.

N

80 40 0 40 80

SCALE: 1" = 40'

LEGEND

EXISTING (REMAIN)	EXISTING (REMOVE)	
		STORM DRAINAGE STRUCTURE
8	8	DRAINAGE STRUCTURE NUMBER*
CO &	CO &	EX. UTILITY STRUCTURES
		EX. TRAFFIC SIGNAGE
+15.00		PRE-DEVELOPMENT EX. GRADE
+52.00		EXISTING DEVELOPMENT GRADE
		STAKED EROSION CONTROL
		SWFWMD WETLAND LINE
		25' OFFSET FROM SWFWMD WETLAND LINE SHOWN FOR INFORMATIONAL PURPOSES
		EX. ASPHALT TO BE SAW-CUT & REMOVED (±149,000 SF)**
		EX. ASPHALT TO REMAIN (±142,473 SF)
		2014 FEMA FLOOD BOUNDARY

NOTES:

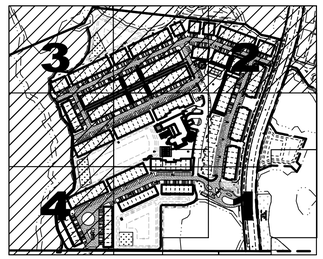
1. * Existing drainage structures per approved Heidt & Associates plans dated January 12, 2005 (Project No. PDH MP 008)

2. ** Where marked for removal, all existing curb and asphalt shall be removed entirely, including base and stabilization layers, and backfilled with material suitable for sod & landscape plantings, except where base & stabilization can be reused for new drives and building pads.

3. Any disturbed right-of-way shall be returned to predevelopment or better condition.

Project lies within Flood Zones "X & AE" as shown on FIRM Panel No. 12101C0437F, dated September 26, 2014

NO WETLAND IMPACTS OR MITIGATION ARE PROPOSED IN THIS PROJECT



KEY MAP

DATE	DESCRIPTION	BY

REVISIONS

Engineering Business Certificate of Authorization No.: 26548

Fuxan Engineering, Inc.

15018 Maurine Cove Ln.
Odessa, Florida 33556
Phone: 813-244-6194

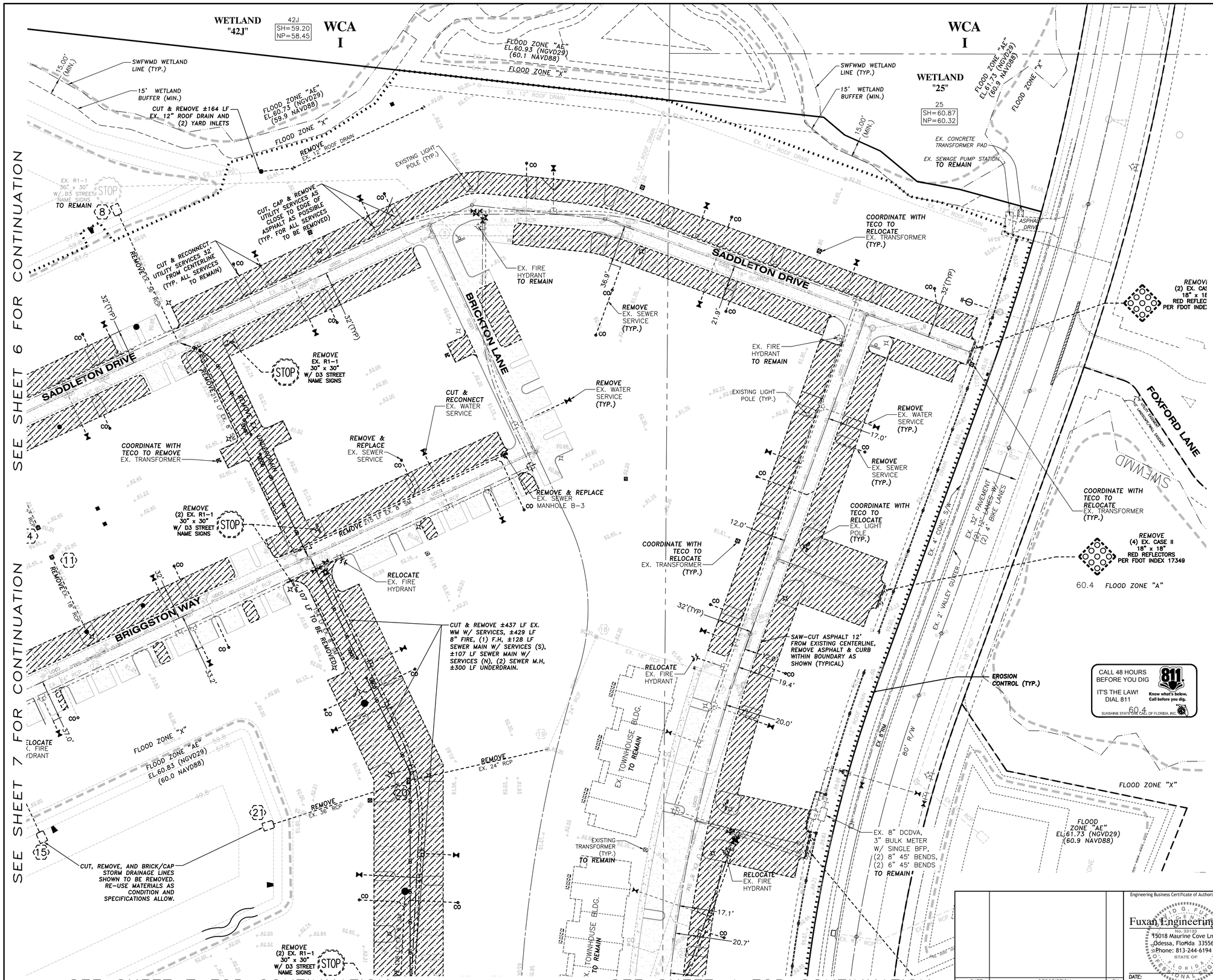
DAVID G. FUXAN No. 33133 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:

DAVID G. FUXAN P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER

DEMOLITION PLAN (1)

JOB NO. 2015-MP-01	ANAND VIHAR
DESIGN FUXAN	Meadow Pointe Tract 14, Unit 3
DRAWN SOMERVILLE	PREPARED FOR: Anand Vihar, LLC
DATE 12-18-2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE DEMO	SHEET 4 OF 20 SHEETS



N

80 40 0 40 80

SCALE: 1" = 40'

LEGEND

EXISTING (REMAIN)	EXISTING (REMOVE)	
		STORM DRAINAGE STRUCTURE
8	8	DRAINAGE STRUCTURE NUMBER*
CO	CO	EX. UTILITY STRUCTURES
		EX. TRAFFIC SIGNAGE
+15.00		PRE-DEVELOPMENT EX. GRADE
+52.00		EXISTING DEVELOPMENT GRADE
		STAKED EROSION CONTROL
		SWFWMD WETLAND LINE
		25' OFFSET FROM SWFWMD WETLAND LINE SHOWN FOR INFORMATIONAL PURPOSES
		EX. ASPHALT TO BE SAW-CUT & REMOVED (±149,000 SF)**
		EX. ASPHALT TO REMAIN (±142,473 SF)
		2014 FEMA FLOOD BOUNDARY

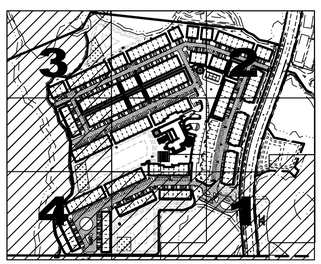
NOTES:
1. * Existing drainage structures per approved Heidt & Associates plans dated January 12, 2005 (Project No. PDH MP 008)

2. ** Where marked for removal, all existing curb and asphalt shall be removed entirely, including base and stabilization layers, and backfilled with material suitable for sod & landscape plantings, except where base & stabilization can be reused for new drives and building pads.

3. Any disturbed right-of-way shall be returned to predevelopment or better condition.

Project lies within Flood Zones "X & AE" as shown on FIRM Panel No. 12101C0437F, dated September 26, 2014

NO WETLAND IMPACTS OR MITIGATION ARE PROPOSED IN THIS PROJECT



KEY MAP

DATE	DESCRIPTION	BY
	REVISIONS	

Engineering Business Certificate of Authorization No.: 26548

Fuxan Engineering, Inc.
15018 Maurine Cove Ln.
Odessa, Florida 33556
Phone: 813-244-6194

DAVID G. FUXAN
No. 33133
STATE OF FLORIDA
PROFESSIONAL ENGINEER

DATE:
DAVID G. FUXAN P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER

DEMOLITION PLAN (2)

JOB NO. 2015-MP-01	ANAND VIHAR Meadow Pointe Tract 14, Unit 3
DESIGN FUXAN	
DRAWN SOMERVILLE	PREPARED FOR: Anand Vihar, LLC
DATE 12-18-2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE DEMO	SHEET 5 OF 20 SHEETS

WETLAND "42J"

42J
SH=59.20
NP=58.45

WCA I

S.W.F.W.M.D. UPLAND PRESERVATION AREA "3B"
O.R. Book 5064, Page 1572

UPLAND PRESERVATION EASEMENT

SWFWMD WETLAND LINE (TYP.)

15' WETLAND BUFFER (MIN.)

15.00' (MIN.)

15.00'

25.00'

CUT & REMOVE ±164 LF EX. 12" ROOF DRAIN AND (2) YARD INLETS

FLOOD ZONE "AE" EL.60.93 (NGVD29) (60.1 NAVD88)

FLOOD ZONE "X"

FLOOD ZONE "AE" EL.60.73 (NGVD29) (59.9 NAVD88)

FLOOD ZONE "X"

REMOVE EX. 12" ROOF DRAIN

EX. 12" ROOF DRAIN

EXISTING LIGHT POLE (TYP.)

EX. R1-1 30" x 30" W/ D3 STREET NAME SIGNS TO REMAIN

CUT, CAP & REMOVE UTILITY SERVICES AS CLOSE TO EDGE OF ASPHALT AS POSSIBLE (TYP. FOR ALL SERVICES TO BE REMOVED)

CUT & RECONNECT UTILITY SERVICES 32' FROM CENTERLINE (TYP. ALL SERVICES TO REMAIN)

REMOVE EX. 30" RCP

EX. FIRE HYDRANT TO REMAIN

32' (TYP)

FLOOD ZONE "AE" EL.60.73 (NGVD29) (59.9 NAVD88)

FLOOD ZONE "X"

REMOVE EX. 12" RD

FLOOD ZONE "AE" EL.60.83 (NGVD29) (60.0 NAVD88)

FLOOD ZONE "X"

REMOVE EX. 12" RD

EX. FIRE HYDRANT TO REMAIN

SADDLETON DRIVE

BRICKTON LANE

REMOVE EX. R1-1 30" x 30" W/ D3 STREET NAME SIGNS

REMOVE 271 LF EX. 8" PVC

REMOVE EX. 24" RCP

CUT & RECONNECT EX. WATER SERVICE

SAW-CUT ASPHALT 12' FROM EXISTING CENTERLINE, REMOVE ASPHALT & CURB WITHIN BOUNDARY AS SHOWN (TYPICAL)

COORDINATE WITH TECO TO RELOCATE EX. TRANSFORMER (TYP.)

CUT & RECONNECT SEWER SERVICE

COORDINATE WITH TECO TO REMOVE EX. TRANSFORMER

REMOVE & REPLACE EX. SEWER SERVICE

REMOVE & REPLAC EX. SEWER MANHOLE B-3

REMOVE (2) EX. R1-1 30" x 30" W/ D3 STREET NAME SIGNS

REMOVE 216 LF EX. 8" PVC

REMOVE EX. 18" RCP

REMOVE EX. 18" RCP

(2) EX. CASE II 18" x 18" RED REFLECTORS PER FDOT INDEX 17349 TO REMAIN

COORDINATE WITH TECO TO RELOCATE EX. TRANSFORMER (TYP.)

RELOCATE EX. FIRE HYDRANT

COORDINATE WITH TECO TO RELOCATE EX. TRANSFORMER (TYP.)

RELOCATE EX. FIRE HYDRANT

RIDDLETON LANE

BRIGGSTON WAY

32' (TYP.)

33.2'

107 LF TO BE REMOVED

CUT & REMOVE ±437 LF EX. WM W/ SERVICES, ±429 LF 8" FIRE, (1) F.H, ±128 LF SEWER MAIN W/ SERVICES (S), ±107 LF SEWER MAIN W/ SERVICES (N), (2) SEWER M.H, ±300 LF UNDERDRAIN.

EX. R1-1 30" x 30" W/ D3 STREET NAME SIGNS TO REMAIN

EXISTING LIGHT POLE (TYP.)

EXISTING TRANSFORMER (TYP.)

RELOCATE EX. FIRE HYDRANT

37.0'

REMOVE EX. 36" RCP

FLOOD ZONE "X"

FLOOD ZONE "AE" EL.60.83 (NGVD29) (60.0 NAVD88)

REMOVE EX. 24" RCP

REMOVE EX. 36" RCP

EROSION CONTROL (TYP.)

(2) EX. CASE II 18" x 18" RED REFLECTORS PER FDOT INDEX 17349 TO REMAIN

CUT, REMOVE, AND BRICK/CAP STORM DRAINAGE LINES SHOWN TO BE REMOVED. RE-USE MATERIALS AS CONDITION AND SPECIFICATIONS ALLOW.

CALL 48 HOURS BEFORE YOU DIG
IT'S THE LAW! DIAL 811
Know what's below. Call before you dig.
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

REMOVE (2) EX. R1-1 30" x 30" W/ D3 STREET NAME SIGNS

ONSERVATION AREA

WCA I

JPLAND AREA "3B"

SEE SHEET 7 FOR CONTINUATION

SEE SHEET 5 FOR CONTINUATION

SEE SHEET 4 FOR CONTINUATION

N

80 40 0 40 80

SCALE: 1" = 40'

LEGEND

EXISTING (REMAIN)	EXISTING (REMOVE)	
		STORM DRAINAGE STRUCTURE
		DRAINAGE STRUCTURE NUMBER*
		EX. UTILITY STRUCTURES
		EX. TRAFFIC SIGNAGE
		PRE-DEVELOPMENT EX. GRADE
		EXISTING DEVELOPMENT GRADE
		STAKED EROSION CONTROL
		SWFWMD WETLAND LINE
		25' OFFSET FROM SWFWMD WETLAND LINE SHOWN FOR INFORMATIONAL PURPOSES
		EX. ASPHALT TO BE SAW-CUT & REMOVED (±149,000 SF)**
		EX. ASPHALT TO REMAIN (±142,473 SF)
		2014 FEMA FLOOD BOUNDARY

NOTES:
1. * Existing drainage structures per approved Heidt & Associates plans dated January 12, 2005 (Project No. PDH MP 008)

2. ** Where marked for removal, all existing curb and asphalt shall be removed entirely, including base and stabilization layers, and backfilled with material suitable for sod & landscape plantings, except where base & stabilization can be reused for new drives and building pads.

3. Any disturbed right-of-way shall be returned to predevelopment or better condition.

Project lies within Flood Zones "X & AE" as shown on FIRM Panel No. 12101C0437F, dated September 26, 2014

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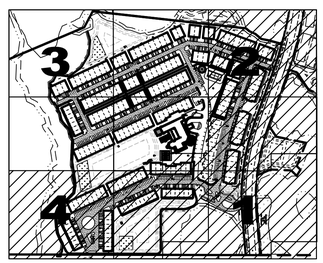

KEY MAP

DATE	DESCRIPTION	BY

REVISIONS

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DAVID G. FUXAN No. 33133 STATE OF FLORIDA PROFESSIONAL ENGINEER
DATE:
DAVID G. FUXAN P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER

DEMOLITION PLAN (3)

JOB NO. 2015-MP-01	ANAND VIHAR Meadow Pointe Tract 14, Unit 3
DESIGN FUXAN	
DRAWN SOMERVILLE	PREPARED FOR: Anand Vihar, LLC
DATE 12-18-2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE DEMO	SHEET 6 OF 20 SHEETS

SEE SHEET 6 FOR CONTINUATION

SEE SHEET 5 FOR CONTINUATION

SEE SHEET 4 FOR CONTINUATION

WETLAND CONSERVATION AREA

S.W.F.W.M.D. UPLAND PRESERVATION AREA "3B"

O.R. Book 5064, Page 1572

WCA I

WCA II

WETLAND "53"

RIDDLETON LANE

BRIGGSTON WAY

CRAVENMOOR DRIVE

(2) EX. CASE II 18" x 18" RED REFLECTORS PER FDOT INDEX 17349 TO REMAIN

COORDINATE WITH TECO TO RELOCATE EX. TRANSFORMER (TYP.)

RELOCATE EX. FIRE HYDRANT

COORDINATE WITH TECO TO RELOCATE EX. LIGHT POLE (TYP.)

EX. R1-1 30" x 30" W/ D3 STREET NAME SIGNS TO REMAIN

EXISTING LIGHT POLE (TYP.)

EXISTING TRANSFORMER (TYP.)

EROSION CONTROL (TYP.)

