HILLSIDE GROVE

PARCEL #: 26-20-25-0100-000-00002, 35-20-25-0003-000-00501, 35-20-25-0002-000-00500, 26-20-25-0100-000-00004, 26-20-25-0100-000-00005, 26-20-25-0100-000-00004, 26-20-25-0100-000-00500, 26-20-25-0100-000-00003 & 26-20-25-0400-D14-00000

AT HOWEY IN THE HILLS, FLORIDA

PREPARED FOR
LENNAR HOMES - ORLANDO
6750 FORUM DRIVE, SUITE 310
ORLANDO, FL 32821
PHONE: (904) 431-6499

DRAWING INDEX

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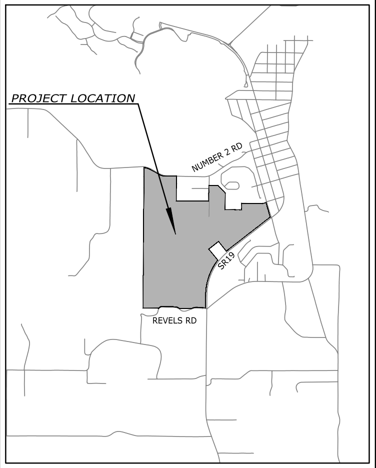
30A – 30C	SR–19 MAINTENANCE OF TRAFFIC (SOUTHBOUND)
31A – 31B	SR–19 MAINTENANCE OF TRAFFIC (NORTHBOUND)



VICINITY MAP
N.T.S.

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 SKINNER LAKE DR., SUITE 500
JACKSONVILLE, FLORIDA 32246
(904) 265-3030 FAX: (904) 265-3031

FLORIDA REGISTRY 3650 L.A. NUMBER: LC26000311
www.cwieng.com

DEVELOPER
LENNAR - ORLANDO
6750 FORUM DRIVE, SUITE 310
ORLANDO, FL 32821

CIVIL ENGINEER
CONNELLY & WICKER INC
1560 NORTH ORANGE AVENUE, SUITE 210
WINTER PARK, FL 32789
(904) 265-3030
CONTACT: RICK WELCH, P.E.

PLANNER
WILLIAM (BILL) A. RAY, AICP
RAY AND ASSOCIATES
PLANNING AND ENVIRONMENTAL SERVICES
2712 SE 29TH STREET,
OCALA, FL 34471
OFFICE & CELL; 352-425-8881

OWNER
EASTON & ASSOCIATES
10165 NW 19TH ST
MIAMI, FL 33172

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By

COVER SHEET

HILLSIDE GROVE
HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
Q.C.: RCW
Date: AUGUST 2022
Scale:
Sheet 1

Printed By: Garrett
Printed: Sep 29 2022 - 10:15am
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THIS DOCUMENT HAS BEEN DIGITALLY SIGN AND SEALED BY:

No. 69260

Justin E Williams

Digitally signed by Justin E Williams
DN: cn=Justin E Williams, c=US,
o=CONNELLY AND WICKER INC.,
ou=A01410C00000171122B277500015D35,
email=jwilliams@cwieng.com
Date: 2022.09.29 10:48:53 -04'00'

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CONNELLY & WICKER INC.
10060 SKINNER LAKE DR., SUITE 500
JACKSONVILLE, FL 32246
PHONE 904.265.3030 FAX 904.265.3031
CA NO. 3650 LA NO. LC26000311
JUSTIN E. WILLIAMS, P.E. NO. 69260

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

DRAWING INDEX

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No. 93585

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CONNELLY & WICKER INC.
10060 SKINNER LAKE DR., SUITE 500
JACKSONVILLE, FL 32246
PHONE 904.265.3030 FAX 904.265.3031
CA NO. 3650 LA NO. LC26000311
ERIC DANIEL EVANS, P.E. NO. 93585

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

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1	..		
2	..		
3	..		
4	..		
5	..		
6	..		
7	..		

SIGNATURE SHEET

HILLSIDE GROVE
HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	O.C.: RCW
Date: AUGUST 2022	
Scale:	
Sheet 1A	

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J:\21\21-04-0008 Preserve at Howey\Design\Dwgs\Plots\21-04-0008 CovSigNotesLegend-Jax.dwg

GENERAL NOTES:

1. ALL WORK AND MATERIALS SHALL BE IN COMPLETE ACCORDANCE WITH ALL RELATIVE SECTIONS OF CITY STANDARDS, (LATEST REVISION) AND ALL CURRENT CITY STANDARD DETAILS. CONTRACTOR SHALL COMPLY WITH CURRENT A.D.A. CODE FOR ALL WORK ON THIS PROJECT.
2. ALL WORK SHALL BE PERFORMED IN A SAFE MANNER. ALL SAFETY RULES AND GUIDELINES OF O.S.H.A. SHALL BE FOLLOWED. THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ANY INJURIES TO HIS EMPLOYEES, AND ANY DAMAGE TO PRIVATE PROPERTY OR PERSONS DURING THE COURSE OF THIS PROJECT. ALL COSTS ASSOCIATED WITH COMPLYING WITH O.S.H.A. REGULATIONS AND THE FLORIDA TRENCH SAFETY ACT MUST BE INCLUDED IN THE CONTRACTORS BID.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE JOB SITE PRIOR TO PREPARING THE BID FOR THE PURPOSE OF FAMILIARIZING HIMSELF WITH THE NATURE AND THE EXTENT OF THE WORK AND LOCAL CONDITIONS, EITHER SURFACE OR SUB-SURFACE, WHICH MAY AFFECT THE WORK TO BE PERFORMED, AND THE EQUIPMENT, LABOR AND MATERIALS REQUIRED. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF COMPLETE PERFORMANCE UNDER THIS CONTRACT. THE CONTRACTOR IS ALSO URGED TO TAKE COLOR PHOTOGRAPHS THROUGHOUT THE PROJECT AREA TO RECORD EXISTING CONDITIONS PRIOR TO CONSTRUCTION, AND TO AID IN RESOLVING POSSIBLE FUTURE COMPLAINTS THAT MAY OCCUR DUE TO CONSTRUCTION OF THE PROJECT.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EITHER CONDUCT ANY FIELD EXPLORATION OR ACQUIRE ANY GEOTECHNICAL ASSISTANCE REQUIRED TO ESTIMATE THE AMOUNT OF UNSUITABLE MATERIAL REQUIRED TO BE REMOVED AND/OR TO ESTIMATE THE AMOUNT OF OFF SITE BORROW THAT WILL BE REQUIRED.
5. ALL IMPROVEMENTS SHOWN ARE TO BE WARRANTED BY THE CONTRACTOR TO THE DEVELOPER AND THE OWNER OF STREET [TCDD I LLC ET AL (ST JOHNS TOWN CENTER)] FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY THE OWNER AND THE CITY.
6. FOR BOUNDARY, ROADWAY AND LOT GEOMETRY INFORMATION SEE PLAT OR ALTA SURVEY.
7. THE CONTRACTOR WILL CONTRACT WITH AN INDEPENDENT TESTING LABORATORY TO PERFORM MATERIAL TESTING AND SOIL TESTING IN ACCORDANCE WITH COUNTY REQUIREMENTS. THIS SHALL INCLUDE DENSITY TESTS IN ALL PAVEMENT AREAS AND IN ALL UTILITY TRENCHES LOCATED IN PAVEMENT AREAS CONCRETE TESTING AND ALL OTHER MATERIAL TESTING. PRIOR TO ROAD BASE PLACEMENT, THE PROJECT GEOTECHNICAL ENGINEER SHALL MAKE RECOMMENDATIONS FOR UNDERDRAIN PLACEMENT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE FOR THE PROJECT INCLUDING CITY RIGHT-OF-WAY PERMITS FOR WORK IN THE CITY RIGHT-OF-WAY OR EASEMENT, ALTHOUGH NO WORK IS EXPECTED WITHIN THE RIGHT-OF-WAY.
9. THE CONTRACTOR SHALL COORDINATE THE WORK WITHIN CITY OR STATE RIGHT-OF-WAY WITH THE PROPER AGENCIES FOR MAINTENANCE OF TRAFFIC AND METHOD OF CONSTRUCTION AND REPAIR, ALTHOUGH NO WORK IS EXPECTED WITHIN THE RIGHT-OF-WAY.
10. ALL PUBLIC DRAINAGE EASEMENTS SHALL BE "UNOBSTRUCTED" EASEMENTS. ALL "UNOBSTRUCTED" EASEMENTS TO BE CLEAR AND DRIVEABLE.
11. "AS-BUILT" DRAWINGS - AS-BUILTS TO THE CITY AND THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT ARE REQUIRED TO BE SIGNED AND SEALED BY A FLORIDA REGISTERED LAND SURVEYOR THEREFORE, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTRACT WITH A LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA FOR THE PREPARATION, FIELD LOCATIONS, CERTIFICATION AND SUBMITTAL OF "AS-BUILT" DRAWINGS IN ACCORDANCE WITH CURRENT CITY STANDARDS AND SPECIFICATIONS AND S.J.R.W.M.D. REGULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROCESS THE "AS-BUILT" DRAWINGS FOR APPROVAL BY THE CITY.
12. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION WITH ALL OTHER CONTRACTORS. IN THE EVENT OF ANY CONFLICT WHATSOEVER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
13. CLEARING AND GRUBBING REQUIRED FOR ALL ROADWAY, UTILITIES, DITCHES, AND BERMS INCLUDED IN THIS PROJECT, AND THE CLEARING AND GRUBBING OF ALL RIGHT-OF-WAY OR EASEMENTS SHALL BE CONSIDERED AS PART OF THE PROJECT.
14. ALL AREAS SHOWN TO BE FILLED SHALL BE CLEARED AND GRUBBED IN ACCORDANCE WITH CITY STANDARDS AND SHALL BE FILLED WITH CLEAN STRUCTURAL FILL COMPACTED AND TESTED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
15. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL SURVEY AND PROPERTY MONUMENTS. IF A MONUMENT IS DISTURBED, THE CONTRACTOR SHALL CONTRACT WITH THE SURVEYOR OF RECORD FOR REINSTALLATION OF THE MONUMENT.
16. ALL DEBRIS RESULTING FROM ALL ACTIVITIES SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR.
17. ALL EXCESS SUITABLE AND UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR UNLESS DIRECTED OTHERWISE BY ENGINEER OR OWNER.
18. ALL EXISTING TREES TO REMAIN SHALL BE PRESERVED AND PROTECTED.
19. BURNING OF TREES, BRUSH AND OTHER MATERIAL SHALL BE APPROVED, PERMITTED AND COORDINATED WITH CITY FIRE MARSHAL.
20. ROADWAY UNDERDRAINS SHALL BE AS REQUIRED ON THE PLANS OR AS MAY BE DETERMINED NECESSARY BY THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF HIGH GROUND WATER CONDITIONS ARE PRESENT DURING THE PREPARATION OF THE PAVEMENT SUB-BASE.
21. PROVIDE CONTRACTION JOINTS AT 10' O.C. AND EXPANSION JOINTS AT 50' O.C. FOR CURBING. PROVIDE CONTRACTION JOINTS AT 6' O.C. AND EXPANSION JOINTS AT 18' O.C. ON ALL EXTERIOR SIDEWALKS.
22. MAINTENANCE OF TRAFFIC SHALL CONFORM TO PLAN HEREIN.
23. ALL SIGNING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH CITY OF JACKSONVILLE PAVEMENT MARKINGS STANDARDS. REFER TO L.D.P.M. #1.8 REGARDING SIGNAGE REQUIREMENTS..
24. ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED ROADWAY/SITE DEVELOPMENT SHALL BE REMOVED BY THE CONTRACTOR UTILIZING METHOD APPROVED BY THE CITY.
25. ALL STORM PIPE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

EROSION & SEDIMENT CONTROL NOTES:

1. THESE PLANS INDICATE THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES REQUIRED FOR THIS PROJECT. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL-A GUIDE TO SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (F.D.E.P.) CHAPTER 6. THE CONTRACTOR SHALL PROVIDE EROSION PROTECTION AND TURBIDITY CONTROL AS REQUIRED TO INSURE CONFORMANCE TO STATE AND FEDERAL WATER QUALITY STANDARDS AND MAY NEED TO INSTALL ADDITIONAL CONTROLS TO CONFORM TO AGENCIES REQUIREMENTS. IF A WATER QUALITY VIOLATION OCCURS, THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ALL DAMAGE AND ALL COSTS WHICH MAY RESULT INCLUDING LEGAL FEES, CONSULTANT FEES, CONSTRUCTION COSTS AND FINES.
2. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS AND SPECIFICATIONS AND THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT SPECIFICATIONS AND CRITERIA.
3. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A PERMANENT STAND OF SOD AND/OR GRASS PER CITY STANDARDS AND MEETING THE N.P.D.E.S. FINAL STABILIZATION REQUIREMENTS.
5. IF DEWATERING CAPACITY REQUIRES A CONSUMPTIVE USE PERMIT (C.U.P.) IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO OBTAIN THE PERMIT THROUGH THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT.
6. PRIOR TO COMMENCEMENT OF CONSTRUCTION AND EXCAVATION ACTIVITIES, THE CONTRACTOR SHALL PERFORM GROUNDWATER TESTING IN ACCORDANCE WITH THE ENVIRONMENTAL PROTECTION AGENCY FEDERAL REGISTER, PAGE 42739, PART 1A.3, TO DETERMINE PETROLEUM CONTAMINATION LEVELS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING N.P.D.E.S. PERMIT, IF REQUIRED, IN ORDER TO DISCHARGE ANY GROUNDWATER ENCOUNTERED DURING CONSTRUCTION AND DEWATERING OPERATIONS.
7. 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR WILL SUBMIT A "NOTICE OF INTENT" TO THE EPA IN ACCORDANCE WITH NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM RULES AND REGULATIONS.
8. THE CONTRACTOR SHALL WRAP STORM SEWER GRATES IN FILTER FABRIC TO PREVENT SEDIMENTATION OF THE STORM SEWER SYSTEM. CONTRACTOR SHALL MAINTAIN THE FILTER FABRIC UNTIL THE ASPHALT/CONCRETE PAVEMENT IS PLACED.
9. THE CONTRACTOR SHALL PROTECT ALL STORMWATER BASINS AND/OR SWALES FROM SEDIMENTATION DURING CONSTRUCTION USING NECESSARY SEDIMENT CONTROL BARRIERS.
10. IN THE EVENT OF DELAYS IN CONSTRUCTION, THE CONTRACTOR SHALL SEED ALL AREAS AND MAINTAIN EROSION CONTROL BARRIERS IN PLACE TO PREVENT EROSION, SILTATION AND AND INCREASE RUNOFF.

SUPPORTING NOTES:

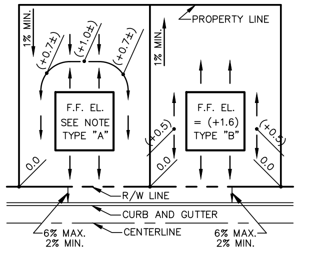
1. ALL WORK AND MATERIALS SHALL BE IN COMPLETE ACCORDANCE WITH ALL RELATIVE SECTIONS OF COUNTY STANDARDS (LATEST REVISION) AND ALL CURRENT CITY STANDARD DETAILS AND THE REQUIREMENTS OF OTHER AUTHORITIES HAVING JURISDICTION. THE WORK SHALL ALSO BE PERFORMED AND TESTED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE REPORT OF GEOTECHNICAL EXPLORATION BY UNIVERSAL ENGINEERING SCIENCES (EUS REPORT NUMBER 1850729, MARCH 23, 2021 AND REPORT NUMBER 1885314, JUNE 23, 2022).
2. FLOOD ZONE INFORMATION TAKEN FROM FEMA FLOOD INSURANCE RATE MAPS FOR LAKE COUNTY, FLORIDA MAP NUMBER 12069C0485E DATED JANUARY 30, 2020.
3. ONSITE SURVEY ELEVATIONS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), AS DETERMINED BY NATIONAL GEODETIC SURVEY, PROVIDED ALLEN & COMPANY PROVIDED VIA CADD FILE AND PDFS DATED 07/05/2021.
4. BOUNDARY INFORMATION AND LINEWORK PROVIDED BY ALLEN & COMPANY.

PAVING AND DRAINAGE LEGEND

EXISTING	PROPOSED	
25.5	• 25.5	SPOT ELEVATION
— —10— —	—— 10 ——	CONTOURS
	S 45°34'23" E	BOUNDARY
	— — —	DRAINAGE DIVIDE
— —ST— —	——	STORM SEWER AND SIZE
— — —□—ST— —	—■—	STORM SEWER INLET
— — —○—ST— —	—●—	STORM SEWER MANHOLE
— — — ST— —⊏	——⊏	MITERED END SECTION
	←	DRAINAGE FLOW ARROWS
	←— · · ←—	DITCH FLOW ARROWS
	S-10	STRUCTURE NUMBERS
	1.8 AC.±	DRAINAGE AREA
	⊕ A1	SOIL BORING LOCATION
	— —UD— —	UNDERDRAIN
⁘⁘⁘	⁘⁘⁘	CONCRETE SIDEWALK
══ ══ ══	══════	CONCRETE CURB AND GUTTER
— · — · —		JURISDICTIONAL WETLANDS
	—×——×—	SILT FENCE
	▦▦▦▦▦	HAY BALES

WATER AND SEWER LEGEND

EXISTING	PROPOSED	
— — —SAN 8" — —	——	SANITARY SEWER LINE
— — ⌊SAN 8" —	——⌊SAN——	SANITARY SEWER SERVICE
— — —○—SAN 8"	——●——	SANITARY SEWER MANHOLE
○— — —	●——	CLEANOUT
— — —FM 4" — —	——FM 4"——	FORCE MAIN
— — —W 8" — —	——W 8"——	WATER MAIN
— — —RW 8" — —	——RW 8"——	REUSE WATER MAIN
— — —FP 8" — —	——FP 8"——	FIRE PROTECTION MAIN
— — —W 8" —	——W 8"——	FIRE HYDRANT
□—W 2" —	■—W 2"——	FLUSHING HYDRANT
— — —⋈—W 8" —	——⋈—W 8"——	GATE VALVE
— — —▷—W 8" —	——▶—W 8"——	REDUCER
— — —W 8" —	——W 8"——	TEE
W 8" —	W 8"——	BEND
M—W 2" —	M—W 2"——	WATER METER
— — —( )—W 8" —	——( )—W 8"——	BACKFLOW PREVENTER



TYPICAL PLAN VIEW - TYPE "A" AND "B" LOTS

NEIGHBORHOOD GRADING DETAIL

N.T.S.

NEIGHBORHOOD GRADING LEGEND

• N.G.	NATURAL GRADE
• 25.1	PROPOSED SPOT ELEVATION
25.5	EXISTING SPOT ELEVATION
— —10— —	EXISTING TOPOGRAPHY
61	LOT NUMBER
S 45°34'23" E	SUBDIVISION BOUNDARY
←	DRAINAGE FLOW ARROWS
←— · · ←—	DITCH FLOW ARROWS

NEIGHBORHOOD DRAINAGE & GRADING NOTES

1. F.F. EL. = 11.8 TYPE "B" — FINISHED FLOOR ELEVATION AND APPROXIMATE BUILDING LOCATION AND LETTER DENOTES LOT TYPE GRADING
2. ALL PROPOSED LOT CORNERS SHALL BE AS FOLLOWS:
    - A. BACK CORNER LOT ELEVATIONS ARE AT NATURAL GROUND UNLESS OTHERWISE NOTED OR WHERE FILLING IS REQUIRED TO OBTAIN 1% SLOPE.
3. "A OR B" — DENOTES STD. LOT TYPE GRADING. EXACT LOCATION OF SWALES SHALL BE DETERMINED WHEN THE SIZE AND LOCATION OF BUILDING IS SET (BY OTHERS)
4. • 25.1 — PROPOSED GRADE AT LOT CORNERS
5. FINISHED FLOOR ELEVATIONS GIVEN ON PLAN ARE MINIMUM. EXACT ELEVATION SHALL BE DETERMINED WHEN THE SIZE AND LOCATION OF BUILDING IS SET (BY OTHERS).
6. CONTRACTOR TO REMOVE UNSUITABLE MATERIAL UNDER HOUSE PADS IN ACCORDANCE WITH PROJECT GEOTECHNICAL REPORT
7. FINISH FLOOR ELEVATION FOR TYPE "A" LOTS SHALL BE 1.3 FEET PLUS THE AVERAGE ELEVATION BETWEEN THE FRONT & REAR CORNER OF THE HIGH SIDE OF THE LOT

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
1	:		
2	:		
3	:		
4	:		
5	:		
6	:		
7	:		

GENERAL NOTES AND LEGENDS

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
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Sheet 2	

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J:\21\21-04-0008 Preserve at Howey\Design\Dwgs\Plots\21-04-0008 Msite.dwg

LEGAL DESCRIPTION:

THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 35, TOWNSHIP 20 SOUTH, RANGE 25 EAST, LAKE COUNTY, FLORIDA;

AND

THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 35, TOWNSHIP 20 SOUTH, RANGE 25 EAST, LAKE COUNTY, FLORIDA;

AND

A TRIANGULAR TRACT OF LAND DESCRIBED AS:

BEGINNING AT THE NORTHEAST CORNER OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4, IN SECTION 35, TOWNSHIP 20 SOUTH, RANGE 25 EAST, LAKE COUNTY, FLORIDA; RUN THENCE WEST APPROXIMATELY 330 FEET TO THE SOUTHEAST CORNER OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4; THENCE RUN NORTH APPROXIMATELY 330 FEET TO THE NORTHEAST CORNER OF THE TWO AND ONE-HALF ACRE TRACT LAST DESCRIBED; THENCE SOUTHEAST TO THE POINT OF BEGINNING;

AND

THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4, LESS THAT PART LYING WITHIN TAYLOR MEMORIAL CEMETERY HEREINAFTER PARTICULARLY DESCRIBED:

THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4, LYING NORTH AND WEST OF STATE ROAD 19, NOW PAVED. LESS AND EXCEPT SUCH PORTION OF TAYLOR MEMORIAL CEMETERY INCLUDED THEREIN, WHICH CEMETERY IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE EAST 1/2 MILE CORNER OF SECTION 35, TOWNSHIP 20 SOUTH, RANGE 25 EAST, LAKE COUNTY, FLORIDA; RUN WEST 1490 FEET TO AN IRON PIPE ON THE NORTH RIGHT-OF-WAY LINE OF SAID STATE ROAD NOW PAVED; THENCE SOUTHWESTERLY ALONG SAID RIGHT-OF-WAY LINE 446.5 FEET TO A CEMENT MARKER AND THE POINT OF BEGINNING OF CEMETERY PROPERTY; RUN THENCE SOUTHWESTERLY WITH THE NORTH RIGHT-OF-WAY LINE OF SAID ROAD 509.4 FEET; THENCE NORTH 36°27' WEST, 573.8 FEET; THENCE NORTH 51°33' EAST, 500 FEET; THENCE SOUTH 38°27 EAST, 500 FEET TO THE POINT OF BEGINNING;

AND

THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4, LYING NORTH AND WEST OF STATE ROAD 19, NOW PAVED, LESS AND EXCEPT SUCH PART THEREOF AS IS CONTAINED IN THE PLAT OF PALM GARDENS AS RECORDED IN THE PUBLIC RECORDS OF LAKE COUNTY, FLORIDA ON FEBRUARY 26, 1951, IN PLAT BOOK 12, PAGE 11;

AND

THE WEST 1/2, LESS AND EXCEPT THE NORTH 3/4 OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4, IN SECTION 35, TOWNSHIP 20 SOUTH, RANGE 25 EAST, LAKE COUNTY, FLORIDA;

AND

THAT PART OF THE SOUTH 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4, LYING SOUTH OF COUNTY CLAY ROAD, IN SECTION 26, TOWNSHIP 20 SOUTH, RANGE 25 EAST, LAKE COUNTY, FLORIDA. SUBJECT TO THE RIGHTS-OF-WAY FOR ALL EXISTING STATE, COUNTY AND TOWN ROAD, STREETS AND HIGHWAYS;

AND

A TRACT OF LAND LOCATED IN THE NORTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 35, TOWNSHIP 20 SOUTH, RANGE 25 EAST, LAKE COUNTY, FLORIDA, AND GENERALLY DESCRIBED AS LYING SOUTH OF THE RESIDENCE OF DON WHITE AND WEST OF THE WESTERLY BOUNDARY LINE OF PALM GARDENS SUBDIVISION;

AND

ALL OF BLOCK D-14, ACCORDING TO THE PLAT OF PALM GARDENS, FILED FEBRUARY 26, 1951, AND RECORDED IN PLAT BOOK 12, PAGE 11, OF THE PUBLIC RECORDS OF LAKE COUNTY, FLORIDA.

ALL OF THE ABOVE LAKE COUNTY PROPERTY BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THAT PART OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 35, TOWNSHIP 20 SOUTH, RANGE 25 EAST, IN THE TOWN OF HOWEY IN THE HILLS, FLORIDA, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGIN AT THE NORTHWEST CORNER OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SAID SECTION 35; THENCE RUN EAST ALONG THE NORTH LINE THEREOF TO THE NORTHEAST CORNER OF THE SAID SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4; THENCE RUN SOUTHEASTERLY ALONG A STRAIGHT LINE TO THE NORTHEAST CORNER OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SAID SECTION 35; THENCE RUN SOUTH ALONG EAST LINE THEREOF, TO THE SOUTHEAST CORNER OF THE SAID SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4; THENCE RUN WEST ALONG THE SOUTH LINE THEREOF TO THE SOUTHWEST CORNER OF THE SAID NORTHWEST 1/4 OF THE NORTHEAST 1/4; THENCE RUN NORTH ALONG THE WEST LINE OF THE SAID NORTHWEST 1/4 OF THE NORTHEAST 1/4 TO THE POINT OF BEGINNING; LESS ALL RIGHTS-OF-WAY FOR STREETS IN HOWEY IN THE HILLS, FLORIDA.

ALL OF BLOCK D-14 IN PALM GARDENS, A SUBDIVISION IN THE TOWN OF HOWEY IN THE HILLS, FLORIDA, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 12, PAGE 11 OF THE PUBLIC RECORDS OF LAKE COUNTY, FLORIDA.

THE SOUTH 3/4 OF THE WEST 1/2; THE NORTHWEST 1/4 OF THE NORTHWEST 1/4, LESS THE RIGHT-OF-WAY OF A COUNTY CLAY ROAD; AND THE SOUTH 1/4 OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 35, TOWNSHIP 20 SOUTH, RANGE 25 EAST, LAKE COUNTY, FLORIDA, IN THE TOWN OF HOWEY IN THE HILLS, FLORIDA.

THAT PART OF THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4 AND THAT PART OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 LYING NORTH AND WEST OF THE WESTERLY LINE OF THE RIGHT-OF-WAY OF STATE ROAD NO. 19, IN SECTION 35, TOWNSHIP 20 SOUTH, RANGE 25 EAST, LAKE COUNTY, FLORIDA, IN THE TOWN OF HOWEY IN THE HILLS, FLORIDA; LESS AND EXCEPT THEREFROM THAT PART THEREOF LYING WITHIN TAYLOR MEMORIAL CEMETERY, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 12, PAGE 5, OF THE PUBLIC RECORDS OF LAKE COUNTY, FLORIDA, AND ALSO LESS ALL RIGHTS-OF-WAY FOR STREETS IN HOWEY IN THE HILLS, FLORIDA.