FLOOD ZONE "X"

FLOOD ZONE "AE" EL.60.83 (NGVD29) (60.0 NAVD88)

CUT, REMOVE, AND BRICK/CAP STORM DRAINAGE LINES SHOWN TO BE REMOVED. RE-USE MATERIALS AS CONDITION AND SPECIFICATIONS ALLOW.

CUT & REMOVE ±437 LF EX. WM W/ SERVICES, ±429 LF 8" FIRE, (1) F.H, ±128 LF SEWER MAIN W/ SERVICES (S), ±107 LF SEWER MAIN W/ SERVICES (N), (2) SEWER M.H, ±300 LF UNDERDRAIN.

107 LF TO BE REMOVED

REMOVE EX. 24" RCP

REMOVE EX. 36" RCP

REMOVE EX. 18" RCP

REMOVE EX. 12" RCP

REMOVE (2) EX. R1-1 30" x 30" W/ D3 STREET NAME SIGNS

SAW-CUT ASPHALT 12' FROM EXISTING CENTERLINE, REMOVE ASPHALT & CURB WITHIN BOUNDARY AS SHOWN (TYPICAL)

EXISTING TRANSFORMER (TYP.) TO REMAIN

EX. TRANSFORMER TO REMAIN (TYP.)

EX. FIRE HYDRANT TO REMAIN

CUT & REMOVE ±146 LF EX. 12" ROOF DRAIN AND (2) YARD INLETS

CUT, CAP & REMOVE UTILITY SERVICES AS CLOSE TO EDGE OF ASPHALT AS POSSIBLE (TYP. ALL SERVICES TO BE REMOVED)

CUT & RECONNECT UTILITY SERVICES 32' FROM CENTERLINE (TYP. FOR SERVICES TO REMAIN)

SAW-CUT & REMOVE ±103 LF 24" RCP

EX. WATER & SEWER SERVICES TO BE REMOVED (TYPICAL)

REMOVE EX. TOWNHOUSE BLDG.

EX. TRASH COMPACTOR TO REMAIN

EX. R1-2 TO REMAIN

EX. R4-7

EX. OM1-1 TO REMAIN

SWFWMD WETLAND LINE

25' WETLAND BUFFER

UPLAND PRESERVATION EASEMENT

25.00' (TYP.)

CALL 48 HOURS BEFORE YOU DIG

IT'S THE LAW! DIAL 811

Know what's below. Call before you dig.

SUNSHINE STATE ONE CALL OF FLORIDA, INC.

SCALE: 1" = 40'

LEGEND

EXISTING (REMAIN)	EXISTING (REMOVE)	
		STORM DRAINAGE STRUCTURE
(8)	(8)	DRAINAGE STRUCTURE NUMBER*
		EX. UTILITY STRUCTURES
		EX. TRAFFIC SIGNAGE
+15.00		PRE-DEVELOPMENT EX. GRADE
		EXISTING DEVELOPMENT GRADE
		STAKED EROSION CONTROL
		SWFWMD WETLAND LINE
		25' OFFSET FROM SWFWMD WETLAND LINE SHOWN FOR INFORMATIONAL PURPOSES
		EX. ASPHALT TO BE SAW-CUT & REMOVED (±149,000 SF)**
		EX. ASPHALT TO REMAIN (±142,473 SF)
		2014 FEMA FLOOD BOUNDARY

NOTES:

1. * Existing drainage structures per approved Heidt & Associates plans dated January 12, 2005 (Project No. PDH MP 008)

2. ** Where marked for removal, all existing curb and asphalt shall be removed entirely, including base and stabilization layers, and backfilled with material suitable for sod & landscape plantings, except where base & stabilization can be reused for new drives and building pads.

3. Any disturbed right-of-way shall be returned to predevelopment or better condition.

Project lies within Flood Zones "X & AE" as shown on FIRM Panel No. 12101C0437F, dated September 26, 2014

NO WETLAND IMPACTS OR MITIGATION ARE PROPOSED IN THIS PROJECT

KEY MAP

DATE	DESCRIPTION	BY

REVISIONS

Engineering Business Certificate of Authorization No.: 26548

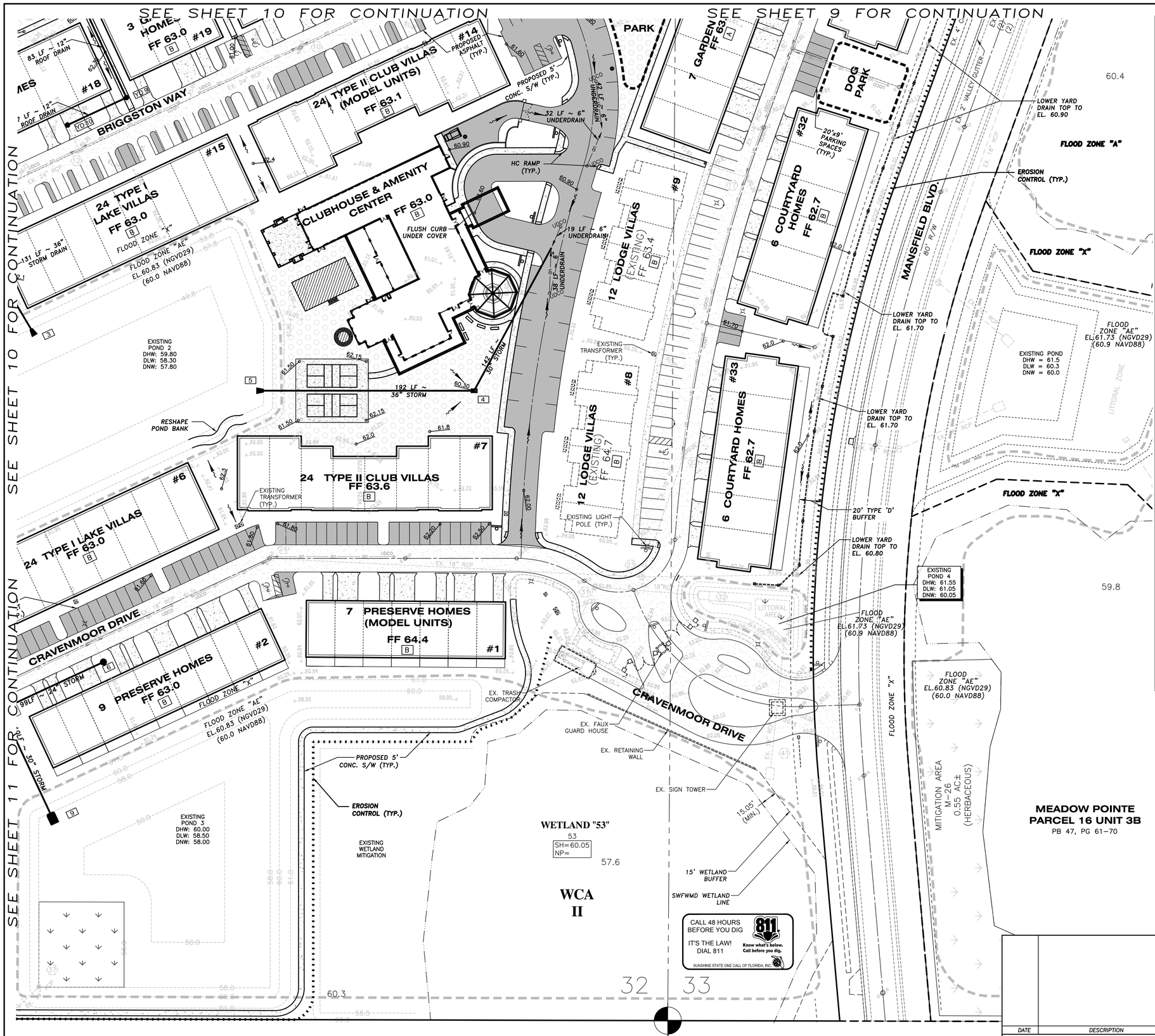
Fuxan Engineering, Inc.

15018 Maurine Cove Ln.
Odessa, Florida 33556
Phone: 813-244-6194

DAVID G. FUXAN P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER

DEMOLITION PLAN (4)

JOB NO. 2015-MP-01	ANAND VIHAR Meadow Pointe Tract 14, Unit 3
DESIGN FUXAN	
DRAWN SOMERVILLE	PREPARED FOR: Anand Vihar, LLC
DATE 12-18-2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE DEMO	SHEET 7 OF 20 SHEETS



PROPOSED DRAINAGE STRUCTURE DATA

(EXISTING STRUCTURES PER APPROVED PLANS BY HEIDT & ASSOCIATES, REF. JOB NO: PDH MP 008)

1	MITERED END SECTION INV.=53.80
2	MANHOLE TOP=61.00 INV.=54.20
3	MITERED END SECTION INV.=53.80
4	TYPE "C" GTI W/ 4'x5' BOTTOM TOP=60.30 INV.=55.00
5	MITERED END SECTION INV.=53.80
6	MANHOLE TOP=61.60 INV.=55.40
7	MANHOLE TOP=61.80 INV.=55.00
8	MANHOLE TOP=61.60 INV.=54.50
9	MITERED END SECTION INV.=53.80
YD 1	YARD DRAIN INLET TOP=62.00 INV.=60.00
YD 2	YARD/ROOF DRAIN MH TOP=62.00 INV.=58.00
YD 3	YARD/ROOF DRAIN MH TOP=61.50 INV.=59.50
YD 4	YARD/ROOF DRAIN MH TOP=61.50 INV.=58.50
YD 5	YARD DRAIN INLET TOP=60.20 INV.=57.70
YD 6	YARD/ROOF DRAIN MH TOP=61.50 INV.=57.00
YD 7	YARD/ROOF DRAIN MH (4' DIAMETER) TOP=61.50 INV.=56.55
YD 8	YARD DRAIN INLET TOP=60.20 INV.=57.70
YD 9	YARD/ROOF DRAIN MH TOP=61.50 INV.=57.20
YD 10	YARD/ROOF DRAIN MH (4' DIAMETER) TOP=61.50 INV.=56.86
YD 11	YARD DRAIN INLET TOP=60.30 INV.=58.30
YD 12	YARD/ROOF DRAIN MH TOP=60.50 INV.=58.50
YD 13	YARD/ROOF DRAIN MH TOP=60.30 INV.=58.00

NOTE: INSTALL CHAINS ON ON-SITE INLET GRATES

N

80 40 0 40 80

SCALE: 1" = 40'

LEGEND

EXISTING	PROPOSED	
		STORM DRAINAGE STRUCTURE
8	2	EXISTING STRUCTURE NO.* / PROPOSED STRUCTURE NO.
+15.00		PRE-DEVELOPMENT EX. GRADE
52.00		EXISTING DEVELOPMENT GRADE
	52.00	PROPOSED GRADE
		DIRECTION OF SLOPE
		STAKED EROSION CONTROL
		SWFWMD WETLAND LINE
		25' OFFSET FROM SWFWMD WETLAND LINE SHOWN FOR INFORMATIONAL PURPOSES
		NEW ASPHALT PAVEMENT 53,644± S.F. (ON-SITE PARKING) 1,104± SF (OFF-SITE DRIVEWAY)
		NEW CONCRETE 78,028± S.F.
		PARK AREA 263,161± S.F.
		2014 FEMA FLOOD BOUNDARY

NOTES:
1. All roof runoff shall be directed to parking areas or roof drain systems or be allowed to sheet flow into immediately adjacent on-site storm ponds.
2. Roof drain system to be 12" diameter ADS N-12 or equal smooth interior wall. Min. 0.5% slope.
3. Spot elevations shown hereon are at asphalt surface and/or finished ground surface elevation.

* NOTE: Existing drainage structures per approved Heidt & Associates plans dated January 12, 2005 (Project No. PDH MP 008)

Project lies within Flood Zones "X & AE" as shown on FIRM Panel No. 12101C0437F, dated September 26, 2014

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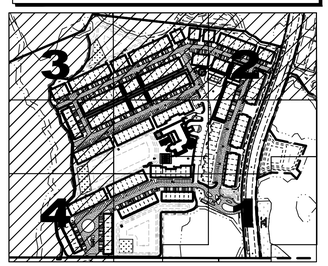

KEY MAP

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REVISIONS

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15018 Maurine Cove Ln.
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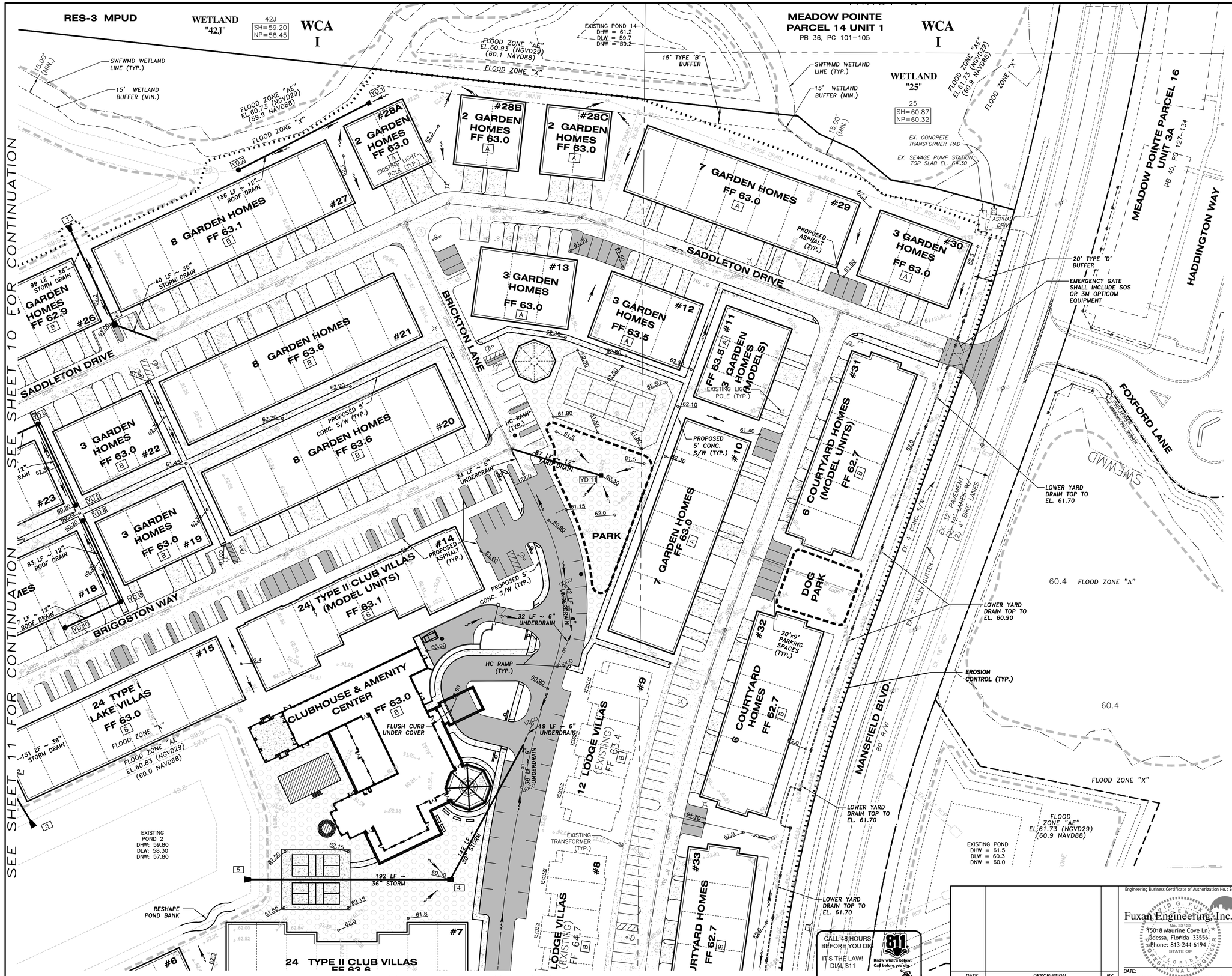
DAVID G. FUXAN No. 33133 STATE OF FLORIDA PROFESSIONAL ENGINEER
DATE:
DAVID G. FUXAN P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER

GRADING & DRAINAGE PLAN (1)

JOB NO. 2015-MP-01	ANAND VIHAR
DESIGN FUXAN	Meadow Pointe Tract 14, Unit 3
DRAWN SOMERVILLE	PREPARED FOR: Anand Vihar, LLC
DATE 12-18-2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE GDP	SHEET 8 OF 20 SHEETS



SCALE: 1" = 40'

LEGEND

EXISTING	PROPOSED	
		STORM DRAINAGE STRUCTURE
		EXISTING STRUCTURE NO.*
	2	PROPOSED STRUCTURE NO.
+15.00		PRE-DEVELOPMENT EX. GRADE
+52.00		EXISTING DEVELOPMENT GRADE
	52.00	PROPOSED GRADE
		DIRECTION OF SLOPE
		STAKED EROSION CONTROL
		SWFWMD WETLAND LINE
		25' OFFSET FROM SWFWMD WETLAND LINE SHOWN FOR INFORMATIONAL PURPOSES
		NEW ASPHALT PAVEMENT 53,644± S.F. (ON-SITE PARKING) 1,104± SF (OFF-SITE DRIVEWAY)
		NEW CONCRETE 78,028± S.F.
		PARK AREA 263,161± S.F.
		2014 FEMA FLOOD BOUNDARY

NOTES:
1. All roof runoff shall be directed to parking areas or roof drain systems or be allowed to sheet flow into immediately adjacent on-site storm ponds.
2. Roof drain system to be 12" diameter ADS N-12 or equal smooth interior wall. Min. 0.5% slope.
3. Spot elevations shown hereon are at asphalt surface and/or finished ground surface elevation.