THAT PART OF THE EAST 1/2 OF THE NORTHEAST 1/4 OF SECTION 35, TOWNSHIP 20 SOUTH, RANGE 25 EAST, IN THE TOWN OF HOWEY IN THE HILLS, FLORIDA, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGIN AT THE NORTHWEST CORNER OF LOT 1, IN BLOCK D-14, IN PALM GARDENS, ACCORDING TO THE PLAT THEREOF RECORDED IN BOOK 12, PAGE 11, OF THE PUBLIC RECORDS OF LAKE COUNTY, FLORIDA; THENCE RUN WEST TO THE WEST LINE OF THE NORTHEAST 1/4 OF THE NORTHEAST 1/4 OF THE SAID SECTION 35; THENCE RUN SOUTH ALONG THE WEST LINE OF THE EAST 1/2 OF THE NORTHEAST 1/4 OF THE SAID SECTION 35 TO A POINT ON THE NORTHWESTERLY LINE OF THE RIGHT-OF-WAY OF STATE ROAD NO. 19; THENCE RUN NORTHEASTERLY ALONG THE NORTHWESTERLY LINE OF THE SAID RIGHT-OF-WAY LINE OF BLOCK D-14, OF THE SAID PALM GARDENS SUBDIVISION; THENCE RUN NORTHWESTERLY ALONG THE WESTERLY LINE OF THE SAID BLOCK D-14, TO THE POINT OF BEGINNING; LESS ALL RIGHTS-OF-WAY FOR STREETS IN HOWEY IN THE HILLS, FLORIDA,

THAT PART OF THE SOUTH 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 26, TOWNSHIP 20 SOUTH, RANGE 25 EAST, LAKE COUNTY, FLORIDA, LYING SOUTH OF THE SOUTHERLY LINE OF THE RIGHT-OF-WAY OF THE COUNTY ROAD.

LESS THE FOLLOWING DESCRIBED PARCEL:

COMMENCE AT THE EAST 1/4 CORNER OF SECTION 35, TOWNSHIP 20 SOUTH, RANGE 25 EAST, LAKE COUNTY, FLORIDA; THENCE RUN NORTH 89°21'35" WEST ALONG THE SOUTH LINE OF THE NORTHEAST 1/4 OF SAID SECTION 35, 1487.79 FEET TO A POINT ON THE NORTHWESTERLY RIGHT-OF-WAY LINE OF STATE ROAD NO. 19; THENCE RUN SOUTH 52°07'27" WEST ALONG SAID NORTHWESTERLY RIGHT-OF-WAY LINE, 459.23 FEET TO THE POINT OF CURVATURE OF A CURVE CONCAVE SOUTHEASTERLY; THENCE RUN SOUTHWESTERLY ALONG THE ARC OF SAID CURVE AND SAID NORTHWESTERLY RIGHT-OF-WAY LINE HAVING A CENTRAL ANGLE OF 14°35'56", A RADIUS OF 2341.83 FEET, AN ARC LENGTH OF 596.69 FEET, A CHORD BEARING OF SOUTH 44°49'31" WEST AND A CHORD DISTANCE OF 595.08 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE ALONG SAID NORTHWESTERLY RIGHT-OF-WAY LINE BEING A CURVE CONCAVE SOUTHEASTERLY; THENCE RUN SOUTHWESTERLY ALONG SAID CURVE HAVING A CENTRAL ANGLE OF 22°58'29", A RADIUS OF 2341.83 FEET, AN ARC LENGTH OF 939.04 FEET, A CHORD BEARING OF SOUTH 26°02'16" WEST AND A CHORD DISTANCE OF 932.76 FEET; THENCE RUN NORTH 75°26'58" WEST, 402.66 FEET; THENCE RUN SOUTH 68°12'24" WEST, 668.73 FEET; THENCE RUN NORTH 53°42'00" WEST, 250.16 FEET; THENCE RUN NORTH 12°38'17" EAST, 257.60 FEET; THENCE RUN NORTH 77°21'43" WEST, 125.00 FEET; THENCE RUN NORTH 12°38'17" EAST, 13.01 FEET TO THE POINT OF CURVATURE OF A CURVE CONCAVE EASTERLY; THENCE RUN NORTHEASTERLY ALONG THE ARC OF SAID CURVE HAVING A CENTRAL ANGLE OF 39°28'41", A RADIUS OF 75.00 FEET, AN ARC LENGTH OF 51.68 FEET, A CHORD BEARING OF NORTH 32°22'37" EAST AND A CHORD DISTANCE OF 50.66 FEET TO THE POINT OF TANGENCY; THENCE RUN NORTH 52°06'58" EAST, 476.63 FEET; THENCE RUN NORTH 54°47'17" EAST, 150.16 FEET; THENCE RUN NORTH 52°06'58" EAST, 205.75 FEET TO THE POINT OF CURVATURE OF A CURVE CONCAVE SOUTHERLY; THENCE RUN EASTERLY ALONG THE ARC OF SAID CURVE HAVING A CENTRAL ANGLE OF 62°53'19", A RADIUS OF 24.99 FEET, AN ARC LENGTH OF 27.43 FEET, A CHORD BEARING OF NORTH 83°33'05" EAST AND A CHORD DISTANCE OF 26.08 FEET TO THE POINT OF REVERSE CURVATURE OF A CURVE CONCAVE NORTHWESTERLY; THENCE RUN NORTHEASTERLY ALONG THE ARC OF SAID CURVE HAVING A CENTRAL ANGLE OF 125°45'33", A RADIUS OF 99.99 FEET, AN ARC LENGTH OF 219.47 FEET, A CHORD BEARING OF NORTH 52°06'58" EAST AND A CHORD DISTANCE OF 178.00 FEET TO THE POINT OF REVERSE CURVATURE OF A CURVE CONCAVE SOUTHEASTERLY; THENCE RUN NORTHEASTERLY ALONG THE ARC OF SAID CURVE HAVING A CENTRAL ANGLE OF 62°53'19", A RADIUS OF 24.99 FEET, AN ARC LENGTH OF 27.43 FEET, A CHORD BEARING OF NORTH 20°40'51" EAST AND A CHORD DISTANCE OF 26.08 FEET TO THE POINT OF TANGENCY; THENCE RUN NORTH 52°06'58" EAST, 560.98 FEET TO A POINT ON THE NORTHWESTERLY EXTENSION OF THE SOUTHWESTERLY LINE OF TAYLOR MEMORIAL CEMETERY; THENCE RUN SOUTH 37°58'58" EAST ALONG SAID NORTHWESTERLY EXTENSION LINE, 613.80 FEET TO THE POINT OF BEGINNING.

ALSO LESS THE FOLLOWING DESCRIBED PARCEL:

COMMENCE AT THE EAST 1/4 CORNER OF SECTION 35, TOWNSHIP 20 SOUTH, RANGE 25 EAST, LAKE COUNTY, FLORIDA; THENCE RUN NORTH 89°21'35" WEST ALONG THE SOUTH LINE OF THE NORTHEAST 1/4 OF SAID SECTION 35, 1487.79 FEET TO A POINT ON THE NORTHWESTERLY RIGHT-OF-WAY LINE OF STATE ROAD NO. 19; THENCE RUN SOUTH 52°07'27" WEST ALONG SAID NORTHWESTERLY RIGHT-OF-WAY LINE, 66.25 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 52°07'27" WEST ALONG SAID NORTHWESTERLY RIGHT-OF-WAY LINE, 392.98 FEET TO THE POINT OF CURVATURE OF A CURVE CONCAVE SOUTHEASTERLY; THENCE RUN SOUTHWESTERLY ALONG THE ARC OF SAID CURVE HAVING A CENTRAL ANGLE OF 02°12'24", A RADIUS OF 2341.83 FEET, AN ARC LENGTH OF 90.19 FEET, A CHORD BEARING OF SOUTH 51°01'15" WEST AND A CHORD DISTANCE OF 90.19 FEET TO THE MOST EASTERLY CORNER OF TAYLOR MEMORIAL CEMETERY; THENCE RUN NORTH 38°00'31" WEST, ALONG THE NORTHEASTERLY LINE OF SAID TAYLOR MEMORIAL CEMETERY, 547.00 FEET; THENCE RUN NORTH 52°06'58" EAST, 484.34 FEET TO THE POINT OF CURVATURE OF A CURVE CONCAVE SOUTHERLY; THENCE RUN SOUTHEASTERLY ALONG THE ARC OF SAID CURVE HAVING A CENTRAL ANGLE OF 90°00'00", A RADIUS OF 10.00 FEET, AN ARC LENGTH OF 15.71 FEET, A CHORD BEARING OF SOUTH 82°53'02" EAST AND A CHORD DISTANCE OF 14.14 FEET TO THE POINT OF TANGENCY; THENCE RUN SOUTH 37°53'02" EAST, 525.33 FEET TO THE POINT OF CURVATURE OF A CURVE CONCAVE NORTHWESTERLY; THENCE RUN SOUTHWESTERLY ALONG THE ARC OF SAID CURVE HAVING A CENTRAL ANGLE OF 90°00'00", A RADIUS OF 10.00 FEET, AN ARC LENGTH OF 15.71 FEET, A CHORD BEARING OF SOUTH 07°07'12" WEST AND A CHORD DISTANCE OF 14.14 FEET TO THE POINT OF BEGINNING.

AND, ALSO LESS THE FOLLOWING DESCRIBED PARCEL:

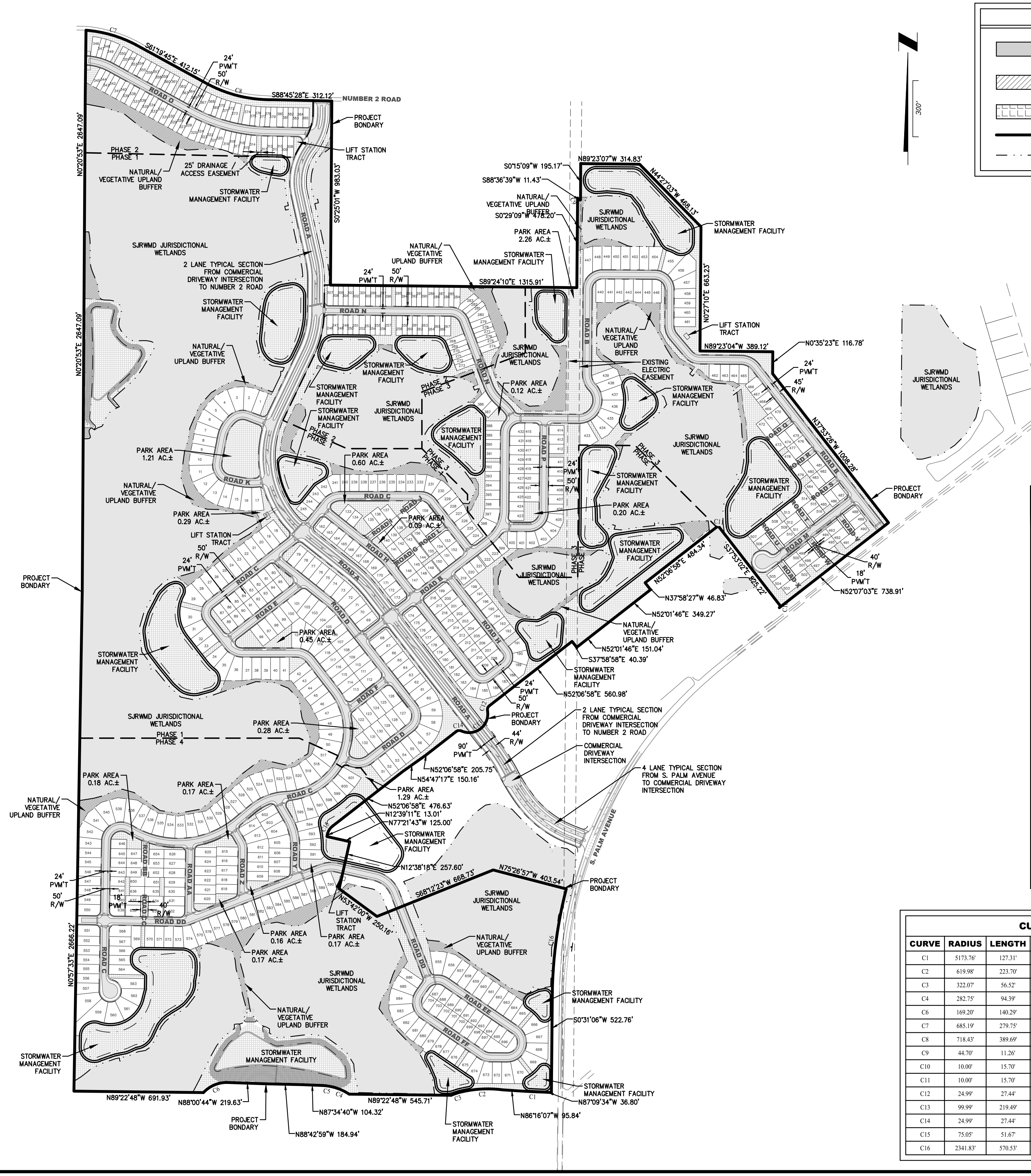
COMMENCE AT THE EAST 1/4 CORNER OF SECTION 35, TOWNSHIP 20 SOUTH, RANGE 25 EAST, LAKE COUNTY, FLORIDA; THENCE RUN NORTH 89°21'35" WEST ALONG THE SOUTH LINE OF THE NORTHEAST 1/4 OF SAID SECTION 35, 1487.79 FEET TO A POINT ON THE NORTHWESTERLY RIGHT-OF-WAY LINE OF STATE ROAD NO. 19 THENCE RUN NORTH 52°07'27" EAST ALONG SAID NORTHWESTERLY RIGHT-OF-WAY LINE, 673.75 FEET TO THE POINT OF BEGINNING; THENCE RUN NORTH 37°53'02" WEST, 1008.88 FEET; THENCE RUN NORTH 00°35'47" EAST, 116.78 FEET TO A POINT ON THE NORTH LINE OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SAID SECTION 35; THENCE RUN SOUTH 89°24'13" EAST ALONG SAID NORTH LINE, 270.08 FEET TO A POINT ON THE WEST LINE OF THE NORTHEAST 1/4 OF THE NORTHEAST 1/4 OF SAID SECTION 35; THENCE RUN NORTH 00°35'58" EAST ALONG SAID WEST LINE, 256.12 FEET TO A POINT ON THE SOUTH LINE OF THE RESIDENCE OF DON WHITE; THENCE RUN SOUTH 89°24'13" EAST ALONG SAID SOUTH LINE, 418.17 FEET; THENCE RUN SOUTH 00°35'47" WEST, 709.10 FEET; THENCE RUN SOUTH 37°52'33" EAST, 317.47 FEET TO A POINT ON SAID NORTHWESTERLY RIGHT-OF-WAY LINE OF STATE ROAD NO. 19; THENCE RUN SOUTH 52°07'27" WEST ALONG SAID NORTHWESTERLY RIGHT-OF-WAY LINE, 329.54 FEET TO THE POINT OF BEGINNING.

ALSO, LESS AND EXCEPT THE FOLLOWING DESCRIBED PARCEL:

THAT PARCEL DESCRIBED AS THE TAYLOR MEMORIAL CEMETERY IN THAT QUITCLAIM DEED RECORDED IN OFFICIAL RECORDS BOOK 1147, PAGE 1398, OF THE PUBLIC RECORDS OF LAKE COUNTY, FLORIDA.

PARCEL 2 (EASEMENT ESTATE):

TOGETHER WITH THOSE APPURTENANT EASEMENTS AS SET FORTH AND GRANTED BY EAGLES LANDING AT OCOEE, INC., A FLORIDA CORPORATION, TO HOWEY IN THE HILLS, A FLORIDA LIMITED PARTNERSHIP, IN THAT DEVELOPMENT AGREEMENT AND GRANT OF EASEMENTS, RECORDED NOVEMBER 10, 2005 IN OFFICIAL RECORDS BOOK 3003, PAGE 1377, OF THE PUBLIC RECORDS OF LAKE COUNTY, FLORIDA.



LEGEND

▨	ST. JOHNS RIVER WATER MANAGEMENT DISTRICT JURISDICTIONAL WETLANDS
▨	NATURAL VEGETATIVE UPLAND BUFFER
▦	NEIGHBORHOOD PARK
━	PROJECT BOUNDARY
— · · —	JURISDICTIONAL WETLAND LINE

PROJECT SUMMARY

1. TOTAL SITE AREA....................................320.12 ACRES

2. OPEN SPACE..22.59 ACRES

3. MAXIMUM ALLOWABLE DEVELOPMENT
   A. 4 PHASES..................728 RESIDENTIAL UNITS

   ANTICIPATED QUANTITY PER PHASE

   PHASE 1
   50'X80' LOTS = 129
   50'X115' LOTS = 116
   27'X100' LOTS = 0

   PHASE 2
   50'X80' LOTS = 0
   50'X115' LOTS = 0
   27'X100' LOTS = 146

   PHASE 3
   50'X80' LOTS = 103
   50'X115' LOTS = 32
   27'X100' LOTS = 0

   PHASE 4
   50'X80' LOTS = 48
   50'X115' LOTS = 154
   27'X100' LOTS = 0

4. MAXIMUM IMPERVIOUS AREA
   - 50'X80' = 65% MAX IMPERVIOUS
   - 50'X115' = 60% MAX IMPERVIOUS
   - 27'X100' = 78% MAX IMPERVIOUS

5. UPLANDS
   A. EXISTING.......................................191.73 ACRES
   B. CREATED..5.32 ACRES
   C. TOTAL..197.05 ACRES

6. WETLANDS
   A. EXISTING.......................................128.39 ACRES
   B. IMPACTED..5.32 ACRES
   C. REMAINING......................................123.07 ACRES

7. UPLAND BUFFERS...................................11.47 ACRES

8. UPLAND PRESERVATION.............................0.00 ACRES

9. STORMWATER MGMT. FACILITY.................26.86 ACRES

10. ROADS
    A. LENGTH..........(31,808.89 LF)...........19.18 ACRES

11. RECREATION..7.79 ACRES

12. EXISTING AND PROPOSED ZONING....................PUD

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	BEARING	CHORD	DELTA
C1	5173.76'	127.31'	63.66'	N87°14'21"W	127.31'	1°24'35"
C2	619.98'	223.70'	113.08'	S87°05'39"W	222.49'	20°40'24"
C3	322.07'	56.52'	28.33'	S71°43'48"W	56.45'	10°03'19"
C4	282.75'	94.39'	47.64'	N66°12'45"W	93.95'	19°07'37"
C6	169.20'	140.29'	74.46'	S66°35'26"W	136.30'	47°30'19"
C7	685.19'	279.75'	141.85'	S73°45'45"E	277.81'	23°23'34"
C8	718.43'	389.69'	199.77'	S75°37'23"E	384.93'	31°04'41"
C9	44.70'	11.26'	5.66'	N22°40'39"W	11.23'	14°26'15"
C10	10.00'	15.70'	10.00'	S7°07'12"W	14.14'	89°58'58"
C11	10.00'	15.70'	10.00'	S82°53'02"E	14.14'	89°58'58"
C12	24.99'	27.44'	15.29'	N20°40'51"E	26.08'	62°54'26"
C13	99.99'	219.49'	195.27'	N52°06'58"E	178.00'	125°46'08"
C14	24.99'	27.44'	15.29'	N83°33'05"E	26.08'	62°54'26"
C15	75.05'	51.67'	26.91'	N32°22'37"E	50.66'	39°26'52"
C16	2341.83'	570.53'	286.68'	N7°31'57"E	569.12'	13°57'31"

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
1			
2			
3			
4			
5			
6			
7			

MASTER SITE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	O.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 300'	
Sheet 3	

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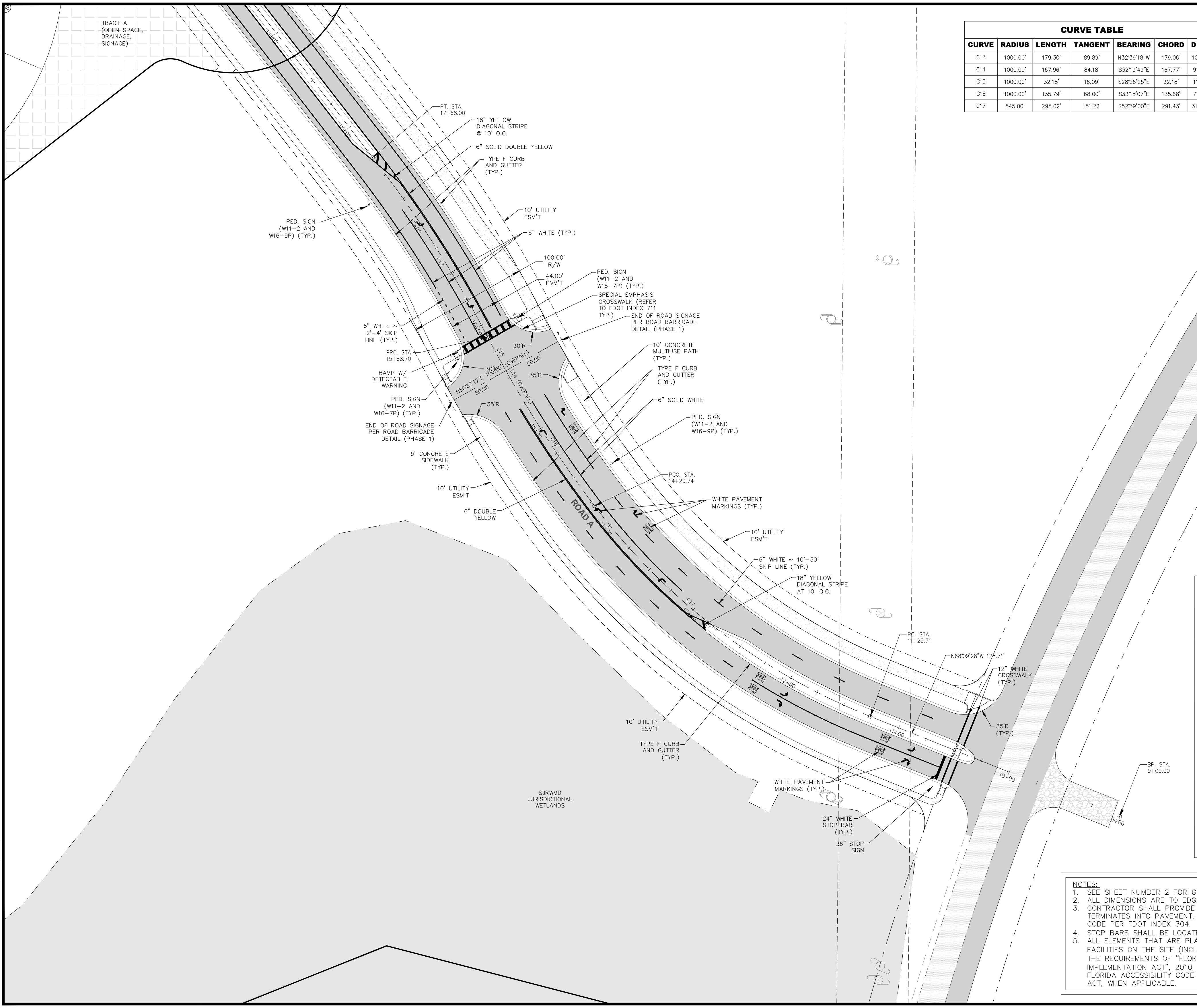
Printed By: Garrett

Printed: Sep 29, 2022 - 9:20am

J:\21\21-04-0008 Preserve at Howey\Design\Dwgs\Plots\21-04-0008 Site.dwg


TRACT A
(OPEN SPACE,
DRAINAGE,
SIGNAGE)
PT. STA.
17+68.00
18" YELLOW
DIAGONAL STRIPE
@ 10' O.C.
6" SOLID DOUBLE YELLOW
TYPE F CURB
AND GUTTER
(TYP.)
10' UTILITY
ESM'T
PED. SIGN
(W11-2 AND
W16-9P) (TYP.)
6" WHITE (TYP.)
100.00'
R/W
44.00'
PVM'T
PED. SIGN
(W11-2 AND
W16-7P) (TYP.)
SPECIAL EMPHASIS
CROSSWALK (REFER
TO FDOT INDEX 711
TYP.)
END OF ROAD SIGNAGE
PER ROAD BARRICADE
DETAIL (PHASE 1)
6" WHITE ~
2'-4' SKIP
LINE (TYP.)
PRC. STA.
15+88.70
30'R
RAMP W/
DETECTABLE
WARNING
C13
C15
C14 (OVERALL)
C16
C17
100.00' (OVERALL)
N60°38'17"E
50.00'
50.00'
35'R
35'R
10' CONCRETE
MULTIUSE PATH
(TYP.)
TYPE F CURB
AND GUTTER
(TYP.)
6" SOLID WHITE
PED. SIGN
(W11-2 AND
W16-7P) (TYP.)
END OF ROAD SIGNAGE
PER ROAD BARRICADE
DETAIL (PHASE 1)
PED. SIGN
(W11-2 AND
W16-9P) (TYP.)
5' CONCRETE
SIDEWALK
(TYP.)
PCC. STA.
14+20.74
10' UTILITY
ESM'T
WHITE PAVEMENT
MARKINGS (TYP.)
6" DOUBLE
YELLOW
ROAD A
ONLY
ONLY
18+00
17+00
16+00
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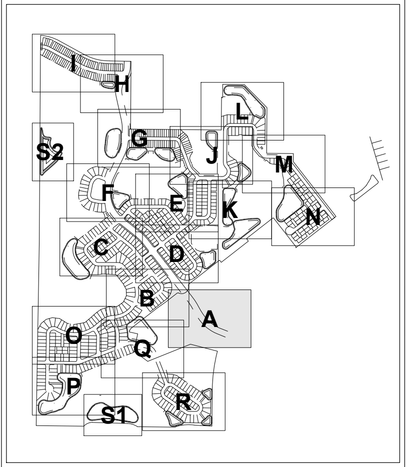
14+00
13+00
12+00
11+00
10+00
9+00
10' UTILITY
ESM'T
6" WHITE ~ 10'-30'
SKIP LINE (TYP.)
18" YELLOW
DIAGONAL STRIPE
AT 10' O.C.
PC. STA.
11+25.71
N68°09'28"W 125.71'
12" WHITE
CROSSWALK
(TYP.)
35'R
(TYP.)
BP. STA.
9+00.00
10' UTILITY
ESM'T
TYPE F CURB
AND GUTTER
(TYP.)
WHITE PAVEMENT
MARKINGS (TYP.)
24" WHITE
STOP BAR
(TYP.)
36" STOP
SIGN
SJRWMD
JURISDICTIONAL
WETLANDS
40'

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	BEARING	CHORD	DELTA
C13	1000.00'	179.30'	89.89'	N32°39'18"W	179.06'	10°16'24"
C14	1000.00'	167.96'	84.18'	S32°19'49"E	167.77'	9°37'25"
C15	1000.00'	32.18'	16.09'	S28°26'25"E	32.18'	1°50'37"
C16	1000.00'	135.79'	68.00'	S33°15'07"E	135.68'	7°46'48"
C17	545.00'	295.02'	151.22'	S52°39'00"E	291.43'	31°00'57"