* NOTE: Existing drainage structures per approved Heidt & Associates plans dated January 12, 2005 (Project No. PDH MP 008)

Project lies within Flood Zones "X & AE" as shown on FIRM Panel No. 12101C0437F, dated September 26, 2014

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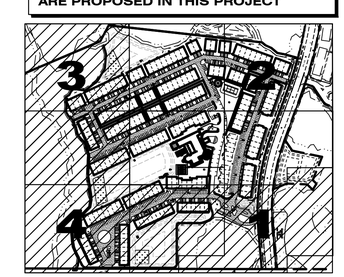

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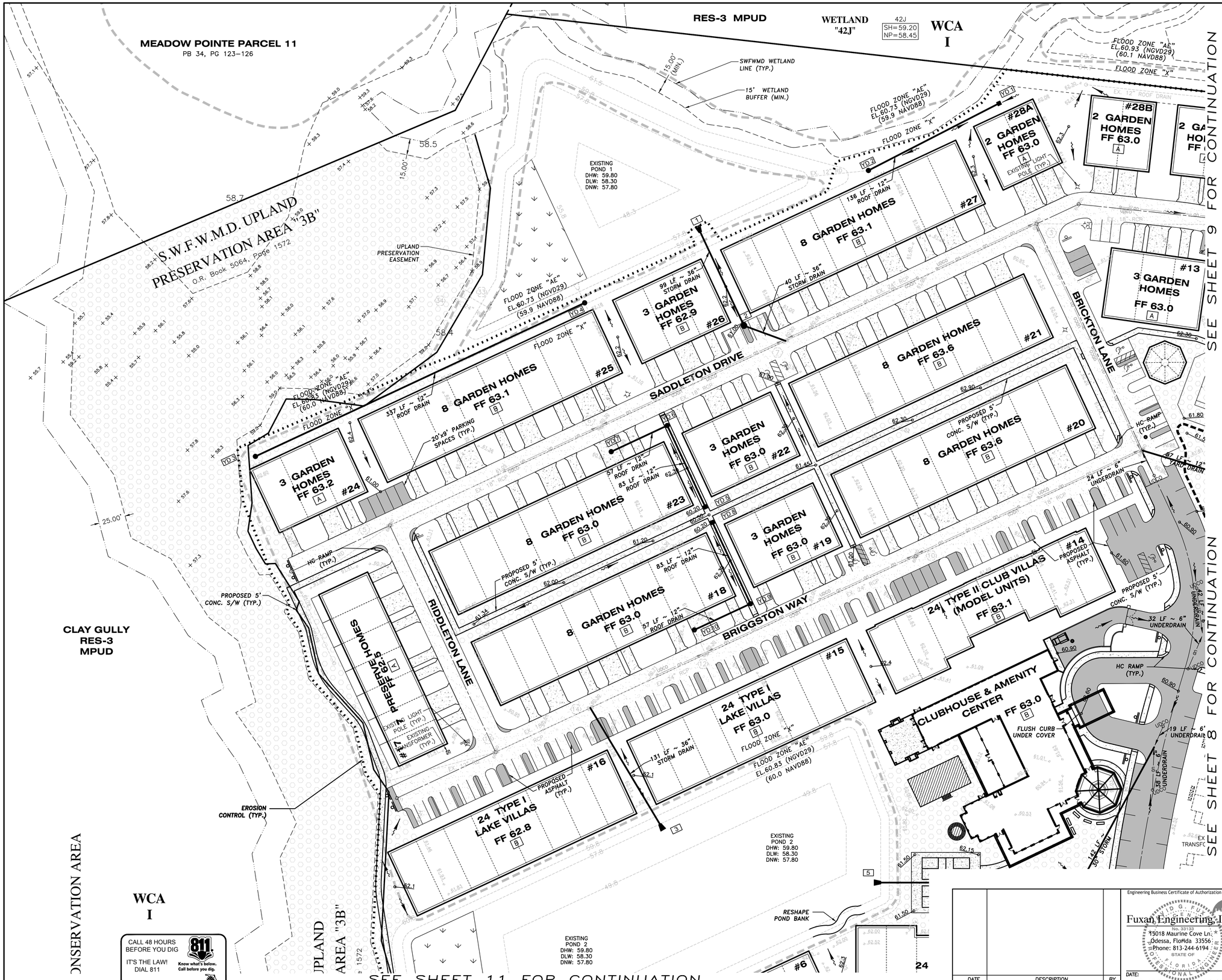
GRADING & DRAINAGE PLAN (2)

JOB NO. 2015-MP-01	ANAND VIHAR Meadow Pointe Tract 14, Unit 3
DESIGN FUXAN	
DRAWN SOMERVILLE	PREPARED FOR: Anand Vihar, LLC
DATE 12-18-2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE GDP	SHEET 9 OF 20 SHEETS



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SUNSHINE STATE ONE CALL OF FLORIDA, INC.

N

80 40 0 40 80

SCALE: 1" = 40'

LEGEND

EXISTING	PROPOSED	
		STORM DRAINAGE STRUCTURE
(8)		EXISTING STRUCTURE NO.*
	2	PROPOSED STRUCTURE NO.
+15.00		PRE–DEVELOPMENT EX. GRADE
+52.00		EXISTING DEVELOPMENT GRADE
	52.00	PROPOSED GRADE
		DIRECTION OF SLOPE
		STAKED EROSION CONTROL
		SWFWMD WETLAND LINE
		25' OFFSET FROM SWFWMD WETLAND LINE SHOWN FOR INFORMATIONAL PURPOSES
		NEW ASPHALT PAVEMENT 53,644± S.F. (ON–SITE PARKING) 1,104± SF (OFF–SITE DRIVEWAY)
		NEW CONCRETE 78,028± S.F.
		PARK AREA 263,161± S.F.
		2014 FEMA FLOOD BOUNDARY

NOTES:
1. All roof runoff shall be directed to parking areas or roof drain systems or be allowed to sheet flow into immediately adjacent on–site storm ponds.

2. Roof drain system to be 12" diameter ADS N–12 or equal smooth interior wall. Min. 0.5% slope.

3. Spot elevations shown hereon are at asphalt surface and/or finished ground surface elevation.

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Project lies within Flood Zones "X & AE" as shown on FIRM Panel No. 12101C0437F, dated September 26, 2014

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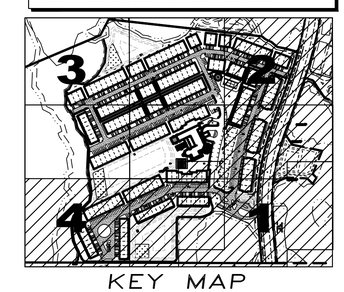

KEY MAP

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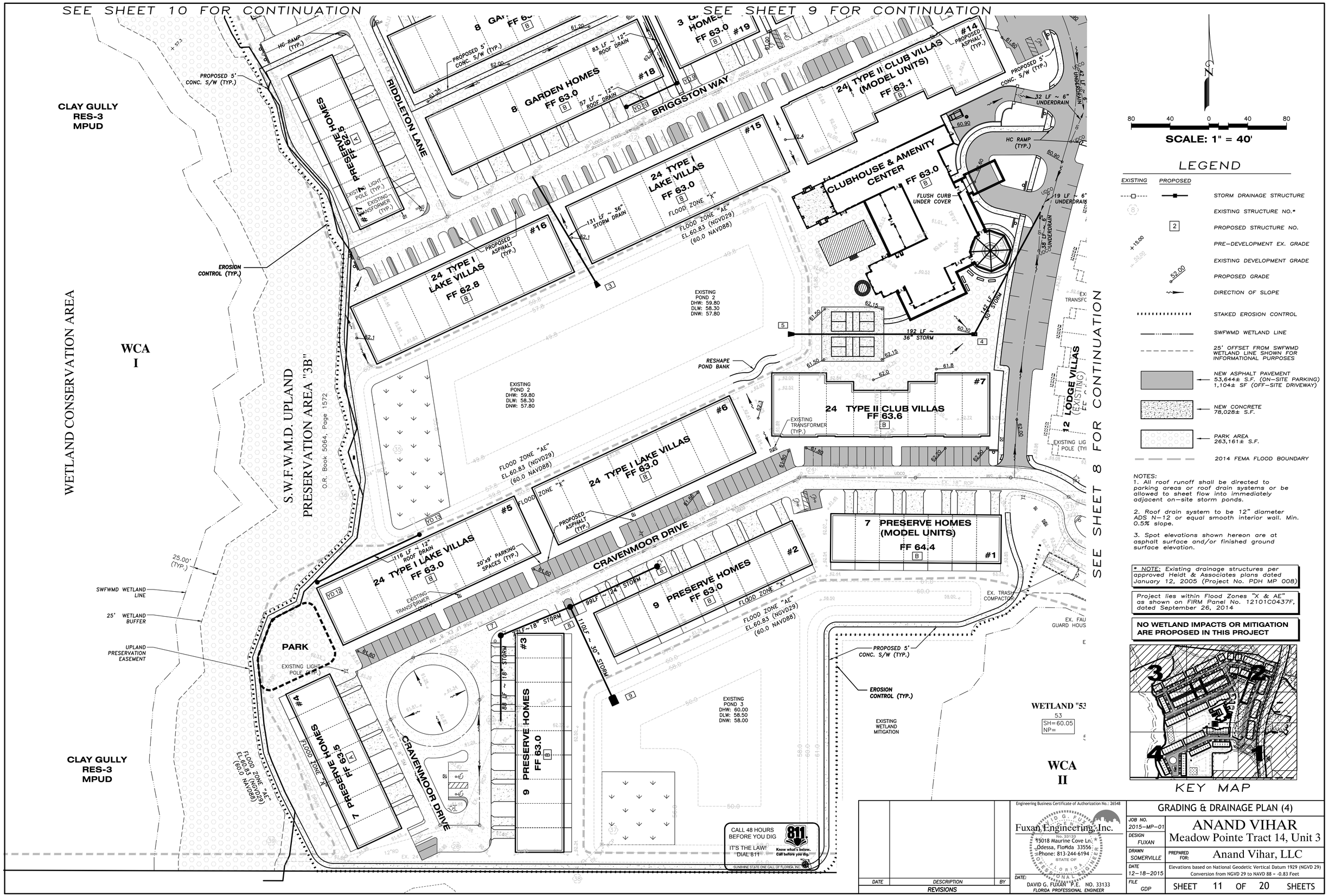
Phone: 813-244-6194

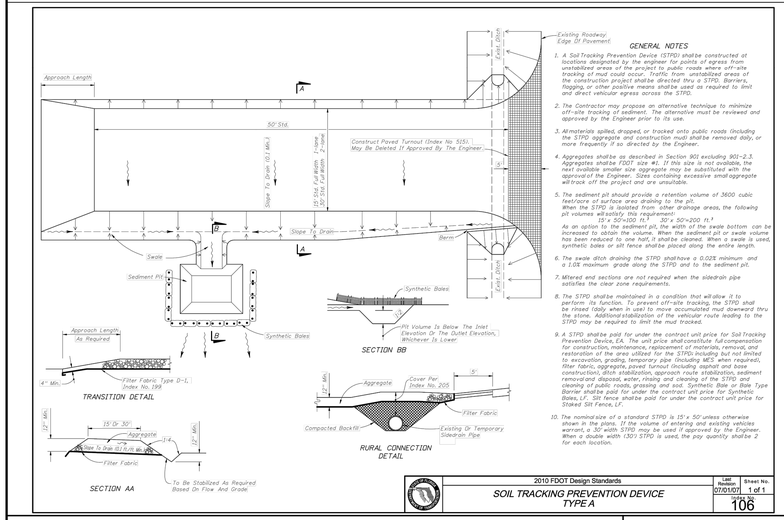
DAVID G. FUXAN P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER

DATE:

GRADING & DRAINAGE PLAN (3)

JOB NO. 2015–MP–01	ANAND VIHAR Meadow Pointe Tract 14, Unit 3
DESIGN FUXAN	
DRAWN SOMERVILLE	PREPARED FOR: Anand Vihar, LLC
DATE 12–18–2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = –0.83 Feet
FILE GDP	SHEET 10 OF 20 SHEETS

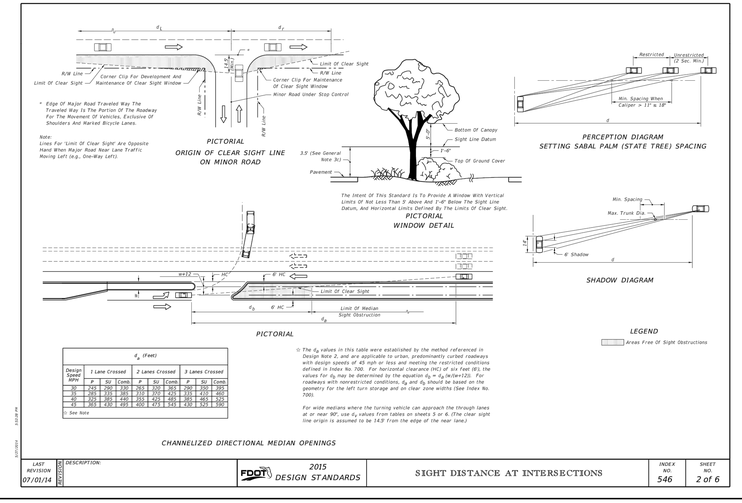

SEE SHEET 10 FOR CONTINUATION
SEE SHEET 9 FOR CONTINUATION
SEE SHEET 8 FOR CONTINUATION
CLAY GULLY
RES-3
MPUD
WETLAND CONSERVATION AREA
S.W.F.W.M.D. UPLAND
PRESERVATION AREA "3B"
O.R. Book 5064, Page 1572
WCA
I
WCA
II
RIDDLETON LANE
BRIGGSTON WAY
CRAVENMOOR DRIVE
8 GARDEN HOMES
FF 63.0
#18
#19
#14
24 TYPE II CLUB VILLAS
(MODEL UNITS)
FF 63.1
CLUBHOUSE & AMENITY
CENTER
FF 63.0
#15
24 TYPE I
LAKE VILLAS
FF 63.0
#16
24 TYPE I
LAKE VILLAS
FF 62.8
#17
7 PRESERVE HOMES
24 TYPE II CLUB VILLAS
FF 63.6
#7
#6
24 TYPE I LAKE VILLAS
FF 63.0
#5
24 TYPE I LAKE VILLAS
FF 63.0
7 PRESERVE HOMES
(MODEL UNITS)
FF 64.4
#1
9 PRESERVE HOMES
FF 63.0
#2
9 PRESERVE HOMES
FF 63.0
#3
7 PRESERVE HOMES
FF 63.0
#4
PARK
EXISTING
POND 2
DHW: 59.80
DLW: 58.30
DNW: 57.80
EXISTING
POND 3
DHW: 60.00
DLW: 58.50
DNW: 58.00
EXISTING
WETLAND
MITIGATION
WETLAND "53"
SH=60.05
NP=
FLOOD ZONE "AE"
EL.60.83 (NGVD29)
(60.0 NAVD88)
FLOOD ZONE "X"
SWFWMD WETLAND LINE
25' WETLAND BUFFER
UPLAND PRESERVATION EASEMENT
25.00' (TYP.)
EROSION CONTROL (TYP.)
PROPOSED 5' CONC. S/W (TYP.)
HC RAMP (TYP.)
PROPOSED ASPHALT (TYP.)
RESHAPE POND BANK
FLUSH CURB UNDER COVER
EXISTING TRANSFORMER (TYP.)
EXISTING LIGHT POLE (TYP.)
EX. TRASH COMPACTOR
EX. FAU GUARD HOUS
EXISTING LIG POLE (TYP
12 LODGE VILLAS (EXISTING)
83 LF ~ 12" ROOF DRAIN
57 LF ~ 12" ROOF DRAIN
116 LF ~ 12" ROOF DRAIN
131 LF ~ 36" STORM DRAIN
192 LF ~ 36" STORM
142 LF ~ 30" STORM
99LF ~ 24" STORM
110LF ~ 30" STORM
71LF~18" STORM
188 LF ~ 18" STORM
20'x9' PARKING SPACES (TYP.)
32 LF ~ 6" UNDERDRAIN
19 LF ~ 6" UNDERDRAIN
38 LF ~ 6" UNDERDRAIN
42 LF ~ 6" UNDERDRAIN
CALL 48 HOURS BEFORE YOU DIG
IT'S THE LAW! DIAL 811
Know what's below. Call before you dig.
SUNSHINE STATE ONE-CALL OF FLORIDA, INC.
SCALE: 1" = 40'
80 40 0 40 80
LEGEND
EXISTING
PROPOSED
STORM DRAINAGE STRUCTURE
EXISTING STRUCTURE NO.*
PROPOSED STRUCTURE NO.
PRE-DEVELOPMENT EX. GRADE
EXISTING DEVELOPMENT GRADE
PROPOSED GRADE
DIRECTION OF SLOPE
STAKED EROSION CONTROL
SWFWMD WETLAND LINE
25' OFFSET FROM SWFWMD WETLAND LINE SHOWN FOR INFORMATIONAL PURPOSES
NEW ASPHALT PAVEMENT 53,644± S.F. (ON-SITE PARKING) 1,104± SF (OFF-SITE DRIVEWAY)
NEW CONCRETE 78,028± S.F.
PARK AREA 263,161± S.F.
2014 FEMA FLOOD BOUNDARY
NOTES:
1. All roof runoff shall be directed to parking areas or roof drain systems or be allowed to sheet flow into immediately adjacent on-site storm ponds.
2. Roof drain system to be 12" diameter ADS N-12 or equal smooth interior wall. Min. 0.5% slope.
3. Spot elevations shown hereon are at asphalt surface and/or finished ground surface elevation.
* NOTE: Existing drainage structures per approved Heidt & Associates plans dated January 12, 2005 (Project No. PDH MP 008)
Project lies within Flood Zones "X & AE" as shown on FIRM Panel No. 12101C0437F, dated September 26, 2014
NO WETLAND IMPACTS OR MITIGATION ARE PROPOSED IN THIS PROJECT
KEY MAP
DATE
DESCRIPTION
BY
REVISIONS
Engineering Business Certificate of Authorization No.: 26548
Fuxan Engineering, Inc.
15018 Maurine Cove Ln.
Odessa, Florida 33556
Phone: 813-244-6194
DAVID G. FUXAN
No. 33133
STATE OF FLORIDA
PROFESSIONAL ENGINEER
DATE:
DAVID G. FUXAN P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER
GRADING & DRAINAGE PLAN (4)
JOB NO. 2015-MP-01
DESIGN FUXAN
DRAWN SOMERVILLE
DATE 12-18-2015
FILE GDP
ANAND VIHAR
Meadow Pointe Tract 14, Unit 3
PREPARED FOR:
Anand Vihar, LLC
Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29)
Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
SHEET 11 OF 20 SHEETS