PHASE 1 OPEN SPACE TRACT TABLE		
TRACT LETTER	TRACT USE	TRACT ACREAGE
A	OPEN SPACE, DRAINAGE, SIGNAGE	0.97 Ac.
B	OPEN SPACE, DRAINAGE, SIGNAGE	9.16 Ac.
C	OPEN SPACE	0.04 Ac.
D	OPEN SPACE	0.07 Ac.
E	OPEN SPACE, DRAINAGE, PARK	0.78 Ac.
F	OPEN SPACE	0.09 Ac.
G	OPEN SPACE	0.24 Ac.
H	OPEN SPACE, DRAINAGE	1.47 Ac.
I	OPEN SPACE, DRAINAGE	0.25 Ac.
J	OPEN SPACE	0.11 Ac.
K	OPEN SPACE, PARK	0.45 Ac.
L	OPEN SPACE	0.09 Ac.
M	OPEN SPACE, DRAINAGE	3.64 Ac.
N	OPEN SPACE	0.08 Ac.
O	OPEN SPACE	0.31 Ac.
P	OPEN SPACE, PUMP STATION	0.02 Ac.
Q	OPEN SPACE	0.27 Ac.
R	OPEN SPACE, AMENITY	1.21 Ac.
S	OPEN SPACE, DRAINAGE	3.48 Ac.
T	OPEN SPACE, DRAINAGE	0.55 Ac.
U	OPEN SPACE, DRAINAGE	3.60 Ac.
V	OPEN SPACE, PRESERVATION	54.72 Ac.
W	OPEN SPACE, PRESERVATION	2.82 Ac.
X	OPEN SPACE, PRESERVATION	2.59 Ac.
Y	OPEN SPACE, PRESERVATION	3.75 Ac.
Z	OPEN SPACE, PRESERVATION	1.03 Ac.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KEYMAP

NOTES:

1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL PROVIDE CURB RAMPS AT ALL PLACES WHERE SIDEWALK TERMINATES INTO PAVEMENT. CURB RAMPS SHALL COMPLY WITH THE LATEST ADA CODE PER FDOT INDEX 304.
4. STOP BARS SHALL BE LOCATED 4.0' MIN. FROM CROSSWALKS AND / OR CURB RAMPS.
5. ALL ELEMENTS THAT ARE PLACES OF PUBLIC ACCOMMODATIONS AND COMMERCIAL FACILITIES ON THE SITE (INCLUDING ACCESSIBLE ROUTES AND PARKING) SHALL MEET THE REQUIREMENTS OF "FLORIDA AMERICANS WITH DISABILITIES ACCESSIBILITY IMPLEMENTATION ACT", 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND 2012 FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION AND THE FAIR HOUSING ACT, WHEN APPLICABLE.

CW Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
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(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
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2	:		
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SITE PLAN

HILLSIDE GROVE

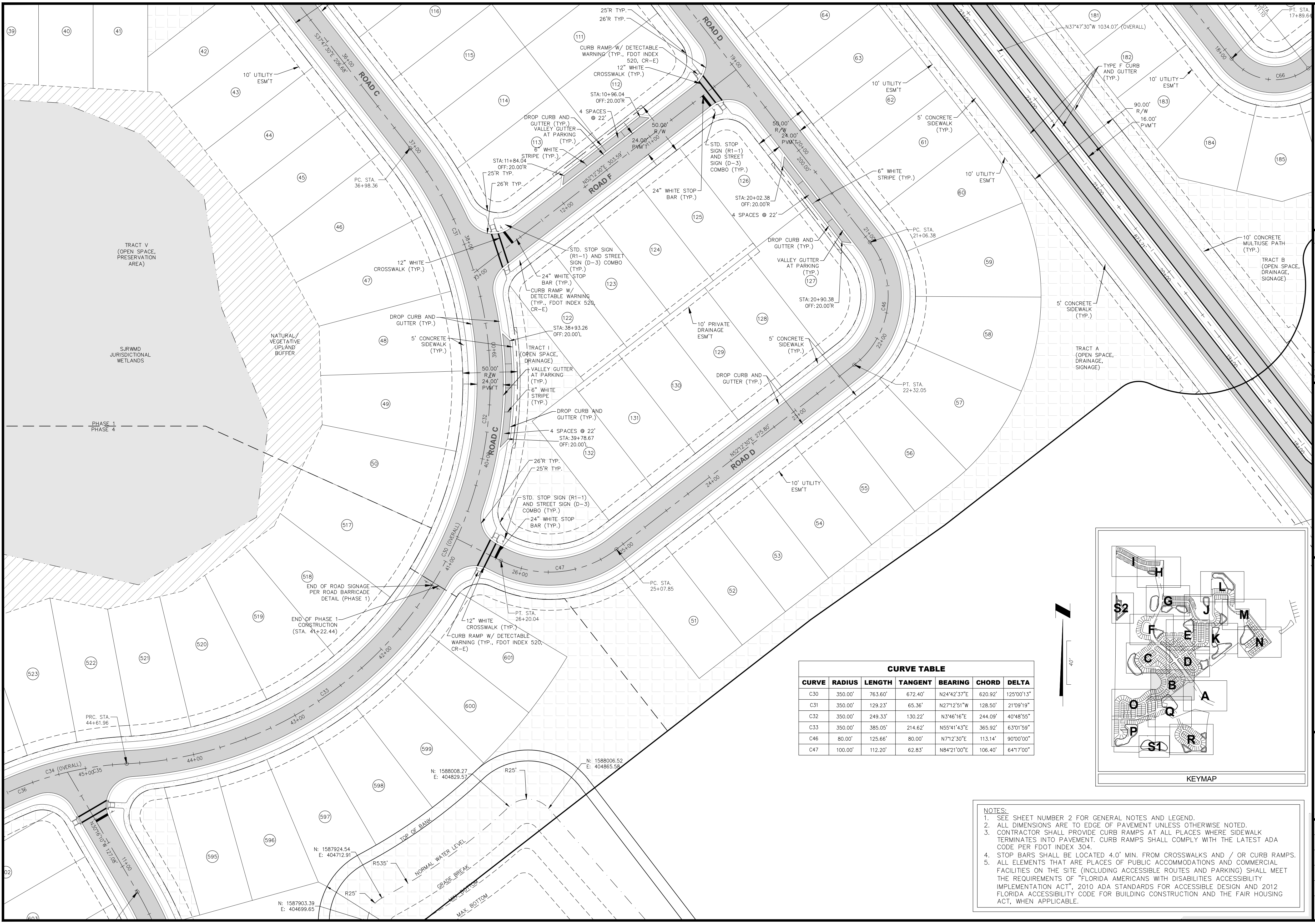
HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 4A	

Printed By: Garrett
Printed: Sep 29 2022 - 9:20am
J:\21\21-04-0008 Preserve at Howey\Design\Dwgs\Plots\21-04-0008 Site.dwg


ROAD C
ROAD D
ROAD F
S37°47'30"E 206.68'
N52°12'30"E 303.59'
N52°12'30"E 275.80'
N37°47'30"W 1034.07' (OVERALL)
25'R TYP.
26'R TYP.
CURB RAMP W/ DETECTABLE WARNING (TYP., FDOT INDEX 520, CR-E)
12" WHITE CROSSWALK (TYP.)
STA:10+96.04 OFF:20.00'R
4 SPACES @ 22'
DROP CURB AND GUTTER (TYP.)
VALLEY GUTTER AT PARKING (TYP.)
6" WHITE STRIPE (TYP.)
STA:11+84.04 OFF:20.00'R
50.00' R/W
24.00' PVM'T
STD. STOP SIGN (R1-1) AND STREET SIGN (D-3) COMBO (TYP.)
24" WHITE STOP BAR (TYP.)
STA:20+02.38 OFF:20.00'R
STA:20+90.38 OFF:20.00'R
PC. STA. 21+06.38
PT. STA. 22+32.05
PC. STA. 36+98.36
PC. STA. 25+07.85
PT. STA. 26+20.04
PRC. STA. 44+61.96
PT. STA. 17+89.64
STA:38+93.26 OFF:20.00'L
STA:39+78.67 OFF:20.00'L
10' UTILITY ESM'T
10' PRIVATE DRAINAGE ESM'T
5' CONCRETE SIDEWALK (TYP.)
TRACT I (OPEN SPACE, DRAINAGE)
TRACT V (OPEN SPACE, PRESERVATION AREA)
SJRWMD JURISDICTIONAL WETLANDS
NATURAL/ VEGETATIVE UPLAND BUFFER
PHASE 1
PHASE 4
END OF ROAD SIGNAGE PER ROAD BARRICADE DETAIL (PHASE 1)
END OF PHASE 1 CONSTRUCTION (STA. 41+22.44)
TYPE F CURB AND GUTTER (TYP.)
90.00' R/W
16.00' PVM'T
10' CONCRETE MULTIUSE PATH (TYP.)
TRACT B (OPEN SPACE, DRAINAGE, SIGNAGE)
TRACT A (OPEN SPACE, DRAINAGE, SIGNAGE)
C30 (OVERALL)
C31
C32
C33
C34 (OVERALL)
C36
C46
C47
C66
N: 1588008.27 E: 404829.57
N: 1588006.52 E: 404865.58
N: 1587924.54 E: 404712.91
N: 1587903.39 E: 404699.65
R25'
R535'
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MAX. BOTTOM
N30°16'10"W 127.08'
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KEYMAP
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CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	BEARING	CHORD	DELTA
C30	350.00'	763.60'	672.40'	N24°42'37"E	620.92'	125°00'13"
C31	350.00'	129.23'	65.36'	N27°12'51"W	128.50'	21°09'19"
C32	350.00'	249.33'	130.22'	N3°46'16"E	244.09'	40°48'55"
C33	350.00'	385.05'	214.62'	N55°41'43"E	365.92'	63°01'59"
C46	80.00'	125.66'	80.00'	N7°12'30"E	113.14'	90°00'00"
C47	100.00'	112.20'	62.83'	N84°21'00"E	106.40'	64°17'00"

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4. STOP BARS SHALL BE LOCATED 4.0' MIN. FROM CROSSWALKS AND / OR CURB RAMPS.
5. ALL ELEMENTS THAT ARE PLACES OF PUBLIC ACCOMMODATIONS AND COMMERCIAL FACILITIES ON THE SITE (INCLUDING ACCESSIBLE ROUTES AND PARKING) SHALL MEET THE REQUIREMENTS OF "FLORIDA AMERICANS WITH DISABILITIES ACCESSIBILITY IMPLEMENTATION ACT", 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND 2012 FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION AND THE FAIR HOUSING ACT, WHEN APPLICABLE.