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 not egress through 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. When the STPD is isolated from other drainage areas, the following pit volumes will satisfy this requirement: $V = (43560/43560)(C)(A)(0.5)$ acre ft.[1] As an option to the 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 0.02ft minimum and a 1.0% maximum grade along the STPD and to the sediment pit.
7. Mitered end sections are not required when the sideslope 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 raised (jiggle) 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, removal, and restoration of the area utilized by the STPD including but not limited to excavation, backfill, compaction, grading, and sod, Synthetic Bale (including wire), 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.

2010 FDOT Design Standards	Last Revision	Sheet No.
SOIL TRACKING PREVENTION DEVICE TYPE A	07/01/07	1 of 1
	Index No.	106



d_a (feet)											
Design Speed MPH	1 Lane Crossed			2 Lanes Crossed			3 Lanes Crossed				
	P	SU	Comb.	P	SU	Comb.	P	SU	Comb.		
30	245	295	305	355	415	425	465	535	545		
35	305	355	365	415	495	505	525	625	635		
40	365	425	435	475	565	575	585	715	725		
45	405	475	485	525	625	635	645	795	805		

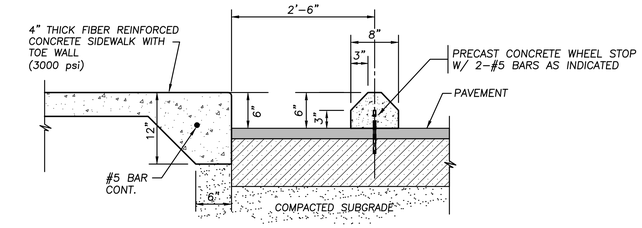
○ See Note

☆ The d_a values in this table were established by the method referenced in Design Note 2, and are applicable to urban, predominantly curbed roadways with design speeds of 45 mph or less and meeting the respirited conditions defined in Index No. 700. For horizontal clearance (HC) of six feet (6'), the values for d_b may be determined by the equation $d_b = d_a$ (6/d+12). For roadways with nonrestricted conditions, d_a and d_b should be based on the geometry for the left turn storage and on clear zone widths (See Index No. 700).

For wide medians where the turning vehicle can approach the through lanes at or near 90°, use d_a values from tables on sheets 5 or 6. (The clear sight line origin is assumed to be 14.5' from the edge of the near lane.)

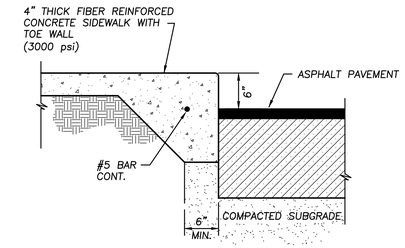
CHANNELIZED DIRECTIONAL MEDIAN OPENINGS

LAST REVISION	DESCRIPTION:	2015 FDOT DESIGN STANDARDS	SIGHT DISTANCE AT INTERSECTIONS	INDEX NO. 546	SHEET NO. 2 of 6
07/01/14					



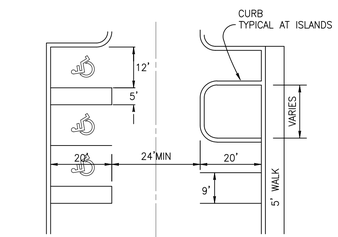
WHEEL STOP DETAIL

NTS



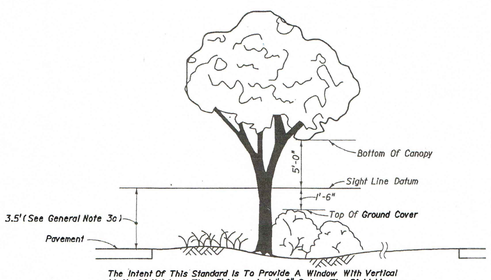
SIDEWALK/CURB DETAIL

NTS



PARKING / DRIVE DETAIL

NTS



The Intent Of This Standard Is To Provide A Window With Vertical Limits Of Not Less Than 5' Above And 1'-6" Below The Sight Line Datum, And Horizontal Limits Defined By The Limits Of Clear Sight.

PICTORIAL

WINDOW DETAIL

PROPOSED PAVEMENT STRUCTURE
ALL LOCAL ROADS

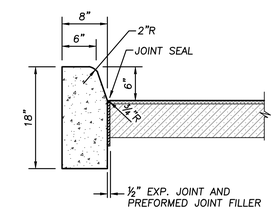
Layer Coefficients	Thickness
0.44 – Type SP-12.5 Asphalt Concrete Surface Course	1½"
0.15 – Crushed Concrete Base Course (LBR 150)	6"
0.08 – Stabilized Subgrade (LBR 40, 12" Min.)	12"

SN = (0.44) (1.50) + (0.15) (6) + (0.08) (12)

SN = 2.52

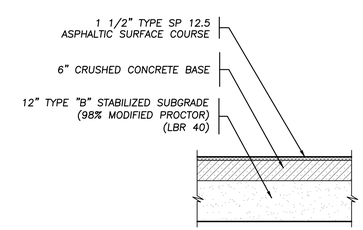
SN 2.52 > SN* 2.24

Use: 6" Crushed Concrete Base with 1-1/2" Type SP-12.5 A.C.S.C. and 12" Stabilized Subgrade (12" Min.)



TYPE D CURB

NTS



ASPHALT PAVEMENT SECTION

NTS

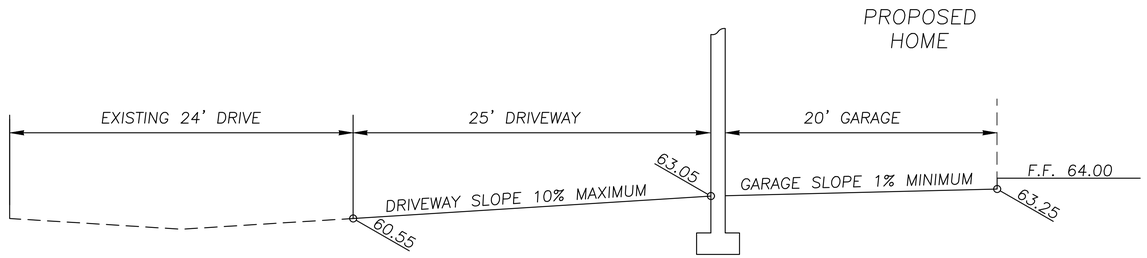
PAVEMENT CONSTRUCTION NOTES

1. Pavement wearing surface shall be asphaltic concrete of type and thickness shown in detail and shall meet current Department of Transportation Specifications.
2. Pavement base shall be soil-cement, as designated in plans, and shall be compacted to a minimum thickness as shown.
3. All Portland Cement Concrete shall have a minimum 28 day compressive strength of 3000 p.s.i.
4. Subgrade for soil-cement base construction shall be in accordance with D.O.T. Standard Specifications, latest edition.
5. Subgrade shall be be stablilized as necessary with a minimum LBR value of 20 which has been compacted to a minimum density of ninety-eight (98) percent , Modified Proctor. Subgrade shall be proof-rolled to grade, as directed by the Engineer and approved by the Engineer prior to placement of base course.
6. Soil-cement shall be with full blend borrow material using limerock, shell or other material as approved by the Engineer.
7. All curbs and gutters shall be placed on a foundation of Type "B" stabilized subgrade with a minimum LBR value of 40 (or a minimum FBV of 75) which has been compacted to a minimum density of ninety-eight (98) percent of the maximum density as determined by AASHTO T-180 for a minimum depth of twelve (12) inches.

ALTERNATIVE BASE MATERIAL
CRUSHED CONCRETE

Crushed concrete road base material should meet the following conditions:

1. Should be of uniform quality, free of all organics, steel rebar, asphalt debris, and any other deleterious material.
2. Should have a minimum Limerock Bearing Ratio (LBR) of 150, tested at a 300 foot frequency.
3. Single course lifts should not exceed 6-inches (loose).
4. Should conform to the gradation chart for graded aggregate base, FDOT Section 204, tested at a 500 foot frequency.
5. Should be compacted to a minimum of 98% of AASHTO T-180, tested at a 500 foot frequency.
6. Subgrade shall be be stablilized as necessary with a minimum LBR value of 40 which has been compacted to a minimum density of ninety-eight (98) percent , Modified Proctor. Subgrade shall be proof-rolled to grade, as directed by the Engineer and approved by the Engineer prior to placement of base course.



TYPICAL DRIVEWAY SECTION

NTS

DATE	DESCRIPTION	BY
	REVISIONS	

Engineering Business Certificate of Authorization No.: 26548

Fuxan Engineering, Inc.
15018 Maurine Cove Ln.
Odessa, Florida 33556
Phone: 813-244-6194

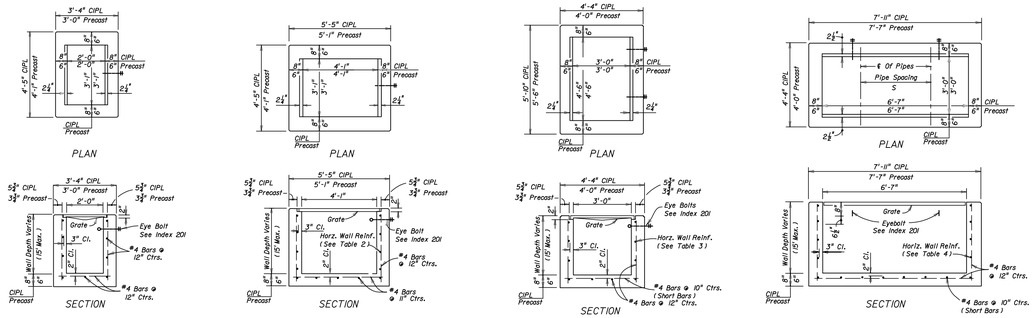
DAVID G. FUXAN No. 33133 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:

DAVID G. FUXAN P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER

DRAINAGE DETAILS

JOB NO. 2015-MP-01	ANAND VIHAR
DESIGN FUXAN	Meadow Pointe Tract 14, Unit 3
DRAWN SOMERVILLE	PREPARED FOR: Anand Vihar, LLC
DATE 12-18-2105	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE DD	SHEET 12 OF 20 SHEETS



HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 1)

WALL DEPTH	SCHEDULE	AREA (in^2/ft)	MAX. SPACING BARS	MAX. SPACING WWF
0'-15'	A12	0.20	12"	8"

TYPE C

Recommended Maximum Pipe Size:
2'-0" Wall - 18" Pipe
3'-1" Wall - 24" Pipe (18" where an 18" pipe enters a 2'-0" wall)

HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 2)

WALL DEPTH	SCHEDULE	AREA (in^2/ft)	MAX. SPACING BARS	MAX. SPACING WWF
0'-6'	A12	0.20	12"	8"
6'-10'	A6	0.20	6"	5"
10'-13'	A4	0.20	4"	3"
10'-15'	B5.5	0.24	$5\frac{1}{2}$"	5"

TYPE D

Recommended Maximum Pipe Size:
3'-1" Wall - 24" Pipe
4'-1" Wall - 36" Pipe

HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 3)

WALL DEPTH	SCHEDULE	AREA (in^2/ft)	MAX. SPACING BARS	MAX. SPACING WWF
0'-5'	A12	0.20	12"	8"
0'-7.5'	A6	0.20	6"	5"
7.5'-10'	B5.5	0.24	$5\frac{1}{2}$"	5"
10'-15'	C6.5	0.37	$6\frac{1}{2}$"	6"

TYPE E

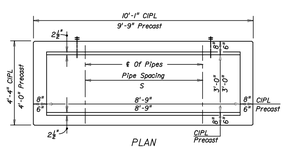
Recommended Maximum Pipe Size:
3'-0" Wall - 24" Pipe
4'-6" Wall - 36" Pipe

HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 4)

WALL DEPTH	SCHEDULE	AREA (in^2/ft)	MAX. SPACING BARS	MAX. SPACING WWF
0'-5'	B5.5	0.24	$5\frac{1}{2}$"	5"
5'-7'	C6.5	0.37	$6\frac{1}{2}$"	6"
7'-15'	D4.5	0.53	$4\frac{1}{2}$"	4"

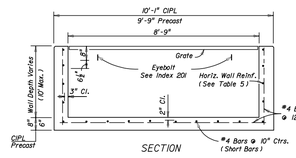
TYPE H (2 & 3-GRATE INLET)

Recommended Maximum Pipe Size:
3'-0" Wall - 24" Pipe
6'-7" Wall - 1-60" Pipe
Or 2-24" Pipe (S=3'-5")



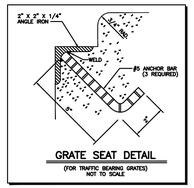
TYPE H (4-GRATE INLET)

Recommended Maximum Pipe Size:
3'-0" Wall - 24" Pipe
8'-9" Wall - 1-78" Pipe
Or 2-30" Pipe (S=4'-3")



HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 5)

WALL DEPTH	SCHEDULE	AREA (in^2/ft)	MAX. SPACING BARS	MAX. SPACING WWF
0'-5'	C3.5	0.37	$3\frac{1}{2}$"	3"
5'-10'	D4.5	0.53	$4\frac{1}{2}$"	4"



GENERAL NOTES

See Sheet 2 of 6.