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SITE PLAN

HILLSIDE GROVE
HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 4B	

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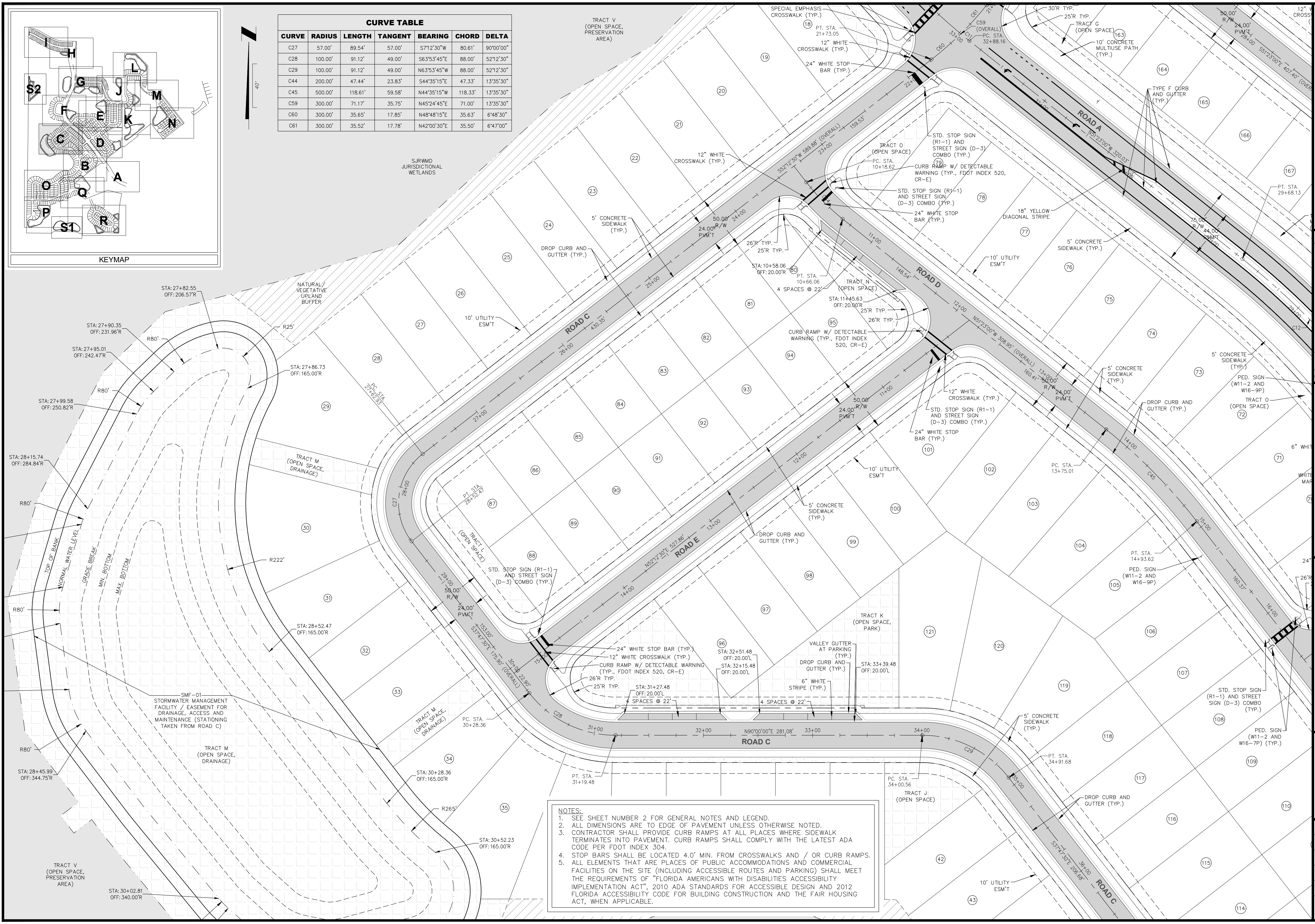
KEYMAP
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S2
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C
D
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P
R
S1
40'
TRACT V (OPEN SPACE, PRESERVATION AREA)
SJRWMD JURISDICTIONAL WETLANDS
ROAD A
ROAD C
ROAD D
ROAD E
SPECIAL EMPHASIS CROSSWALK (TYP.)
PT. STA. 21+73.05
12" WHITE CROSSWALK (TYP.)
24" WHITE STOP BAR (TYP.)
C59 (OVERALL)
PC. STA. 32+88.16
C60
C61
30'R TYP.
25'R TYP.
TRACT G (OPEN SPACE)
10' CONCRETE MULTIUSE PATH (TYP.)
TYPE F CURB AND GUTTER (TYP.)
50.00' R/W
24.00' PVM'T
75.00' R/W
44.00' PVM'T
N51°23'00"W 320.03'
S51°23'00"E 407.40' (OVERALL)
TRACT O (OPEN SPACE)
PC. STA. 10+18.62
CURB RAMP W/ DETECTABLE WARNING (TYP., FDOT INDEX 520, CR-E)
STD. STOP SIGN (R1-1) AND STREET SIGN (D-3) COMBO (TYP.)
24" WHITE STOP BAR (TYP.)
18" YELLOW DIAGONAL STRIPE
10' UTILITY ESM'T
5' CONCRETE SIDEWALK (TYP.)
DROP CURB AND GUTTER (TYP.)
S52°12'30"W 589.88' (OVERALL)
159.53'
430.35'
26'R TYP.
25'R TYP.
STA: 10+58.06 OFF: 20.00'R
PT. STA. 10+66.06
4 SPACES @ 22'
TRACT N (OPEN SPACE)
STA: 11+45.63 OFF: 20.00'R
148.54'
N51°23'00"W 308.95' (OVERALL)
160.41'
160.37'
C44
C45
PC. STA. 13+75.01
PT. STA. 14+93.62
PED. SIGN (W11-2 AND W16-9P)
PED. SIGN (W11-2 AND W16-7P) (TYP.)
TRACT O (OPEN SPACE)
PT. STA. 29+68.13
C12
6" WHITE
NATURAL/ VEGETATIVE UPLAND BUFFER
STA: 27+82.55 OFF: 206.57'R
STA: 27+90.35 OFF: 231.96'R
STA: 27+95.01 OFF: 242.47'R
STA: 27+99.58 OFF: 250.82'R
STA: 27+86.73 OFF: 165.00'R
STA: 28+15.74 OFF: 284.84'R
STA: 28+52.47 OFF: 165.00'R
STA: 28+45.99 OFF: 344.75'R
STA: 30+28.36 OFF: 165.00'R
STA: 30+52.23 OFF: 165.00'R
STA: 30+02.81 OFF: 340.00'R
R25'
R80'
R222'
R265'
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM
SMF-01 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE (STATIONING TAKEN FROM ROAD C)
TRACT M (OPEN SPACE, DRAINAGE)
PC. STA. 27+62.93
PT. STA. 28+52.47
C27
C28
C29
TRACT L (OPEN SPACE)
N52°12'30"E 527.86'
S37°47'30"E 175.90' (OVERALL)
153.00'
22.90'
PC. STA. 30+28.36
PT. STA. 31+19.48
N90°00'00"E 281.08'
PC. STA. 34+00.56
PT. STA. 34+91.68
S37°47'30"E 206.68'
STA: 31+27.48 OFF: 20.00'L
STA: 32+51.48 OFF: 20.00'L
STA: 32+15.48 OFF: 20.00'L
STA: 33+39.48 OFF: 20.00'L
VALLEY GUTTER AT PARKING (TYP.)
6" WHITE STRIPE (TYP.)
TRACT K (OPEN SPACE, PARK)
TRACT J (OPEN SPACE)
19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 42 43
71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
101 102 103 104 105 106 107 108 109 110 114 115 116 117 119 120 121
163 164 165 166 167
11+00 12+00 13+00 14+00 15+00 16+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	BEARING	CHORD	DELTA
C27	57.00'	89.54'	57.00'	S7°12'30"W	80.61'	90°00'00"
C28	100.00'	91.12'	49.00'	S63°53'45"E	88.00'	52°12'30"
C29	100.00'	91.12'	49.00'	N63°53'45"W	88.00'	52°12'30"
C44	200.00'	47.44'	23.83'	S44°35'15"E	47.33'	13°35'30"
C45	500.00'	118.61'	59.58'	N44°35'15"W	118.33'	13°35'30"
C59	300.00'	71.17'	35.75'	N45°24'45"E	71.00'	13°35'30"
C60	300.00'	35.65'	17.85'	N48°48'15"E	35.63'	6°48'30"
C61	300.00'	35.52'	17.78'	N42°00'30"E	35.50'	6°47'00"

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SITE PLAN

HILLSIDE GROVE
HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW
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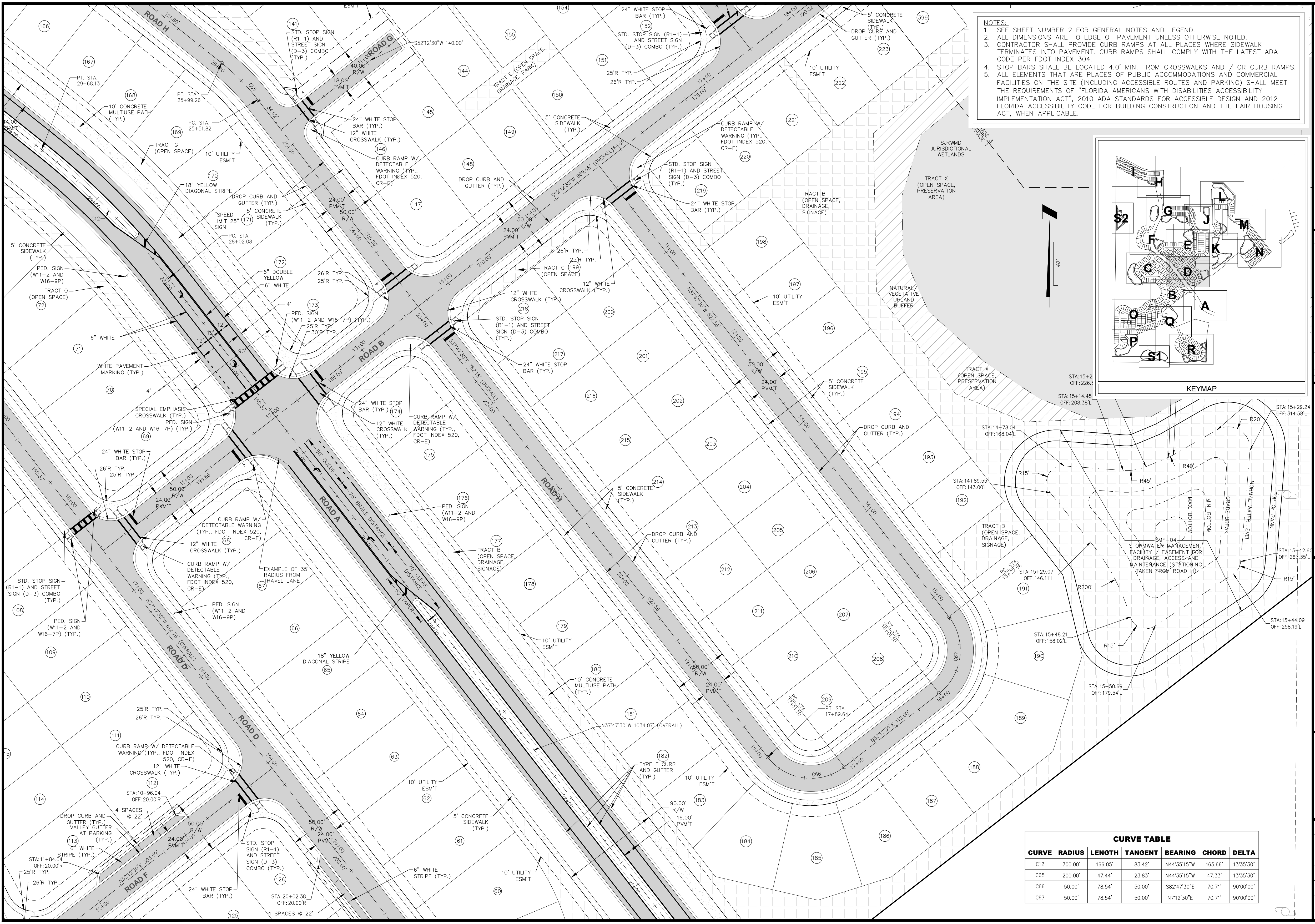
ROAD A
ROAD B
ROAD D
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KEYMAP
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TRACT G (OPEN SPACE)
TRACT O (OPEN SPACE)
TRACT C (OPEN SPACE)
TRACT E (OPEN SPACE, DRAINAGE, PARK)
TRACT B (OPEN SPACE, DRAINAGE, SIGNAGE)
TRACT X (OPEN SPACE, PRESERVATION AREA)
SJRWMD JURISDICTIONAL WETLANDS
NATURAL / VEGETATIVE UPLAND BUFFER
PHASE 3
PHASE 1
STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE (STATIONING TAKEN FROM ROAD H)
SMF-04
MAX. BOTTOM
MIN. BOTTOM
GRADE BREAK
NORMAL WATER LEVEL
TOP OF BANK
STD. STOP SIGN (R1-1) AND STREET SIGN (D-3) COMBO (TYP.)
24" WHITE STOP BAR (TYP.)
12" WHITE CROSSWALK (TYP.)
CURB RAMP W/ DETECTABLE WARNING (TYP., FDOT INDEX 520, CR-E)
5' CONCRETE SIDEWALK (TYP.)
DROP CURB AND GUTTER (TYP.)
10' UTILITY ESM'T
10' CONCRETE MULTIUSE PATH (TYP.)
18" YELLOW DIAGONAL STRIPE
"SPEED LIMIT 25" SIGN
6" DOUBLE YELLOW
6" WHITE
PED. SIGN (W11-2 AND W16-9P)
PED. SIGN (W11-2 AND W16-7P) (TYP.)
WHITE PAVEMENT MARKING (TYP.)
SPECIAL EMPHASIS CROSSWALK (TYP.)
EXAMPLE OF 35' RADIUS FROM TRAVEL LANE
50' QUEUE
75' BRAKE DISTANCE
70' CLEAR DISTANCE
50' TAPER
TYPE F CURB AND GUTTER (TYP.)
VALLEY GUTTER AT PARKING (TYP.)
4 SPACES @ 22'
6" WHITE STRIPE (TYP.)
25'R TYP.
26'R TYP.
30'R TYP.
50.00' R/W
24.00' PVM'T
40.00' R/W
18.00' PVM'T
90.00' R/W
16.00' PVM'T
S52°12'30"W 140.00'
S52°12'30"W 869.68' (OVERALL)
S37°47'30"E 762.18' (OVERALL)
N37°47'30"W 522.56'
N37°47'30"W 612.76' (OVERALL)
N37°47'30"W 1034.07' (OVERALL)
N52°12'30"E 110.00'
N52°12'30"E 303.59'
PT. STA. 29+68.13
PT. STA. 25+99.26
PC. STA. 25+51.82
PC. STA. 28+02.08
PC. STA. 17+11.10
PT. STA. 17+89.64
PT. STA. 16+01.10
PC. STA. 15+22.56
STA:10+96.04 OFF:20.00'R
STA:11+84.04 OFF:20.00'R
STA:20+02.38 OFF:20.00'R
STA:14+78.04 OFF:168.04'L
STA:14+89.55 OFF:143.00'L
STA:15+14.45 OFF:208.38'L
STA:15+29.24 OFF:314.58'L
STA:15+42.60 OFF:267.35'L
STA:15+44.09 OFF:258.19'L
STA:15+29.07 OFF:146.11'L
STA:15+48.21 OFF:158.02'L
STA:15+50.69 OFF:179.54'L
R15'
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CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	BEARING	CHORD	DELTA
C12	700.00'	166.05'	83.42'	N44°35'15"W	165.66'	13°35'30"
C65	200.00'	47.44'	23.83'	N44°35'15"W	47.33'	13°35'30"
C66	50.00'	78.54'	50.00'	S82°47'30"E	70.71'	90°00'00"
C67	50.00'	78.54'	50.00'	N7°12'30"E	70.71'	90°00'00"

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HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
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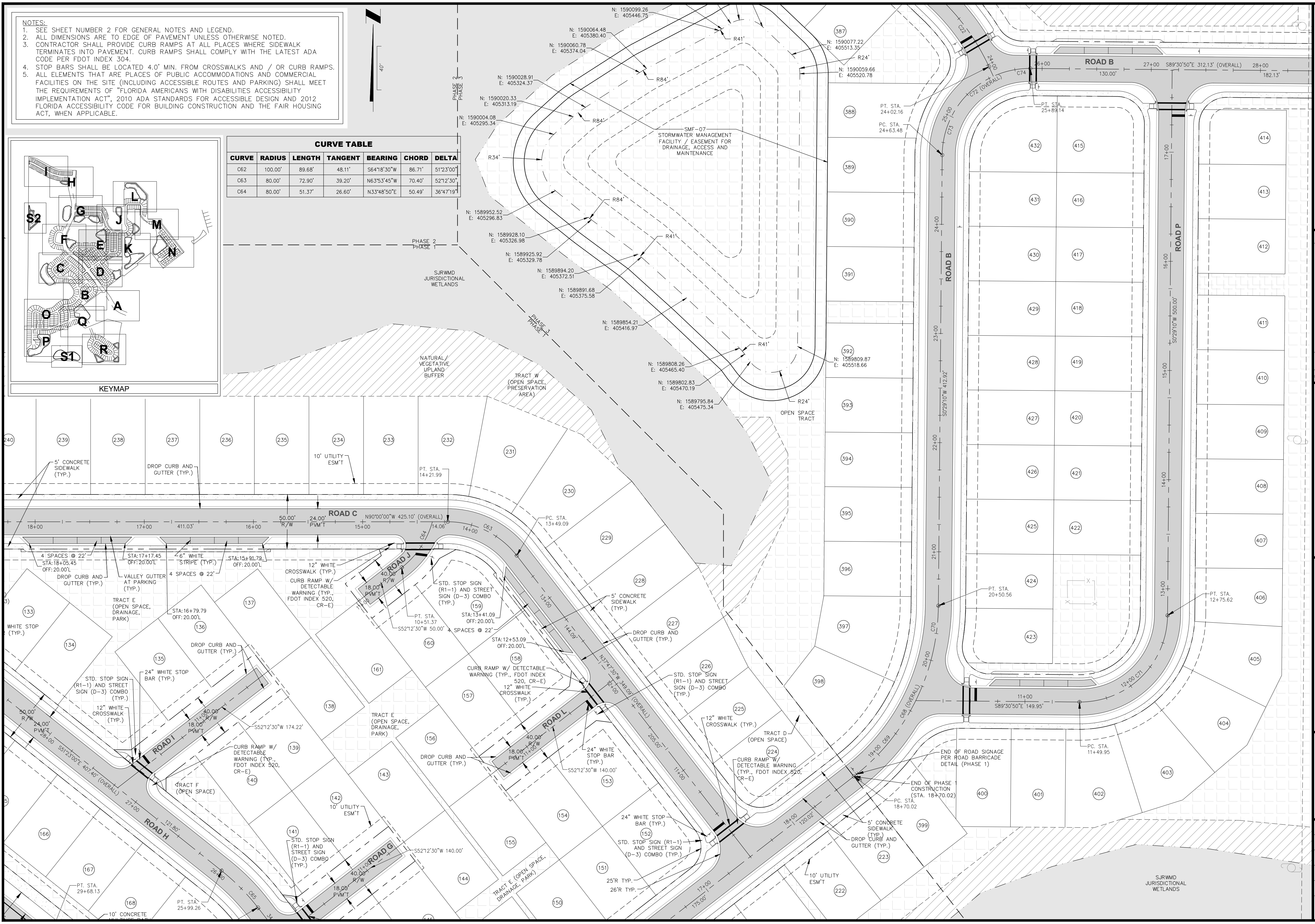
CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	BEARING	CHORD	DELTA
C62	100.00'	89.68'	48.11'	S64°18'30"W	86.71'	51°23'00"
C63	80.00'	72.90'	39.20'	N63°53'45"W	70.40'	52°12'30"
C64	80.00'	51.37'	26.60'	N33°48'50"E	50.49'	36°47'19"



40'
KEYMAP
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Q
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S1
R
PHASE 2
PHASE 3
PHASE 2
PHASE 1
PHASE 3
PHASE 1
SJRWMD JURISDICTIONAL WETLANDS
NATURAL/ VEGETATIVE UPLAND BUFFER
TRACT W (OPEN SPACE, PRESERVATION AREA)
N: 1590099.26 E: 405446.75
N: 1590064.48 E: 405380.40
N: 1590060.78 E: 405374.04
N: 1590028.91 E: 405324.37
N: 1590020.33 E: 405313.19
N: 1590004.08 E: 405295.34
N: 1589952.52 E: 405296.83
N: 1589928.10 E: 405326.98
N: 1589925.92 E: 405329.78
N: 1589894.20 E: 405372.51
N: 1589891.68 E: 405375.58
N: 1589854.21 E: 405416.97
N: 1589808.26 E: 405465.40
N: 1589802.83 E: 405470.19
N: 1589795.84 E: 405475.34
N: 1590077.22 E: 405513.35
N: 1590059.66 E: 405520.78
N: 1589809.87 E: 405518.66
R41'
R24'
R84'
R84'
R34'
R84'
R41'
R41'
R24'
SMF-07 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
OPEN SPACE TRACT
ROAD B
26+00
27+00
28+00
S89°30'50"E 312.13' (OVERALL)
130.00'
182.13'
C22
C74
C72 (OVERALL)
C73
24+00
25+00
PT. STA. 24+02.16
PC. STA. 24+63.48
PT. STA. 25+89.14
ROAD B
23+00
22+00
21+00
20+00
S0°29'10"W 412.92'
C70
C68 (OVERALL)
C69
19+00
18+00
17+00
120.02'
175.00'
ROAD P
17+00
16+00
15+00
14+00
13+00
12+00
C71
11+00
S0°29'10"W 500.00'
S89°30'50"E 149.95'
PT. STA. 20+50.56
PT. STA. 12+75.62
PC. STA. 11+49.95
END OF ROAD SIGNAGE PER ROAD BARRICADE DETAIL (PHASE 1)
END OF PHASE 1 CONSTRUCTION (STA. 18+70.02)
PC. STA. 18+70.02
5' CONCRETE SIDEWALK (TYP.)
DROP CURB AND GUTTER (TYP.)
10' UTILITY ESM'T
SJRWMD JURISDICTIONAL WETLANDS
ROAD C
N90°00'00"W 425.10' (OVERALL)
18+00
17+00
411.03'
16+00
50.00' R/W
24.00' PVM'T
15+00
14.06'
14+00
C63
C64
PT. STA. 14+21.99
PC. STA. 13+49.09
5' CONCRETE SIDEWALK (TYP.)
DROP CURB AND GUTTER (TYP.)
10' UTILITY ESM'T
4 SPACES @ 22'
STA: 18+05.45 OFF: 20.00'L
DROP CURB AND GUTTER (TYP.)
VALLEY GUTTER AT PARKING (TYP.)
STA: 17+17.45 OFF: 20.00'L
6" WHITE STRIPE (TYP.)
4 SPACES @ 22'
STA: 15+91.79 OFF: 20.00'L
STA: 16+79.79 OFF: 20.00'L
TRACT E (OPEN SPACE, DRAINAGE, PARK)
12" WHITE CROSSWALK (TYP.)
CURB RAMP W/ DETECTABLE WARNING (TYP., FDOT INDEX 520, CR-E)
ROAD J
40.00' R/W
18.00' PVM'T
11+00
PT. STA. 10+51.37
S52°12'30"W 50.00'
STD. STOP SIGN (R1-1) AND STREET SIGN (D-3) COMBO (TYP.)
STA: 13+41.09 OFF: 20.00'L
4 SPACES @ 22'
STA: 12+53.09 OFF: 20.00'L
13+00
144.09'
12+00
N37°47'30"W 349.09' (OVERALL)
205.00'
11+00
CURB RAMP W/ DETECTABLE WARNING (TYP., FDOT INDEX 520, CR-E)
12" WHITE CROSSWALK (TYP.)
ROAD L
40.00' R/W
18.00' PVM'T
11+00
24" WHITE STOP BAR (TYP.)
S52°12'30"W 140.00'
STD. STOP SIGN (R1-1) AND STREET SIGN (D-3) COMBO (TYP.)
12" WHITE CROSSWALK (TYP.)
TRACT D (OPEN SPACE)
CURB RAMP W/ DETECTABLE WARNING (TYP., FDOT INDEX 520, CR-E)
24" WHITE STOP BAR (TYP.)
STD. STOP SIGN (R1-1) AND STREET SIGN (D-3) COMBO (TYP.)
25'R TYP.
26'R TYP.
TRACT E (OPEN SPACE, DRAINAGE, PARK)
WHITE STOP BAR (TYP.)
STD. STOP SIGN (R1-1) AND STREET SIGN (D-3) COMBO (TYP.)
24" WHITE STOP BAR (TYP.)
12" WHITE CROSSWALK (TYP.)
DROP CURB AND GUTTER (TYP.)
ROAD I
40.00' R/W
18.00' PVM'T
11+00
S52°12'30"W 174.22'
CURB RAMP W/ DETECTABLE WARNING (TYP., FDOT INDEX 520, CR-E)
TRACT F (OPEN SPACE)
TRACT E (OPEN SPACE, DRAINAGE, PARK)
DROP CURB AND GUTTER (TYP.)
10' UTILITY ESM'T
ROAD H
50.00' R/W
24.00' PVM'T
28+00
S51°23'00"E 407.40' (OVERALL)
27+00
121.80'
26+00
C65
PT. STA. 29+68.13
PT. STA. 25+99.26
10' CONCRETE
STD. STOP SIGN (R1-1) AND STREET SIGN (D-3) COMBO (TYP.)
ROAD G
40.00' R/W
18.00' PVM'T
11+00
S52°12'30"W 140.00'
240
239
238
237
236
235
234
233
232
231
230
229
228
227
226
225
224
223
222
133
134
135
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No.	Date	Revision	By
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2	:		
1	:		

SITE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 4E	

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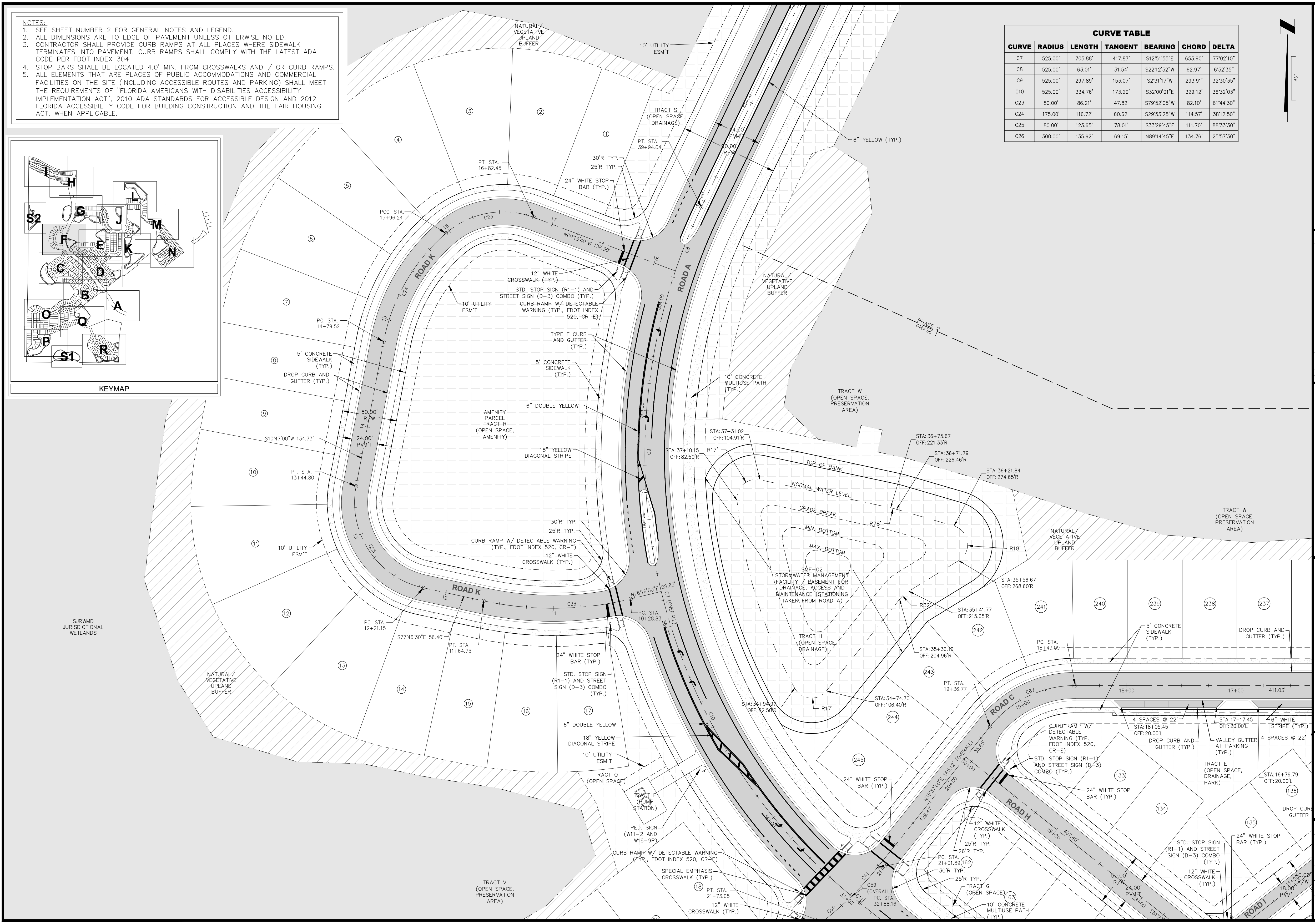
NOTES:

1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL PROVIDE CURB RAMPS AT ALL PLACES WHERE SIDEWALK TERMINATES INTO PAVEMENT. CURB RAMPS SHALL COMPLY WITH THE LATEST ADA CODE PER FDOT INDEX 304.
4. STOP BARS SHALL BE LOCATED 4.0' MIN. FROM CROSSWALKS AND / OR CURB RAMPS.
5. ALL ELEMENTS THAT ARE PLACES OF PUBLIC ACCOMMODATIONS AND COMMERCIAL FACILITIES ON THE SITE (INCLUDING ACCESSIBLE ROUTES AND PARKING) SHALL MEET THE REQUIREMENTS OF "FLORIDA AMERICANS WITH DISABILITIES ACCESSIBILITY IMPLEMENTATION ACT", 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND 2012 FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION AND THE FAIR HOUSING ACT, WHEN APPLICABLE.