DITCH BOTTOM INLET
TYPES C, D, E & H

Sheet No. 1 of 6
Index No. 232

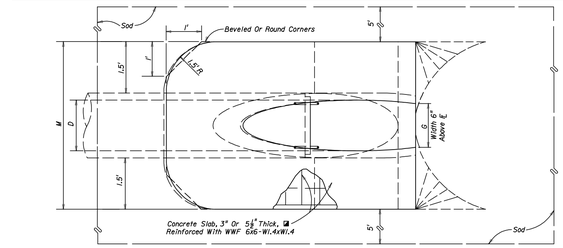
DIMENSIONS AND QUANTITIES

	D	X	A	B	C	E	F	G	H ◪	M Single Pipe	M Double Pipe	M Triple Pipe	M Quad. Pipe	N	$5\frac{1}{2}$" CONCRETE SLAB (CY) ◪ Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	SODDING (SQ. YDS.) Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
1:2 Slope	15"	2'-7"	1.92'	2.18'	4.10'	2.05'	5'	1.22'	2.9'	4.63'	7.21'	9.79'	12.37'	1.13'	0.38	0.58	0.77	0.96	21	24	27	30
	18"	2'-10"	1.97'	2.74'	4.71'	2.56'	6'	1.41'	3.4'	4.92'	7.75'	10.58'	13.42'	1.21'	0.44	0.65	0.87	1.09	22	25	28	31
	24"	3'-5"	2.06'	3.80'	5.38'	3.58'	7'	1.73'	3.4'	5.52'	8.92'	12.33'	15.73'	1.25'	0.54	0.83	1.12	1.42	24	28	32	35
	30"	4'-3"	2.15'	4.95'	7.10'	4.56'	8'	2.00'	3.4'	6.08'	10.33'	14.58'	18.83'	1.29'	0.66	1.09	1.50	1.91	26	31	35	40
	36"	5'-1"	2.25'	6.08'	8.33'	5.55'	9'	2.24'	3.4'	6.67'	11.75'	16.83'	21.92'	1.33'	0.81	1.38	1.95	2.51	28	34	39	45
	42"	5'-10"	2.34'	7.19'	9.55'	6.56'	10'	2.45'	3.4'	7.25'	13.25'	19.25'	25.25'	1.38'	0.97	1.70	2.45	3.19	30	37	43	50
	48"	6'-8"	2.43'	8.33'	10.76'	7.58'	11'	2.65'	3.4'	7.83'	14.58'	21.33'	28.08'	1.42'	1.13	2.04	2.93	3.84	32	39	47	54
	54"	7'-6"	2.52'	9.44'	11.96'	8.56'	12'	2.83'	3.4'	8.42'	16.08'	23.75'	31.42'	1.46'	1.29	2.38	3.58	4.72	34	42	51	59
	60"	8'-6"	2.62'	10.56'	13.18'	9.56'	14'	3.00'	4.4'	9.00'	17.50'	26.00'	34.50'	1.50'	1.51	2.89	4.28	5.68	36	45	55	64
	66"	9'-3"	2.71'	11.68'	14.39'	10.56'	15'	3.16'	4.4'	9.58'	18.75'	27.92'	37.08'	1.54'	1.68	3.25	4.84	6.43	38	48	58	68
	72"	10'-0"	2.80'	12.80'	15.60'	11.56'	16'	3.30'	4.4'	10.16'	20.16'	30.16'	40.16'	1.58'	1.89	3.74	5.59	7.45	40	51	62	73
1:4 Slope	15"	2'-7"	2.27'	4.09'	6.36'	4.03'	8'	1.22'	4.0'	4.63'	7.21'	9.79'	12.37'	1.19'	0.57	0.87	1.15	1.44	23	26	29	32
	18"	2'-10"	2.36'	5.10'	7.48'	5.03'	9'	1.41'	4.0'	4.92'	7.75'	10.58'	13.42'	1.21'	0.66	0.99	1.31	1.65	25	28	31	35
	24"	3'-5"	2.53'	6.18' Δ	9.17'	6.03' Δ	11'	1.73'	4.0'	5.52'	8.92'	12.33'	15.73'	1.25'	0.83	1.30	1.75	2.20	28	32	36	40
	30"	4'-3"	2.70'	7.25'	10.95'	9.03'	13'	2.00'	4.0'	6.08'	10.33'	14.58'	18.83'	1.29'	1.10	1.74	2.39	3.05	31	36	41	46
	36"	5'-1"	2.87'	8.31' ◇	14.18'	11.00' ◇◇	15'	2.24'	4.0'	6.67'	11.75'	16.83'	21.92'	1.33'	1.12	2.21	3.08	3.96	34	40	46	52
	42"	6'-0"	3.05'	15.37'	16.42'	13.03'	17'	2.45'	4.0'	7.25'	13.25'	19.25'	25.25'	1.38'	1.58	2.76	3.91	5.09	38	44	51	58
	48"	6'-9"	3.22'	15.43'	18.65'	15.03'	19'	2.65'	4.0'	7.83'	14.58'	21.33'	28.08'	1.42'	1.85	3.30	4.73	6.17	41	48	56	63
	54"	7'-6"	3.39'	17.49'	20.88'	17.03'	21'	2.83'	4.0'	8.42'	16.08'	23.75'	31.42'	1.46'	2.14	3.95	5.77	7.58	44	52	61	69
	60"	8'-3"	3.56'	19.55'	23.17'	19.03'	23'	3.00'	4.0'	9.00'	17.50'	26.00'	34.50'	1.50'	2.45	4.66	6.87	9.07	47	56	66	75
	66"	9'-0"	3.73'	21.62'	25.35'	21.03'	25'	3.16'	4.0'	9.58'	18.75'	27.92'	37.08'	1.54'	2.88	5.54	8.18	10.84	49	59	69	80
	72"	10'-0"	3.91'	23.68'	27.59'	23.03'	27'	3.30'	4.0'	10.16'	20.16'	30.16'	40.16'	1.58'	3.54	6.61	9.87	13.13	52	63	74	85

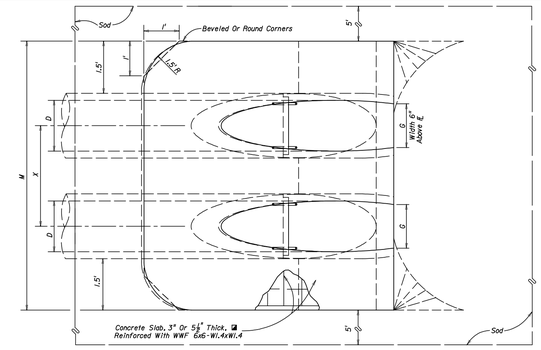
◪ See General Note No. 3, See Sheet 5 Of 6 For 3" Slab Quantities

◪ Values shown for estimating pipe quantities and are for information only.

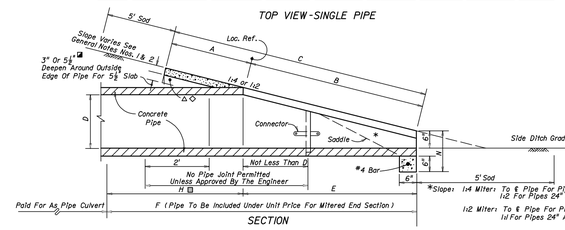
B E
Δ 6.42' Δ 6.25' Dimensions permitted to allow use of 8' standard pipe lengths.
◇ 10.40' ◇ 10.10' Dimensions permitted to allow use of 12' standard pipe lengths.
ΔΔ Concrete slab shall be deepened to form bridge across crown of pipe. See section below.



TOP VIEW-SINGLE PIPE



TOP VIEW-MULTIPLE PIPE

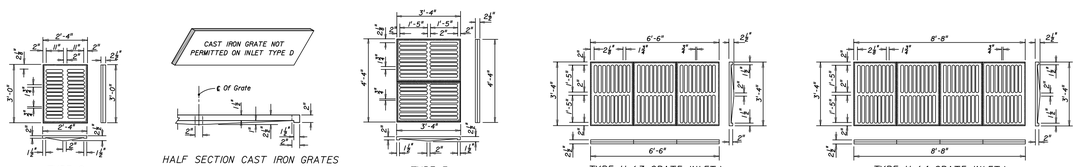


*Slopes: 1:4 Miter: To ℄ Pipe For Pipes 18" And Smaller. 1:2 For Pipes 24" And Larger.
1:2 Miter: To ℄ Pipe For Pipes 18" And Smaller. 1:1 For Pipes 24" And Larger.

NOTE: See sheet 6 for details and notes.

CROSS DRAIN MITERED END SECTION
SINGLE AND MULTIPLE ROUND CONCRETE PIPE

Sheet No. 1 of 6
Index No. 272



TYPE C
Approx. Weight 235 Lbs.

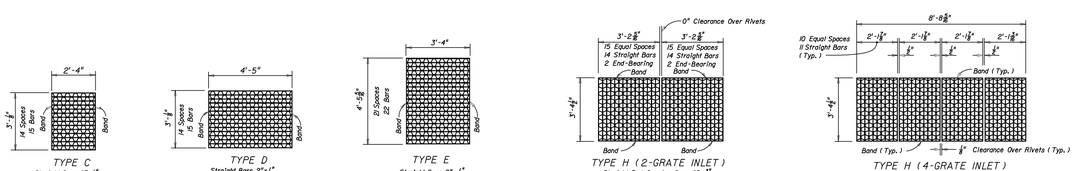
HALF SECTION CAST IRON GRATES

TYPE E
Approx. Weight 465 Lbs.

TYPE H (3-GRATE INLET)
Approx. Weight 725 Lbs.

TYPE H (4-GRATE INLET)
Approx. Weight 967 Lbs.

CAST IRON GRATES



TYPE C
Straight Bars 2"x$\frac{1}{4}$"
Reticuline Bars $1\frac{1}{2}$" x $\frac{3}{8}$"
Bands 2"x$\frac{1}{4}$"
Approx. Weight 104 Lbs.

TYPE D
Straight Bars 2"x$\frac{1}{4}$"
Reticuline Bars $1\frac{1}{2}$" x $\frac{3}{8}$"
Bands 2"x$\frac{1}{4}$"
Approx. Weight 190 Lbs.

TYPE E
Straight Bars 2"x$\frac{1}{4}$"
Reticuline Bars $1\frac{1}{2}$" x $\frac{3}{8}$"
Bands 2"x$\frac{1}{4}$"
Approx. Weight 215 Lbs.

TYPE H (2-GRATE INLET)
Straight End-Bearing Bars 2"x$\frac{1}{4}$"
Straight Bearing Bars 2"x$\frac{1}{4}$"
Reticuline Bars $1\frac{1}{2}$" x $\frac{3}{8}$"
Bonding Bars 2" x $\frac{1}{4}$"
Approx. Total Weight 310 Lbs.

TYPE H (4-GRATE INLET)
Straight End-Bearing Bars 2" x $\frac{1}{4}$"
Reticuline Bars $1\frac{1}{2}$" x $\frac{3}{8}$"
Bonding Bars 2" x $\frac{1}{4}$"
Approx. Total Weight 388 Lbs.

STEEL GRATES

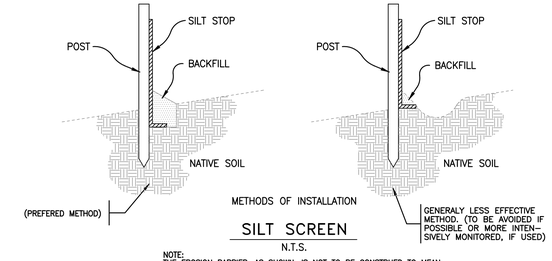
NOTE: Steel Grates Are Required On Inlets With Traversable Slots And On Inlets where Bicycle Traffic Is Anticipated.

GENERAL NOTES

1. These inlets are suitable for bicycle traffic and are to be used in ditches, medians and other areas subject to infrequent traffic loadings but are not to be placed in areas subject to any heavy wheel loads. These inlets may be placed in areas subject to occasional pedestrian traffic such as landscaped areas and pavement areas where pedestrians can walk around the inlet.
2. Inlets subject to minimal debris should be constructed without slots. Where debris is a problem inlets should be constructed with slots. Slotted inlets located within roadway clear zones and areas subject to bicycles and/or pedestrians shall have traversable slots. The traversable slot modification is not adaptable to Inlet Type H. Slots may be constructed at either or both ends as shown on plans.
3. Steel grates are to be used on all inlets where bicycle traffic is anticipated. Steel grates are to be used on all inlets with traversable slots. Either cast iron or steel grates may be used on inlets without slots where bicycle traffic is not anticipated. Either cast iron or steel grates may be used on all inlets with non-traversable slots. Subject to the selection described above, when Alternate G grate is specified in the plans, either the steel grate, hot dipped galvanized after fabrication, or the cast iron grate may be used, unless the plans stipulate the particular type.
4. Recommended maximum pipe sizes shown are for concrete pipe. Size for other types of pipe must be checked for fit.
5. All exposed corners and edges of concrete are to be chamfered $\frac{3}{4}$".
6. Concrete inlet pavement to be used on inlets without slots and inlets with non-traversable slots only when called for in the plans; but required on all traversable slot inlets. Cost to be included in contract unit price for inlets. Quantities shown are for information only.
7. Traversable slots constructed in existing inlets shall be paid for as inlets partial. For conversion work and method of payment see "TRAVERSABLE SLOT INLETS (PARTIAL) FOR EXISTING INLETS".
8. Sodding to be used on all inlets not located in paved areas and paid for under contract concrete inlet pavement unit price for Sodding, SY.
9. For supplementary details see Index No. 201.
10. All reinforcing Grade 60 bars with 2" min. cover unless otherwise noted. Bars to be cut or bent for $\frac{1}{2}$" clearance around pipe opening. Provide one additional #4 bar above and at each side of pipe opening.

DITCH BOTTOM INLET
TYPES C, D, E & H

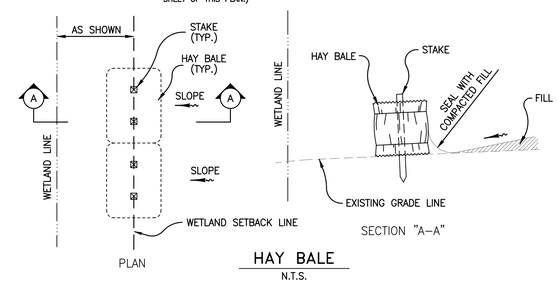
Sheet No. 2 of 6
Index No. 232



SILT SCREEN

N.T.S.

NOTE:
THE EROSION BARRIER, AS SHOWN, IS NOT TO BE CONSTRUED TO MEAN THAT IT IS ALL THAT MAY BE REQUIRED. THE CONTRACTOR IS TO TAKE WHATEVER MEASURES NECESSARY TO CONTROL EROSION THROUGHOUT THE PROJECT. EROSION CONTROL WILL BE INSTALLED PRIOR TO LAND CLEARING AND SHALL REMAIN IN PLACE UNTIL THE AREA IS STABILIZED. (SEE OTHER EROSION AND TURBIDITY NOTES ON THE GENERAL NOTES SHEET OF THIS PLAN.)



HAY BALE

N.T.S.

EROSION CONTROL DETAILS

EITHER METHOD OR A COMBINATION OF BOTH IS ACCEPTABLE

DATE	DESCRIPTION	BY

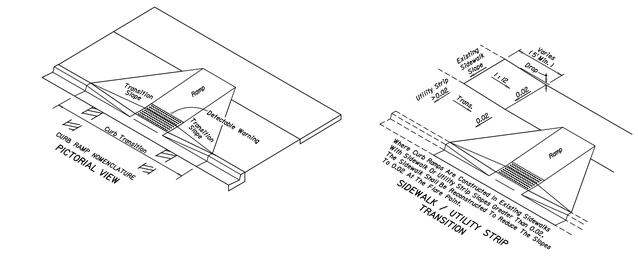
REVISIONS

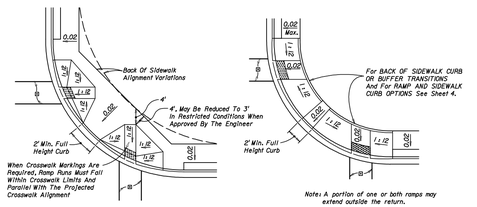
Engineering Business Certificate of Authorization No.: 26548
Fuxan Engineering, Inc.
15018 Maurine Cove Ln.
Odessa, Florida 33556
Phone: 813-244-6194
DAVID G. FUXAN P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER

DATE:

DRAINAGE DETAILS

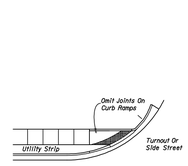
JOB NO. 2015-MP-01	ANAND VIHAR Meadow Pointe Tract 14, Unit 3
DESIGN FUXAN	
DRAWN SOMERVILLE	PREPARED FOR: Anand Vihar, LLC
DATE 12-18-2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE DD	SHEET 13 OF 20 SHEETS





⊠ Crosswalk widths and configuration vary; must conform to Index No. 17344 and 17346.

TYPICAL PLACEMENT OF PUBLIC SIDEWALK CURB RAMPS AT CURBED RETURNS



LINEAR SIDEWALK RAMPS

GENERAL NOTES

1. Public sidewalk curb ramps shall be constructed in the public right of way at locations that will provide continuous unobstructed pedestrian circulation paths to pedestrian areas, elements and facilities in the public right of way and to accessible pedestrian routes on adjacent sites. Curbed facilities with sidewalks and those without sidewalks are to have curb ramps constructed at intersections and at turnouts that have curbed returns. Curb ramps shall extend the full width of the turnout and be wide enough to accommodate curb ramps. Ramps constructed at locations without sidewalks shall have a landing constructed at the top of each ramp, see Sheet 5.
2. The location and orientation of curb ramps shall be as shown in the plans.
3. Curb ramp running slopes at unrestrained sites shall not be steeper than 1:12 and cross slope shall be 0.02 or flatter. Transition slopes shall not be steeper than 1:12.

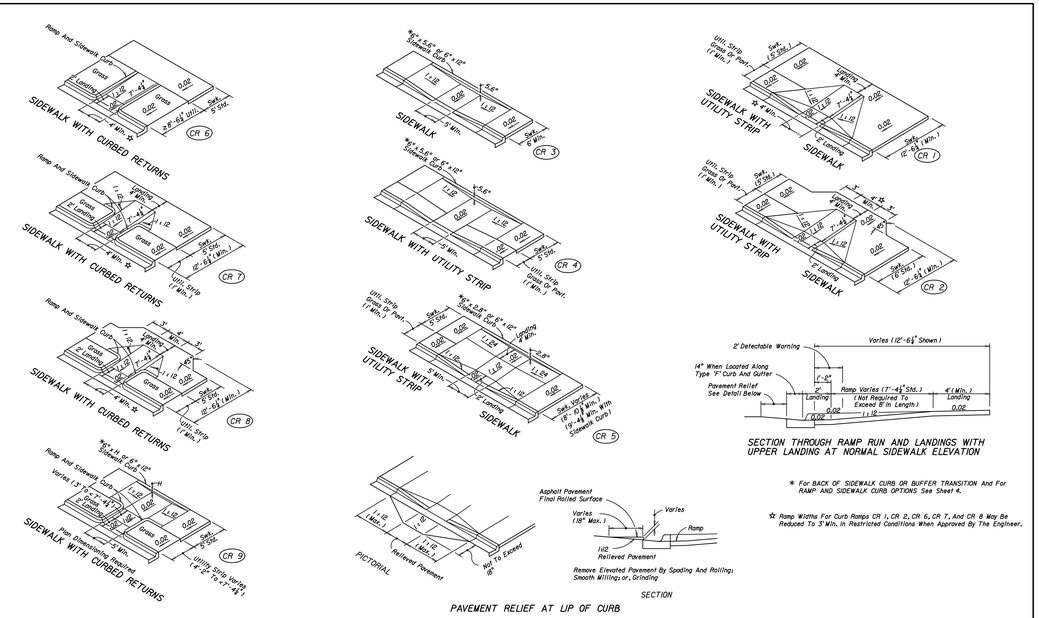
   When altering existing pedestrian facilities where existing site development precludes the accommodation of a ramp slope of 1:12, a running slope between 1:12 and 1:10 is permitted for a rise of 6" maximum and a running slope of between 1:10 and 1:8 is permitted for a rise of 3" maximum. Where compliance with the requirements for cross slope cannot be fully met, the minimum feasible cross slope shall be provided.

   Ramp running slope is not required to exceed 8' in length, except at sites where the plans specify a greater length.
4. If a curb ramp is located where pedestrians must walk across the ramp, then the walk shall have transition slopes to the ramp; the maximum slope of the transitions shall be 1:12. Ramps with curb returns may be used at locations where other improvements provide guidance away from that portion of curb perpendicular to the sidewalk, improvements for guidance are not required at curb ramps for linear pedestrian traffic.
5. Curb ramp detectable warning surfaces shall extend the full width of the ramp and in the direction of travel 24" from the back of curb. Detectable warning surfaces shall be constructed in accordance with Specification 527. See Sheet 6 of 6 for detectable warning layouts. Transition slopes are not to have detectable warnings.
6. Where a curb ramp is constructed within existing curb, curb and gutter and/or sidewalk, the existing curb or curb and gutter shall be removed to the nearest joint beyond the curb transitions or to the extent that no remaining section of curb or curb and gutter is less than 5' long. The existing sidewalk shall be removed to the nearest joint beyond the transition slope or walk around or to the extent that no remaining section of sidewalk is less than 5' long. For details of Concrete Sidewalk See Index 310.
7. Alpha-numeric identifications are for reference (plans, permits, etc.).
8. Public sidewalk curb ramps are to be paid for as follows:

   Ramps, reconstructed sidewalks, walk around sidewalks, sidewalk landings and sidewalk curbs are to be paid for under the contract unit price for Sidewalk Concrete, (____ Thick), SY. Curb transitions and reconstructed curbs are to be paid for under the contract unit price for the parent curb, i.e., Curb Conc., (Type ___), LF or Curb and Gutter Conc., (Type ___), LF.

   When a separate pay item for the removal and disposal of existing curb, curb and gutter, and/or sidewalk is not provided in the plans, the cost of removal and disposal of these features shall be included in the contract unit price for new curb, curb and gutter and/or sidewalk respectively.
9. Acceptance Criteria for Detectable Warnings:
   (a.) The ramp detectable warning surface shall be complete and uniform in color and texture
   (b.) 90% of the individual truncated domes must comply with the design criteria
   (c.) There may be no more than 4 non-complying domes in any one square foot of surface
   (d.) No two adjacent domes may be non-compliant
   (e.) Surface may not deviate more than 0.05" from a true plane
10. All sidewalk surfaces, ramp surfaces, and landings with a cross slope shown in this index to be 0.02 shall be 0.02 maximum. All ramp surfaces and ramp transition slopes with a slope shown in this index to be 1:12 shall be 1:12 maximum.

PUBLIC SIDEWALK CURB RAMPS

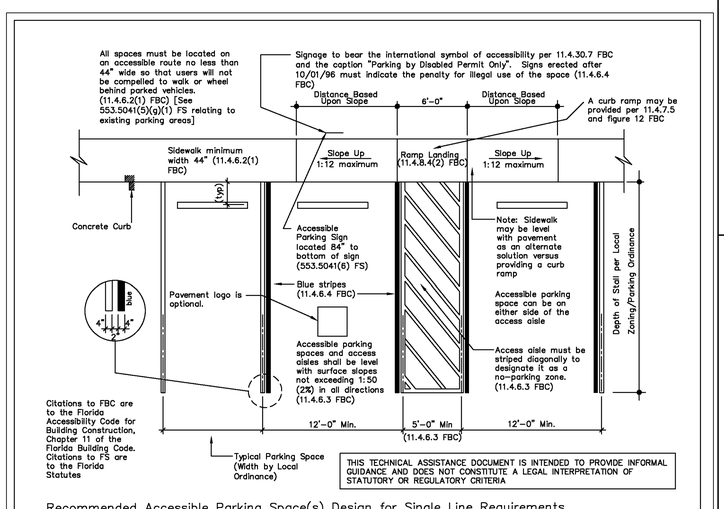


* For BACK OF SIDEWALK CURB OR BUFFER TRANSITION And For RAMP AND SIDEWALK CURB OPTIONS See Sheet 4.

☆ Ramp Widths For Curb Ramps CR 1, CR 2, CR 6, CR 7, And CR 8 May Be Reduced To 3' Min. In Restricted Conditions When Approved By The Engineer.

DIMENSIONAL FEATURES FOR PUBLIC SIDEWALK CURB RAMPS WHERE RAMP AND LANDING DEPTH ARE NOT RESTRICTED BY RIGHT OF WAY

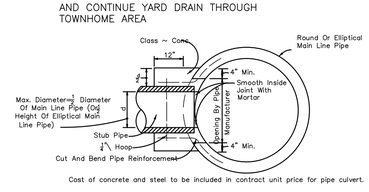
PUBLIC SIDEWALK CURB RAMPS



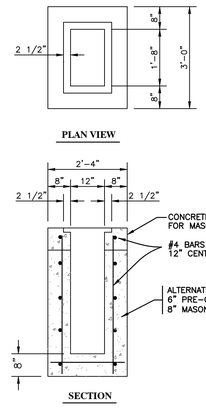
Recommended Accessible Parking Space(s) Design for Single Line Requirements

N.T.S.

Drawing by Larry M. Schneider, AIA for the Florida Building Commission 04-01-02

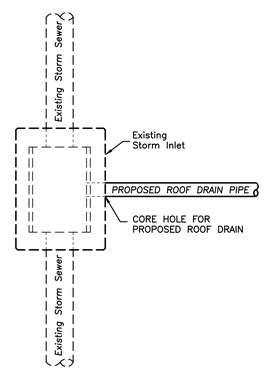


CONCRETE COLLAR FOR JOINING MAINLINE PIPE AND STUB PIPE



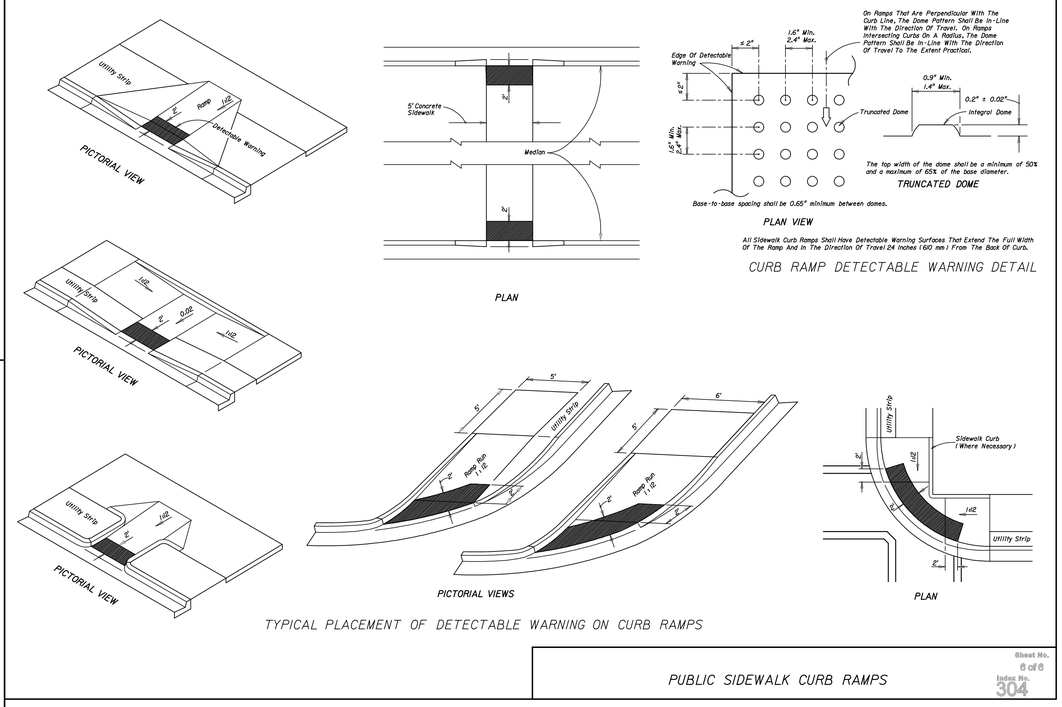
YARD DRAIN DETAIL

GRATE TYPE U.S.F. NO. 6145 OR APPROVED EQUAL



ROOF DRAIN CONNECTION DETAIL

N.T.S.



TYPICAL PLACEMENT OF DETECTABLE WARNING ON CURB RAMPS

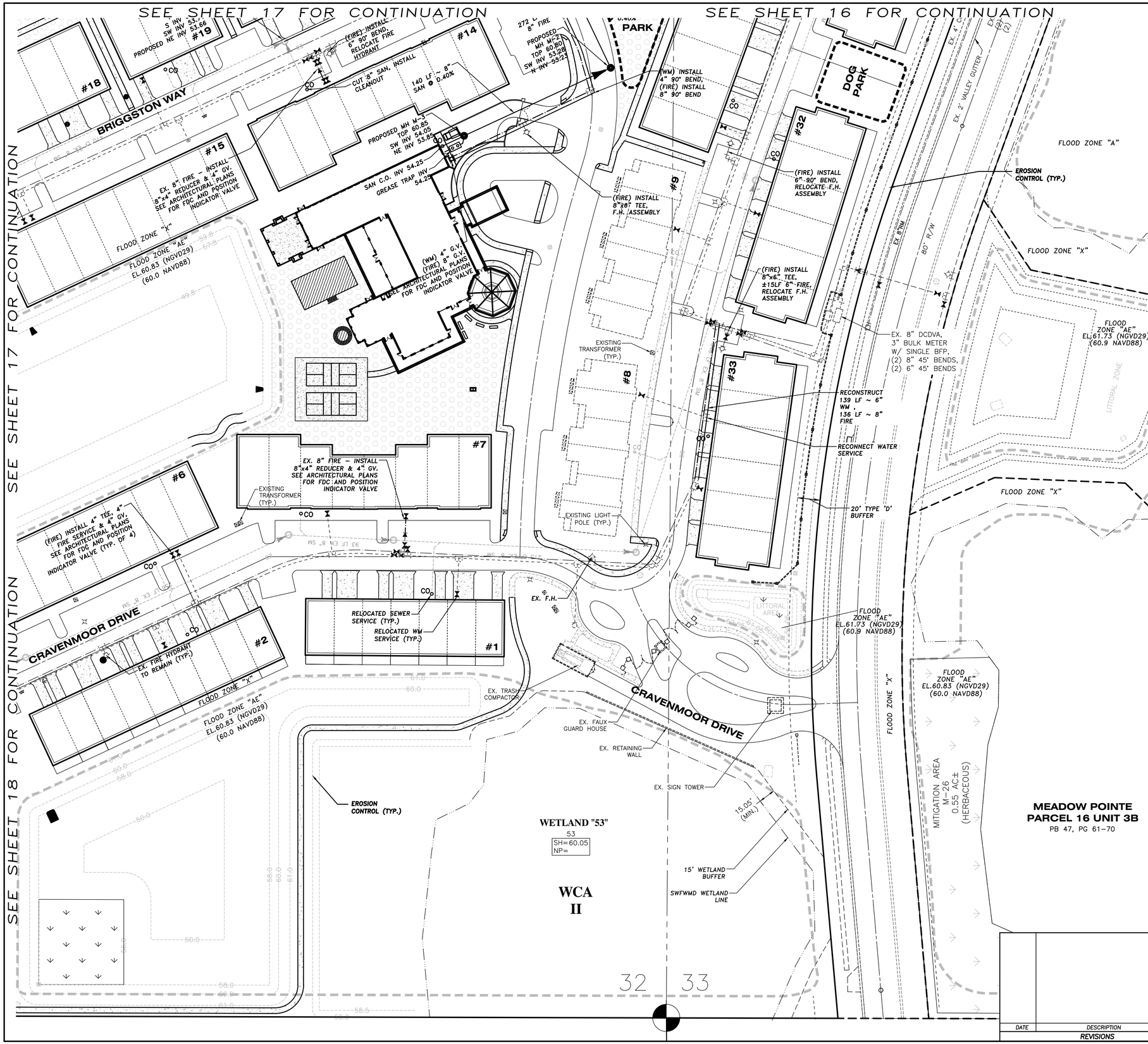
PUBLIC SIDEWALK CURB RAMPS

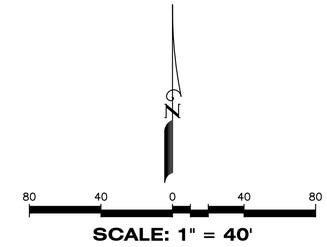
DATE	DESCRIPTION	BY
	REVISIONS	

Engineering Business Certificate of Authorization No.: 26548
Fuxan Engineering, Inc.
15018 Maurine Cove Ln.
Odessa, Florida 33556
Phone: 813-244-6194
DATE:
DAVID G. FUXAN P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER

DRAINAGE DETAILS

JOB NO. 2015-MP-01	ANAND VIHAR Meadow Pointe Tract 14, Unit 3
DESIGN FUXAN	
DRAWN SOMERVILLE	PREPARED FOR: Anand Vihar, LLC
DATE 12-18-2105	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE DD	SHEET 14 OF 20 SHEETS



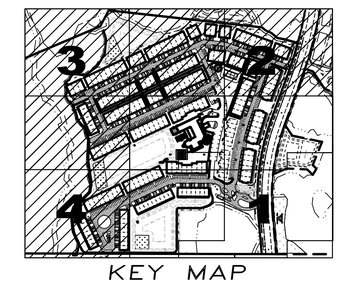


LEGEND

EXISTING	PROPOSED	
		WATER MAIN (WM)
		FIRE MAIN
		FIRE HYDRANT
		VALVE & BOX
		REDUCER
		PLUG
		BLOW-OFF
		BENDS
CO	CO	SANITARY SEWER (SM)

NOTE:
A separate plan and permit, issued to a contractor licensed by the Florida State Fire Marshal's Office, is required for the installation of underground fire lines.

CALL 48 HOURS BEFORE YOU DIG
IT'S THE LAW! DIAL 811
811 Know what's below. Call before you dig.
SUNSHINE STATE ONE CALL OF FLORIDA, INC.



KEY MAP

DATE	DESCRIPTION	BY
	REVISIONS	

Engineering Business Certificate of Authorization No.: 26548

Fuxan Engineering, Inc.
15018 Maurine Cove Ln.
Odessa, Florida 33556
Phone: 813-244-6194

DAVID G. FUXAN No. 33133 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:

DAVID G. FUXAN P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER

WATER & SEWER PLAN (1)

JOB NO. 2015-MP-01	ANAND VIHAR Meadow Pointe Tract 14, Unit 3
DESIGN FUXAN	
DRAWN SOMERVILLE	PREPARED FOR: Anand Vihar, LLC
DATE 12-18-2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE WSP	SHEET 15 OF 20 SHEETS

RES-3 MPUD

WETLAND "42J"

42J
SH=59.20
NP=58.45

WCA I

MEADOW POINTE PARCEL 14 UNIT 1
PB 36, PG 101–105

WCA I

WETLAND "25"

25
SH=60.87
NP=60.32

MEADOW POINTE PARCEL 16 UNIT 3A
PB 45, PG 127–134

HADDINGTON WAY

FOXFORD LANE

SADDLETON DRIVE

BRICKSTON LANE

BRIGGSTON WAY

SEE SHEET 17 FOR CONTINUATION

SEE SHEET 18 FOR CONTINUATION

SEE SHEET 15 FOR CONTINUATION

SWFWMD WETLAND LINE (TYP.)

15' WETLAND BUFFER (MIN.)

15.00' (MIN.)

FLOOD ZONE "AE" EL.60.93 (NGVD29) (60.1 NAVD88)

FLOOD ZONE "X"

FLOOD ZONE "AE" EL.60.75 (NGVD29) (59.9 NAVD88)

15' TYPE 'B' BUFFER

EX. CONCRETE TRANSFORMER PAD

EX. SEWAGE PUMP STATION

ASPHALT DRIVE

20' TYPE 'D' BUFFER

EMERGENCY GATE SHALL INCLUDE SOS OR 3M OPTICOM EQUIPMENT

#26 #27 #28A #28B #28C #29 #30 #13 #12 #11 #31 #10 #22 #21 #20 #23 #19 #14 #18 #15 #32 #9 #8 #33 #7 #6

#28B: CUT & REMOVE EX. SAN SERVICE, INSTALL 4" WYE, 4" 30° BEND & (2) SERVICE CONNECTIONS

#28C: (WM) CUT & REMOVE EX. SERVICE, INSTALL 2½" DOUBLE WYE, (2) 2½" G.V. & SERVICE CONNECTIONS

#27: CUT & RECONNECT SEWER SERVICE, INSTALL 45° BEND, EXTEND TO CORNER OF PROPOSED BUILDING

#27: (WM) CUT & REMOVE EX. SERVICE, INSTALL 2½" 90° BEND, 2½" 45° BEND, 2½" G.V., SERVICE CONNECTION

EXISTING LIGHT POLE (TYP.)

PROPOSED 6" SAN SERVICE WITH CLEANOUT (TYP.)

EX. F.H.

#21: EXISTING MH B-2 TOP 60.50 SW INV 51.80 E INV 51.74; PROPOSED S INV 51.71; 212 LF ~ 8" SAN @ 0.40%

RELOCATE WATER & SEWER SERVICE TO 5' FROM FOUNDATION (TYP. ALL UNITS)

#20: (WM) REMOVE 6" 90° BEND, INSTALL 6" TEE, 6"x4" REDUCER, 4" G.V., 4" 90°; (FIRE) REMOVE 8" TEE, 8" BEND, INSTALL 8" TEE, 8" G.V.

RECONNECT SAN SERVICE 250 LF ~ 8" SAN @ 0.40%

142 LF ~ 8" SAN @ 0.40%

#19: EXISTING MH B-4 TOP 60.50 S INV 53.71 SW INV 53.71 NE INV 53.66; PROPOSED

(FIRE) INSTALL 6" 90° BEND, RELOCATE FIRE HYDRANT

CUT 8" SAN, INSTALL CLEANOUT

140 LF ~ 8" SAN @ 0.40%

276 LF ~ 4" WM

272 LF ~ 8" FIRE

PROPOSED MH M-2 TOP 60.80 SW INV 53.29 N INV 53.22

PROPOSED MH M-3 TOP 60.85 SW INV 54.05 NE INV 53.85

SAN C.O. INV 54.25 GREASE TRAP INV 54.25

PROPOSED MH M-1 TOP 60.45 SW INV 52.68 S INV 52.65 N INV 52.64

142 LF ~ 8" SAN @ 0.40%

PARK

(WM) INSTALL 4" 90° BEND, (FIRE) INSTALL 8" 90° BEND

DOG PARK

EXISTING LIGHT POLE (TYP.)

PROPOSED 2½" WATER SERVICE (TYP.)

RELOCATED WM SERVICE (TYP.)

RELOCATED SEWER SERVICE (TYP.)

EX. 32' PAVEMENT (2) 12' LANES W/ (2) 4' BIKE LANES

EX. 4' CONC. S/W

EX. 2' VALLEY GUTTER

80' R/W

SWFWMD

FLOOD ZONE "A"

FLOOD ZONE "X"

FLOOD ZONE "AE" EL.61.73 (NGVD29) (60.9 NAVD88)

EROSION CONTROL (TYP.)

(FIRE) INSTALL 8"x8" TEE, F.H. ASSEMBLY

(FIRE) INSTALL 6"-90° BEND, RELOCATE F.H. ASSEMBLY

(FIRE) INSTALL 8"x6" TEE, ±15LF 8"-FIRE, RELOCATE F.H. ASSEMBLY

EX. TOWNHOUSE BLDG.

EXISTING TRANSFORMER (TYP.)

EX. 8" DCDVA, 3" BULK METER W/ SINGLE BFP, (2) 8" 45° BENDS, (2) 6" 45° BENDS

RECONSTRUCT 139 LF ~ 6" WM, 136 LF ~ 8" FIRE

RECONNECT WATER SERVICE

(WM) 4" G.V. (FIRE) 8" G.V. SEE ARCHITECTURAL PLANS FOR FDC AND POSITION INDICATOR VALVE

EX. 8" FIRE – INSTALL 8"x4" REDUCER & 4" GV. SEE ARCHITECTURAL PLANS FOR FDC AND POSITION INDICATOR VALVE

EX. 8" FIRE – INSTALL 8"x4" REDUCER & 4" GV. SEE ARCHITECTURAL PLANS FOR FDC AND POSITION INDICATOR VALVE

FLOOD ZONE "AE" EL.60.83 (NGVD29) (60.0 NAVD88)

SCALE: 1" = 40'

LEGEND

EXISTING	PROPOSED	
		WATER MAIN (WM)
		FIRE MAIN
		FIRE HYDRANT
		VALVE & BOX
		REDUCER
		PLUG
		BLOW-OFF
		BENDS
CO	CO	SANITARY SEWER (SM)

CALL 48 HOURS BEFORE YOU DIG
IT'S THE LAW! DIAL 811
811 Know what's below. Call before you dig.
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

NOTE:
A separate plan and permit, issued to a contractor licensed by the Florida State Fire Marshal's Office, is required for the installation of underground fire lines.

KEY MAP

DATE	DESCRIPTION	BY
	REVISIONS	

Engineering Business Certificate of Authorization No.: 26548

Fuxan Engineering, Inc.
15018 Maurine Cove Ln.
Odessa, Florida 33556
Phone: 813-244-6194

DAVID G. FUXAN P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER

DATE:

WATER& SEWER PLAN (2)

JOB NO. 2015–MP–01

DESIGN FUXAN

DRAWN SOMERVILLE

DATE 12–18–2015

FILE WSP

ANAND VIHAR
Meadow Pointe Tract 14, Unit 3

PREPARED FOR: Anand Vihar, LLC

Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet

SHEET 16 OF 20 SHEETS

MEADOW POINTE PARCEL 11
PB 34, PG 123–126

RES-3 MPUD

WETLAND "42J"

42J
SH=59.20
NP=58.45

WCA I

SWFWMD WETLAND LINE (TYP.)

15' WETLAND BUFFER (MIN.)

15.00' (MIN.)

S.W.F.W.M.D. UPLAND PRESERVATION AREA "3B"
O.R. Book 5064, Page 1572

UPLAND PRESERVATION EASEMENT

15.00'

25.00'

FLOOD ZONE "AE"
EL.60.93 (NGVD29)
(60.1 NAVD88)

FLOOD ZONE "X"

FLOOD ZONE "AE"
EL.60.73 (NGVD29)
(59.9 NAVD88)

FLOOD ZONE "X"

FLOOD ZONE "AE"
EL.60.73 (NGVD29)
(59.9 NAVD88)

FLOOD ZONE "X"

FLOOD ZONE "AE"
EL.60.83 (NGVD29)
(60.0 NAVD88)

FLOOD ZONE "X"

FLOOD ZONE "AE"
EL.60.83 (NGVD29)
(60.0 NAVD88)

FLOOD ZONE "X"

SADDLETON DRIVE

BRICKTON LANE

RIDDLETON LANE

BRIGGSTON WAY

#28A — EXISTING LIGHT POLE (TYP.)

#28B — CUT & REMOVE EX. SAN SERVICE, INSTALL 4" WYE, 4" 30° BEND & (2) SERVICE CONNECTIONS

(WM) REMOVE 2" SERVICE, 2" DO (2) 2" SERVICE CONNEC

#27 — CUT & RECONNECT SEWER SERVICE, INSTALL 45° BEND, EXTEND TO CORNER OF PROPOSED BUILDING

(WM) CUT & REMOVE EX. SERVICE, INSTALL 2" 90° BEND, 2" 45° BEND, 2" G.V., SERVICE CONNECTION

#13 — EX. F.H.

#26

#25 — EX. FIRE HYDRANT TO REMAIN (TYP.)

#21 — EXISTING MH B-2 TOP 60.50 S INV 51.80 SW INV 51.74 E INV 51.71

RELOCATE WATER & SEWER SERVICE TO 5' FROM FOUNDATION (TYP. ALL UNITS)

212 LF ~ 8" SAN @ 0.4%

(WM) REMOVE 4" 90° BEND, INSTALL 4" TEE, 4"x2½" REDUCER, 2½" G.V., SERVICE CONNECTION

CUT & RECONNECT SEWER SERVICE, EXTEND TO CORNER OF PROPOSED BUILDING

#24

#22

#23

RELOCATED WM SERVICE (TYP.)

RELOCATED SEWER SERVICE (TYP.)

(FIRE) INSTALL (2) 6" 90° BENDS, RELOCATE FIRE HYDRANT

#20 — (WM) REMOVE 6" 90° BEND, INSTALL 6" TEE, 6"x4" REDUCER, 4" G.V. (FIRE) REMOVE 8" 90° BEND, INSTALL 8" TEE, G.V.

RECONNECT SAN SERVICE

250 LF ~ 8" SAN @ 0.40%

142 LF ~ 8" SAN @ 0.40%

276 LF ~ 4" WM

272 LF ~ 8" FIRE

PROPOSED MH M-1 TOP 60.80 SW INV 53.26 N INV 53.22

#19 — EXISTING MH B-4 TOP 60.50 S INV 53.71 SW INV 53.71 NE INV 53.66

PROPOSED

#18

#14

(FIRE) INSTALL 6" 90° BEND, RELOCATE FIRE HYDRANT

CUT 8" SAN, INSTALL CLEANOUT

140 LF ~ 8" SAN @ 0.40%

PROPOSED MH M-3 TOP 60.85 SW INV 54.05 NE INV 53.85

SAN C.O. INV 54.25

GREASE TRAP INV 54.25

#15 — EX. 8" FIRE – INSTALL 8"x4" REDUCER & 4" GV. SEE ARCHITECTURAL PLANS FOR FDC AND POSITION INDICATOR VALVE

(FIRE) INSTALL 6" 90° BEND, RELOCATE FIRE HYDRANT

EXISTING LIGHT POLE (TYP.)

EXISTING TRANSFORMER (TYP.)

#16

FLOOD ZONE "X"

FLOOD ZONE "AE"
EL.60.83 (NGVD29)
(60.0 NAVD88)

(WM) 4" G.V.
(FIRE) 8" G.V.
SEE ARCHITECTURAL PLANS FOR FDC AND POSITION INDICATOR VALVE

EROSION CONTROL (TYP.)

(FIRE) INSTALL 4" TEE, 4" FIRE SERVICE & 4" GV. SEE ARCHITECTURAL PLANS FOR FDC AND POSITION INDICATOR VALVE (TYP. OF 4)

EX. TRANSFO

EX. 8"x4" SEE AR FOR

#6

CLAY GULLY
RES-3
MPUD

ONSERVATION AREA

WCA
I

UPLAND
AREA "3B"

SEE SHEET 18 FOR CONTINUATION

SEE SHEET 16 FOR CONTINUATION

SEE SHEET 15 FOR CONTINUATION

N

80 40 0 40 80

SCALE: 1" = 40'

LEGEND

EXISTING	PROPOSED	
		WATER MAIN (WM)
		FIRE MAIN
		FIRE HYDRANT
		VALVE & BOX
		REDUCER
		PLUG
		BLOW-OFF
		BENDS
CO	CO	SANITARY SEWER (SM)

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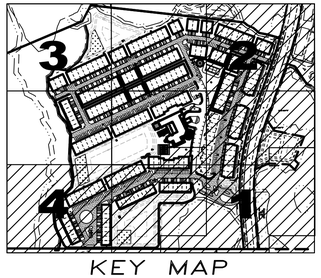

KEY MAP

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	REVISIONS	

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Phone: 813-244-6194

DAVID G. FUXAN
No. 33133
STATE OF FLORIDA
PROFESSIONAL ENGINEER

DATE:
DAVID G. FUXAN, P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER

WATER & SEWER PLAN (3)

JOB NO. 2015-MP-01	ANAND VIHAR
DESIGN FUXAN	Meadow Pointe Tract 14, Unit 3
DRAWN SOMERVILLE	PREPARED FOR: Anand Vihar, LLC
DATE 12-18-2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE WSP	SHEET 17 OF 20 SHEETS

SEE SHEET 17 FOR CONTINUATION

SEE SHEET 16 FOR CONTINUATION

SEE SHEET 15 FOR CONTINUATION

CLAY GULLY
RES-3
MPUD

WETLAND CONSERVATION AREA

S.W.F.W.M.D. UPLAND
PRESERVATION AREA "3B"
O.R. Book 5064, Page 1572

WCA
I

EROSION CONTROL (TYP.)

RIDDLETON LANE

BRIGGSTON WAY

CRAVENMOOR DRIVE

#1 #2 #3 #4 #5 #6 #7 #14 #15 #16 #18 #19

(FIRE) INSTALL (2) 6" 90° BENDS, RELOCATE FIRE HYDRANT

(FIRE) INSTALL 6" 90° BEND, RELOCATE FIRE HYDRANT

(FIRE) INSTALL 6" 90° BEND, RELOCATE FIRE HYDRANT

CUT 8" SAN, INSTALL CLEANOUT

140 LF ~ 8" SAN @ 0.40%

272 L ~ 8" FIRE

PROPOSED MH M-3 TOP 60.80 SW INV 53.29 N INV 53.29

PROPOSED MH M-3 TOP 60.85 SW INV 54.05 NE INV 53.85

SAN C.O. INV 54.25
GREASE TRAP INV 54.25

EX. 8" FIRE – INSTALL 8"x4" REDUCER & 4" GV. SEE ARCHITECTURAL PLANS FOR FDC AND POSITION INDICATOR VALVE

(WM) 4" G.V.
(FIRE) 8" G.V.
SEE ARCHITECTURAL PLANS FOR FDC AND POSITION INDICATOR VALVE

FLOOD ZONE "X"

FLOOD ZONE "AE"
EL.60.83 (NGVD29)
(60.0 NAVD88)

(FIRE) INSTALL 4" TEE, 4" FIRE SERVICE & 4" GV. SEE ARCHITECTURAL PLANS FOR FDC AND POSITION INDICATOR VALVE (TYP. OF 4)

EXISTING LIGHT POLE (TYP.)

EXISTING TRANSFORMER (TYP.)

EX. 8" FIRE – INSTALL 8"x4" REDUCER & 4" GV. SEE ARCHITECTURAL PLANS FOR FDC AND POSITION INDICATOR VALVE

RELOCATED SEWER SERVICE (TYP.)

RELOCATED WM SERVICE (TYP.)

EX. F.H.

EX. FIRE HYDRANT TO REMAIN (TYP.)

20'x9' PARKING SPACES (TYP.)

RELOCATED WM SERVICE (TYP.)

RELOCATED SEWER SERVICE (TYP.)

EX. TRASH COMPACTOR

EX. FAU GUARD HOUS

25.00' (TYP.)

SWFWMD WETLAND LINE

25' WETLAND BUFFER

UPLAND PRESERVATION EASEMENT

PARK

EXISTING LIGHT POLE (TYP.)

32'(TYP)

FLOOD ZONE "X"

FLOOD ZONE "AE"
EL.60.83 (NGVD29)
(60.0 NAVD88)

EROSION CONTROL (TYP.)

WETLAND "53
53
SH=60.05
NP=

WCA
II

CLAY GULLY
RES-3
MPUD

N

80 40 0 40 80

SCALE: 1" = 40'

LEGEND

EXISTING	PROPOSED	
		WATER MAIN (WM)
		FIRE MAIN
		FIRE HYDRANT
		VALVE & BOX
		REDUCER
		PLUG
		BLOW-OFF
		BENDS
CO	CO	SANITARY SEWER (SM)

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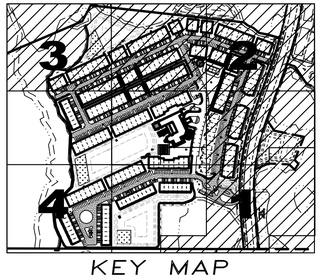

KEY MAP

DATE	DESCRIPTION	BY
	REVISIONS	

Engineering Business Certificate of Authorization No.: 26548

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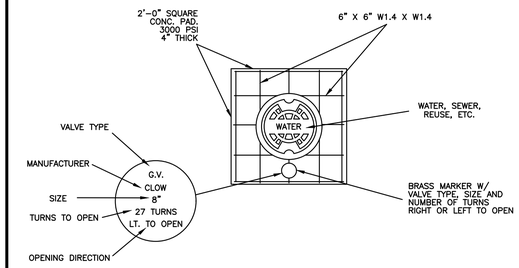
19018 Maurine Cove Ln.
Odessa, Florida 33556
Phone: 813-244-6194

DAVID G. FUXAN No. 33133 STATE OF FLORIDA PROFESSIONAL ENGINEER

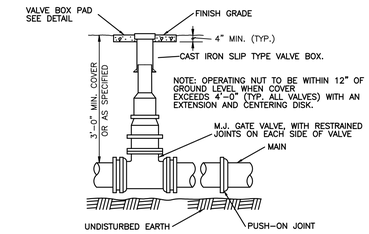
DATE:
DAVID G. FUXAN P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER

WATER & SEWER PLAN (4)

JOB NO. 2015-MP-01	ANAND VIHAR Meadow Pointe Tract 14, Unit 3
DESIGN FUXAN	
DRAWN SOMERVILLE	PREPARED FOR: Anand Vihar, LLC
DATE 12-18-2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE WSP	SHEET 18 OF 20 SHEETS



TYPICAL CONCRETE VALVE PAD



CREATED 02/24/03 REVISED	VALVE BOX DETAIL SLIP TYPE	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 27

PIPE RESTRAINT LENGTHS IN FEET
COMMON FITTINGS

		WATER MAINS - TEST PRESSURE 150 PSI				
		FITTING TYPE				
		11-1/4°	22-1/2°	45°	90°	DEAD END
PIPE SIZE	4"	2'	4'	8'	20'	45'
	6"	3'	6'	12'	28'	63'
	8"	4'	7'	15'	36'	82'
	10"	4'	9'	18'	43'	98'
	12"	5'	10'	21'	50'	116'
	16"	6'	13'	26'	63'	148'
	20"	7'	15'	31'	76'	179'
	24"	9'	17'	36'	87'	208'

		FORCE MAINS - TEST PRESSURE 100 PSI				
		FITTING TYPE				
		11-1/4°	22-1/2°	45°	90°	DEAD END
PIPE SIZE	4"	1'	3'	6'	13'	30'
	6"	2'	4'	8'	19'	42'
	8"	2'	5'	10'	24'	55'
	10"	3'	6'	12'	29'	66'
	12"	3'	7'	14'	34'	77'
	16"	4'	8'	18'	42'	99'
	20"	5'	10'	21'	50'	119'
	24"	6'	11'	24'	58'	139'

RESTRAINT LENGTHS ARE MEASURED FROM THE CENTER LINE OF THE FITTING ALONG THE PIPE IN BOTH DIRECTIONS (EXCEPT DEAD ENDS).

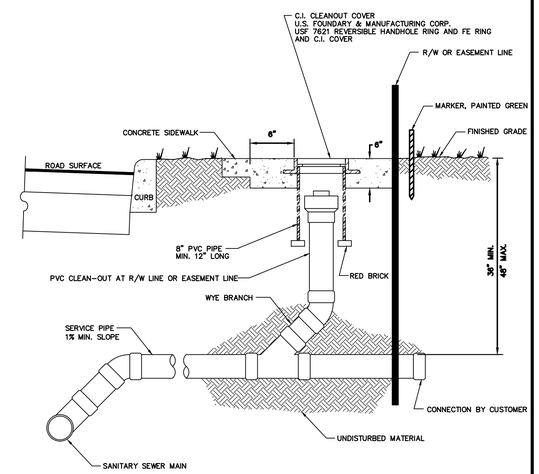
CREATED 02/24/03 REVISED	RESTRAINED JOINT TABLE COMMON FITTINGS	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 28

PIPE RESTRAINT LENGTHS IN FEET
TEES (BRANCH SIDE)

		WATER MAINS - TEST PRESSURE 150 PSI								
		BRANCH SIZE								
		3"	4"	6"	8"	10"	12"	16"	20"	24"
RUN SIZE	3"	6'	14'	30'	—	—	—	—	—	—
	4"	2'	11'	28'	44'	—	—	—	—	—
	6"	1'	2'	22'	40'	52'	—	—	—	—
	8"	1'	1'	16'	35'	48'	62'	—	—	—
	10"	1'	1'	10'	30'	44'	58'	83'	—	—
	12"	1'	1'	3'	25'	40'	55'	80'	103'	—
	16"	1'	1'	1'	14'	31'	48'	75'	98'	119'
	20"	1'	1'	1'	2'	22'	40'	69'	94'	116'
	24"	1'	1'	1'	1'	11'	31'	63'	89'	111'

RESTRAINT LENGTHS ARE MEASURED FROM THE CENTER LINE OF THE TEE ALONG THE BRANCH FOR THE DISTANCE INDICATED. A MINIMUM OF 5 FEET OF RESTRAINED PIPE MUST BE INSTALLED ON BOTH RUNS OF THE TEE. MEGALUG TYPE RESTRAINERS ARE REQUIRED ON ALL JOINTS.

CREATED 02/24/03 REVISED	RESTRAINED JOINT TABLE TEES (BRANCH SIDE)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 29



NTS

CREATED 02/24/03 REVISED	SANITARY SEWER – SINGLE WYE CONNECTION AND TYPICAL CLEAN-OUT	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 42

DATE	DESCRIPTION	BY
	REVISIONS	

Engineering Business Certificate of Authorization No.: 26548

Fuxan Engineering, Inc.
15018 Maurine Cove Ln.
Odessa, Florida 33556
Phone: 813-244-6194

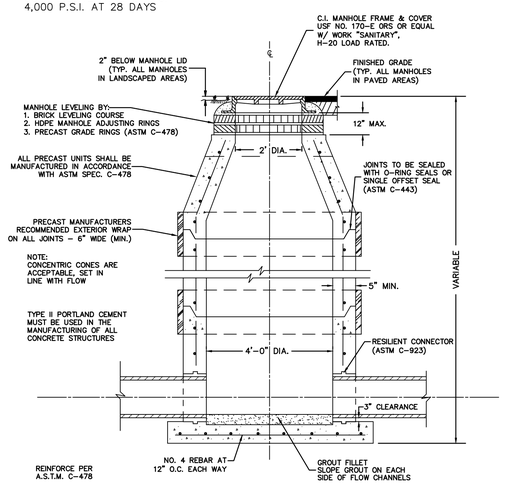
DAVID G. FUXAN No. 33133 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE:
DAVID G. FUXAN P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER

POTABLE WATER SYSTEM DETAILS

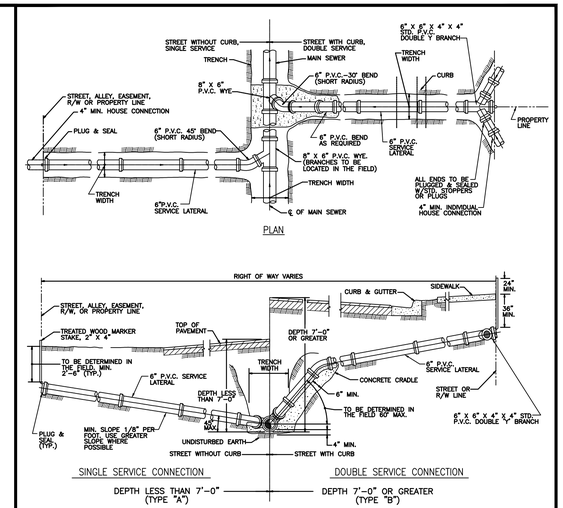
JOB NO. 2015-MP-01	ANAND VIHAR Meadow Pointe Tract 14, Unit 3
DESIGN FUXAN	
DRAWN SOMERVILLE	PREPARED FOR: Anand Vihar, LLC
DATE 12-18-2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE WD	SHEET 19 OF 20 SHEETS

NOTE:
PRECAST CONCRETE
COMPRESSIVE STRENGTH OF
4,000 P.S.I. AT 28 DAYS



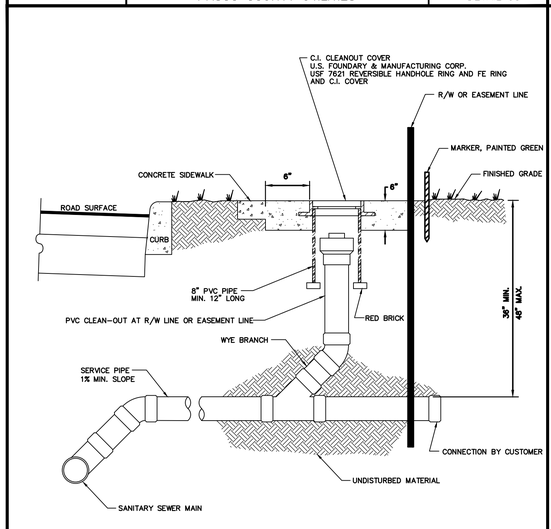
NOTES:
1. MANUFACTURERS RECOMMENDED EXTERNAL WRAP MUST BE USED ON ALL MANHOLE JOINTS AND RISER RINGS.
2. PASCO COUNTY WILL HAVE THE OPTION OF SPECIFYING THE TYPE OF INTERIOR LINING/COATING TO BE INSTALLED FOR EACH INDIVIDUAL MANHOLE.
3. PASCO COUNTY SHALL HAVE THE OPTION OF REQUIRING A NEGATIVE PRESSURE TEST FOR ANY MANHOLE PER ASTM C-1244.
4. LIFT HOLES MUST NOT PENETRATE WALLS. LIFT INSERTS AND LIFT BARS MUST BE USED WHEN LIFTING MANHOLES.

CREATED 02/24/03 REVISED 10/06/03	STANDARD MANHOLE PASCO COUNTY UTILITIES	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL DETAIL 38



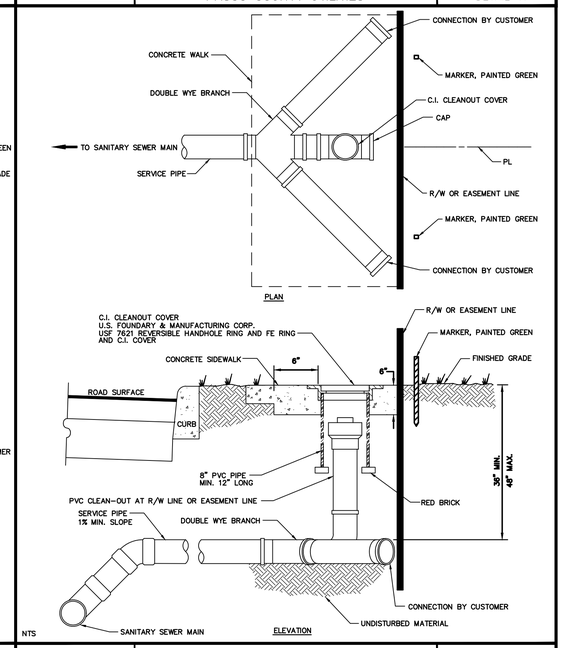
NOTE:
- CONTRACTOR SHALL MAKE, ON A CLEAN SET OF PLANS, THE FINAL STATIONING OR DISTANCE AND DIRECTION FROM MANHOLE OF EACH SERVICE LATERAL AND THEN GIVE TO ENGINEER FOR RECORD PURPOSES.
- PROVIDE 2" x 4" PRESSURE TREATED WOOD MARKER STAKE AT ALL SANITARY SERVICES (INCLUDE IN PIPE PRICE), TOP OF STAKE TO BE PAINTED WITH GREEN PAINT.
- THE MINIMUM DIAMETER OF ALL SERVICE LATERALS SHALL BE 6 INCHES.

CREATED 02/24/03 REVISED	SEWER LATERAL CONNECTION PASCO COUNTY UTILITIES	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL DETAIL 41



NTS

CREATED 02/24/03 REVISED	SANITARY SEWER - SINGLE WYE CONNECTION AND TYPICAL CLEAN-OUT PASCO COUNTY UTILITIES	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL DETAIL 42



NTS

CREATED 02/24/03 REVISED	SANITARY SEWER - DOUBLE WYE CONNECTION AND TYPICAL CLEAN-OUT PASCO COUNTY UTILITIES	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL DETAIL 43

DATE	DESCRIPTION	BY
03/03/15	REMOVED DETAIL 39	DM

REVISIONS

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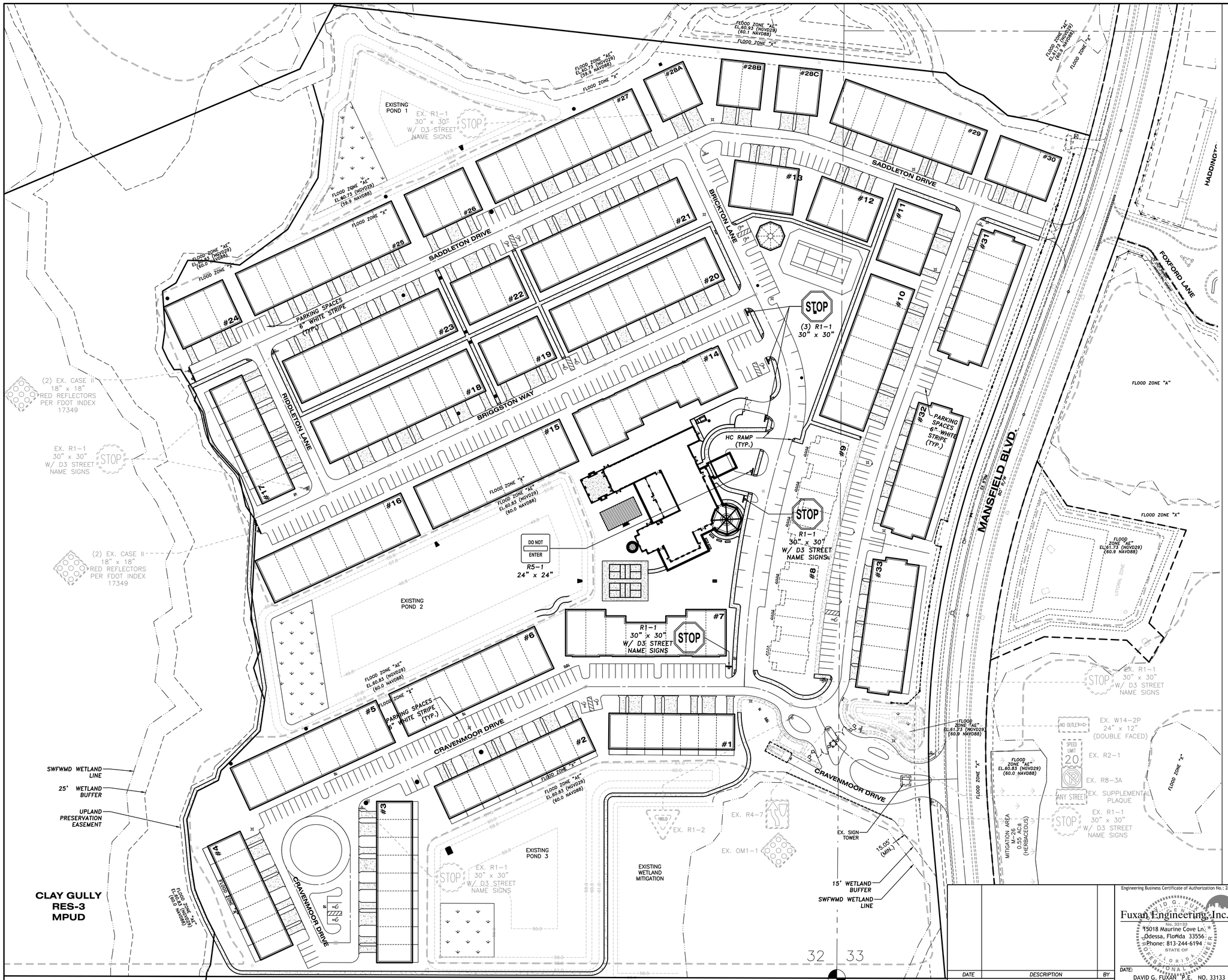
15018 Maurine Cove Ln.
Odessa, Florida 33556
Phone: 813-244-6194
DATE:
DAVID G. FUXAN P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER

SANITARY SEWER SYSTEM DETAILS

JOB NO. 2015-MP-01	ANAND VIHAR Meadow Pointe Tract 14, Unit 3
DESIGN FUXAN	
DRAWN SOMERVILLE	PREPARED FOR: Anand Vihar, LLC
DATE 12-18-2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE SD	SHEET 20 OF 20 SHEETS



DATE	DESCRIPTION	BY

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Phone: 813-244-6194

DATE:

DAVID G. FUXAN P.E. NO. 33133
FLORIDA PROFESSIONAL ENGINEER

SIGNAGE & PAVEMENT MARKING PLAN

JOB NO. 2015-MP-01	ANAND VIHAR Meadow Pointe Tract 14, Unit 3
DESIGN FUXAN	
DRAWN SOMERVILLE	PREPARED FOR: Anand Vihar, LLC
DATE 12-18-2015	Elevations based on National Geodetic Vertical Datum 1929 (NGVD 29) Conversion from NGVD 29 to NAVD 88 = -0.83 Feet
FILE SPM	SHEET 1 OF 1 SHEETS