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	BEARING	CHORD	DELTA
C7	525.00'	705.88'	417.87'	S12°51'55"E	653.90'	77°02'10"
C8	525.00'	63.01'	31.54'	S22°12'52"W	62.97'	6°52'35"
C9	525.00'	297.89'	153.07'	S2°31'17"W	293.91'	32°30'35"
C10	525.00'	334.76'	173.29'	S32°00'01"E	329.12'	36°32'03"
C23	80.00'	86.21'	47.82'	S79°52'05"W	82.10'	61°44'30"
C24	175.00'	116.72'	60.62'	S29°53'25"W	114.57'	38°12'50"
C25	80.00'	123.65'	78.01'	S33°29'45"E	111.70'	88°33'30"
C26	300.00'	135.92'	69.15'	N89°14'45"E	134.76'	25°57'30"


KEYMAP
I
H
G
L
S2
J
M
F
E
K
N
C
D
B
A
O
Q
P
S1
R
40'
NATURAL/ VEGETATIVE UPLAND BUFFER
10' UTILITY ESM'T
TRACT S (OPEN SPACE, DRAINAGE)
PT. STA. 39+94.04
30'R TYP.
25'R TYP.
24" WHITE STOP BAR (TYP.)
PT. STA. 16+82.45
PCC. STA. 15+96.24
N69°15'40"W 138.30'
54.00' PVM'T
50.00' R/W
6" YELLOW (TYP.)
ROAD K
ROAD A
C23
C24
C25
C26
C7 (OVERALL)
C8
C9
C10
12" WHITE CROSSWALK (TYP.)
STD. STOP SIGN (R1-1) AND STREET SIGN (D-3) COMBO (TYP.)
CURB RAMP W/ DETECTABLE WARNING (TYP., FDOT INDEX 520, CR-E)
TYPE F CURB AND GUTTER (TYP.)
5' CONCRETE SIDEWALK (TYP.)
6" DOUBLE YELLOW
18" YELLOW DIAGONAL STRIPE
AMENITY PARCEL TRACT R (OPEN SPACE, AMENITY)
PC. STA. 14+79.52
DROP CURB AND GUTTER (TYP.)
24.00' PVM'T
S10°47'00"W 134.73'
PT. STA. 13+44.80
N76°16'00"E 28.83'
PC. STA. 10+28.83
PC. STA. 12+21.15
S77°46'30"E 56.40'
PT. STA. 11+64.75
SJRWMD JURISDICTIONAL WETLANDS
PHASE 2
PHASE 1
10' CONCRETE MULTIUSE PATH (TYP.)
TRACT W (OPEN SPACE, PRESERVATION AREA)
STA: 37+31.02 OFF: 104.91'R
STA: 37+10.15 OFF: 82.50'R
R17'
STA: 36+75.67 OFF: 221.33'R
STA: 36+71.79 OFF: 226.46'R
STA: 36+21.84 OFF: 274.65'R
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM
R78'
R18'
R32'
SMF-02 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE (STATIONING TAKEN FROM ROAD A)
TRACT H (OPEN SPACE, DRAINAGE)
STA: 35+56.67 OFF: 268.60'R
STA: 35+41.77 OFF: 215.65'R
STA: 35+36.16 OFF: 204.96'R
STA: 34+94.97 OFF: 82.50'R
STA: 34+74.70 OFF: 106.40'R
PC. STA. 18+47.09
PT. STA. 19+36.77
ROAD C
C62
18+00
17+00
411.03'
4 SPACES @ 22'
STA: 18+05.45 OFF: 20.00'L
STA: 17+17.45 OFF: 20.00'L
6" WHITE STRIPE (TYP.)
VALLEY GUTTER AT PARKING (TYP.)
TRACT E (OPEN SPACE, DRAINAGE, PARK)
STA: 16+79.79 OFF: 20.00'L
ROAD H
407.40'
N38°13'00"E 165.12' (OVERALL)
TRACT Q (OPEN SPACE)
TRACT P (PUMP STATION)
PED. SIGN (W11-2 AND W16-9P)
SPECIAL EMPHASIS CROSSWALK (TYP.)
PT. STA. 21+73.05
PC. STA. 21+01.89
PC. STA. 32+88.16
C59 (OVERALL)
C60
C61
TRACT G (OPEN SPACE)
TRACT V (OPEN SPACE, PRESERVATION AREA)
18.00' PVM'T
ROAD I
1
2
3
4
5
6
7
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9
10
11
12
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15
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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
1			
2			
3			
4			
5			
6			
7			

SITE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 4F	

Printed By: Garrett

Printed: Sep 29, 2022 - 9:20am

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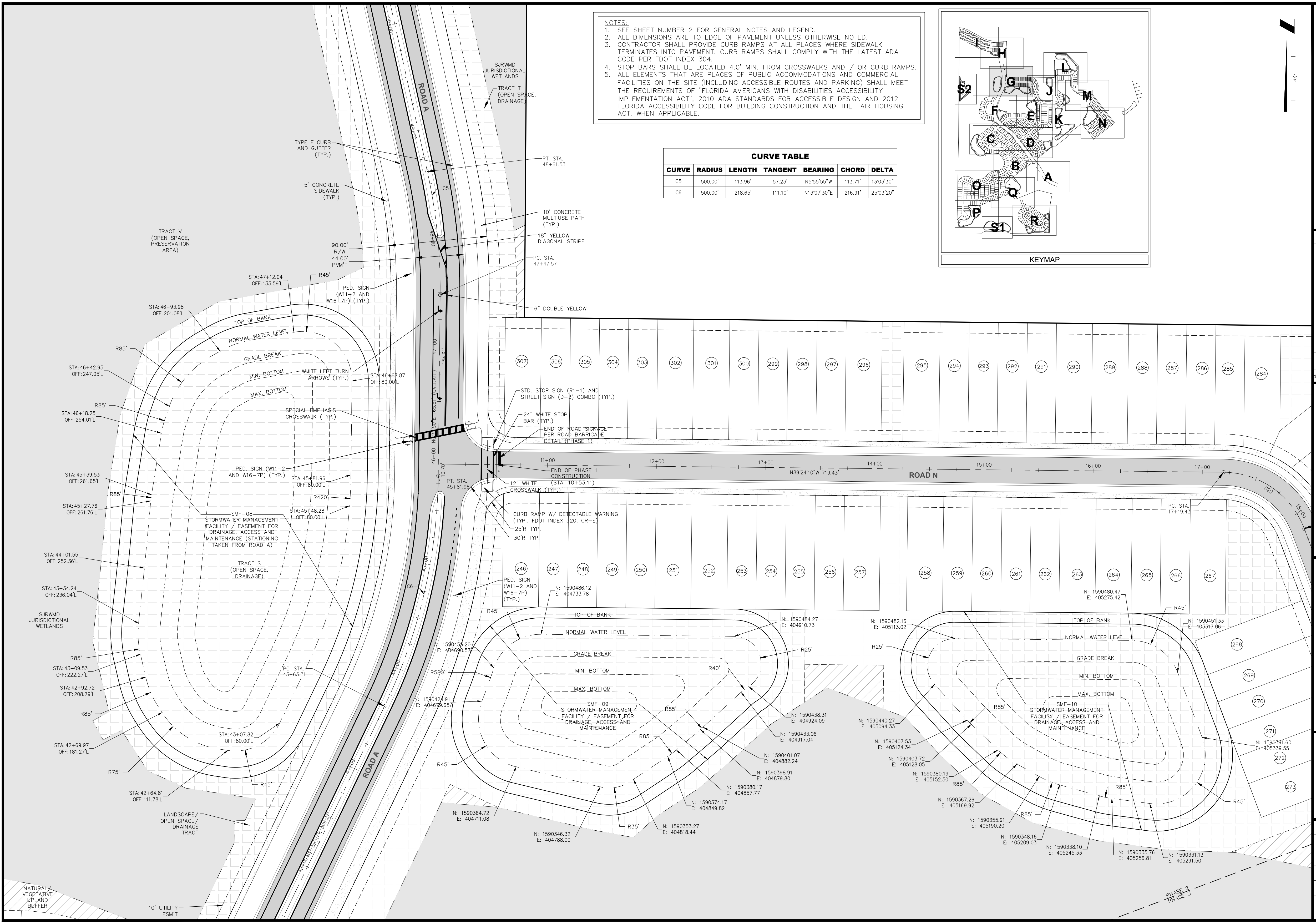
ROAD A
SJRWMD JURISDICTIONAL WETLANDS
TRACT T (OPEN SPACE, DRAINAGE)
TYPE F CURB AND GUTTER (TYP.)
PT. STA. 48+61.53
C5
5' CONCRETE SIDEWALK (TYP.)
10' CONCRETE MULTIUSE PATH (TYP.)
18" YELLOW DIAGONAL STRIPE
TRACT V (OPEN SPACE, PRESERVATION AREA)
90.00' R/W
44.00' PVM'T
PC. STA. 47+47.57
STA: 47+12.04 OFF: 133.59'L
R45'
PED. SIGN (W11-2 AND W16-7P) (TYP.)
6" DOUBLE YELLOW
STA: 46+93.98 OFF: 201.08'L
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM
R85'
STA: 46+42.95 OFF: 247.05'L
WHITE LEFT TURN ARROWS (TYP.)
STA: 46+67.87 OFF: 80.00'L
154.91'
165.61' (OVERALL)
STD. STOP SIGN (R1-1) AND STREET SIGN (D-3) COMBO (TYP.)
R85'
STA: 46+18.25 OFF: 254.01'L
SPECIAL EMPHASIS CROSSWALK (TYP.)
24" WHITE STOP BAR (TYP.)
END OF ROAD SIGNAGE PER ROAD BARRICADE DETAIL (PHASE 1)
11+00
12+00
13+00
14+00
15+00
16+00
17+00
N89°24'10"W 719.43'
ROAD N
END OF PHASE 1 CONSTRUCTION (STA. 10+53.11)
12" WHITE CROSSWALK (TYP.)
PT. STA. 45+81.96
10.70'
PED. SIGN (W11-2 AND W16-7P) (TYP.)
STA: 45+39.53 OFF: 261.65'L
STA: 45+81.96 OFF: 80.00'L
R85'
R420'
STA: 45+27.76 OFF: 261.76'L
STA: 45+48.28 OFF: 80.00'L
CURB RAMP W/ DETECTABLE WARNING (TYP., FDOT INDEX 520, CR-E)
25'R TYP.
30'R TYP.
SMF-08 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE (STATIONING TAKEN FROM ROAD A)
PC. STA. 17+19.43
C20
18+00
307
306
305
304
303
302
301
300
299
298
297
296
295
294
293
292
291
290
289
288
287
286
285
284
TRACT S (OPEN SPACE, DRAINAGE)
STA: 44+01.55 OFF: 252.36'L
C6
PED. SIGN (W11-2 AND W16-7P) (TYP.)
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
STA: 43+34.24 OFF: 236.04'L
SJRWMD JURISDICTIONAL WETLANDS
N: 1590486.12 E: 404733.78
N: 1590480.47 E: 405275.42
R45'
TOP OF BANK
N: 1590484.27 E: 404910.73
N: 1590482.16 E: 405113.02
N: 1590451.33 E: 405317.06
NORMAL WATER LEVEL
R25'
R25'
268
N: 1590455.20 E: 404690.57
GRADE BREAK
R85'
STA: 43+09.53 OFF: 222.27'L
R580'
R40'
MIN. BOTTOM
269
PC. STA. 43+63.31
STA: 42+92.72 OFF: 208.79'L
N: 1590424.91 E: 404679.65
MAX. BOTTOM
SMF-09 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
SMF-10 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
270
R85'
R85'
N: 1590438.31 E: 404924.09
N: 1590440.27 E: 405094.33
STA: 43+07.82 OFF: 80.00'L
N: 1590433.06 E: 404917.04
N: 1590407.53 E: 405124.34
271
N: 1590391.60 E: 405339.55
STA: 42+69.97 OFF: 181.27'L
R85'
N: 1590401.07 E: 404882.24
N: 1590403.72 E: 405128.05
272
R75'
R45'
R45'
N: 1590398.91 E: 404879.80
N: 1590380.19 E: 405152.50
R85'
R45'
273
STA: 42+64.81 OFF: 111.78'L
N: 1590380.17 E: 404857.77
N: 1590367.26 E: 405169.92
R85'
N: 1590374.17 E: 404849.82
R85'
LANDSCAPE/ OPEN SPACE/ DRAINAGE TRACT
N: 1590364.72 E: 404711.08
N: 1590355.91 E: 405190.20
R35'
N: 1590353.27 E: 404818.44
N: 1590348.16 E: 405209.03
N: 1590346.32 E: 404788.00
N: 1590338.10 E: 405245.33
N: 1590335.76 E: 405256.81
N: 1590331.13 E: 405291.50
42+00 N25°39'10"E 369.27'
43+00
44+00
45+00
46+00
47+00
48+00
49+00
ROAD A
NATURAL VEGETATIVE UPLAND BUFFER
10' UTILITY ESM'T
PHASE 2
PHASE 3
I
H
L
G
J
S2
M
F
E
K
N
C
D
B
A
O
Q
P
R
S1
KEYMAP
40'

NOTES:

1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL PROVIDE CURB RAMPS AT ALL PLACES WHERE SIDEWALK TERMINATES INTO PAVEMENT. CURB RAMPS SHALL COMPLY WITH THE LATEST ADA CODE PER FDOT INDEX 304.
4. STOP BARS SHALL BE LOCATED 4.0' MIN. FROM CROSSWALKS AND / OR CURB RAMPS.
5. ALL ELEMENTS THAT ARE PLACES OF PUBLIC ACCOMMODATIONS AND COMMERCIAL FACILITIES ON THE SITE (INCLUDING ACCESSIBLE ROUTES AND PARKING) SHALL MEET THE REQUIREMENTS OF "FLORIDA AMERICANS WITH DISABILITIES ACCESSIBILITY IMPLEMENTATION ACT", 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND 2012 FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION AND THE FAIR HOUSING ACT, WHEN APPLICABLE.

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	BEARING	CHORD	DELTA
C5	500.00'	113.96'	57.23'	N5°55'55"W	113.71'	13°03'30"
C6	500.00'	218.65'	111.10'	N13°07'30"E	216.91'	25°03'20"

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SITE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

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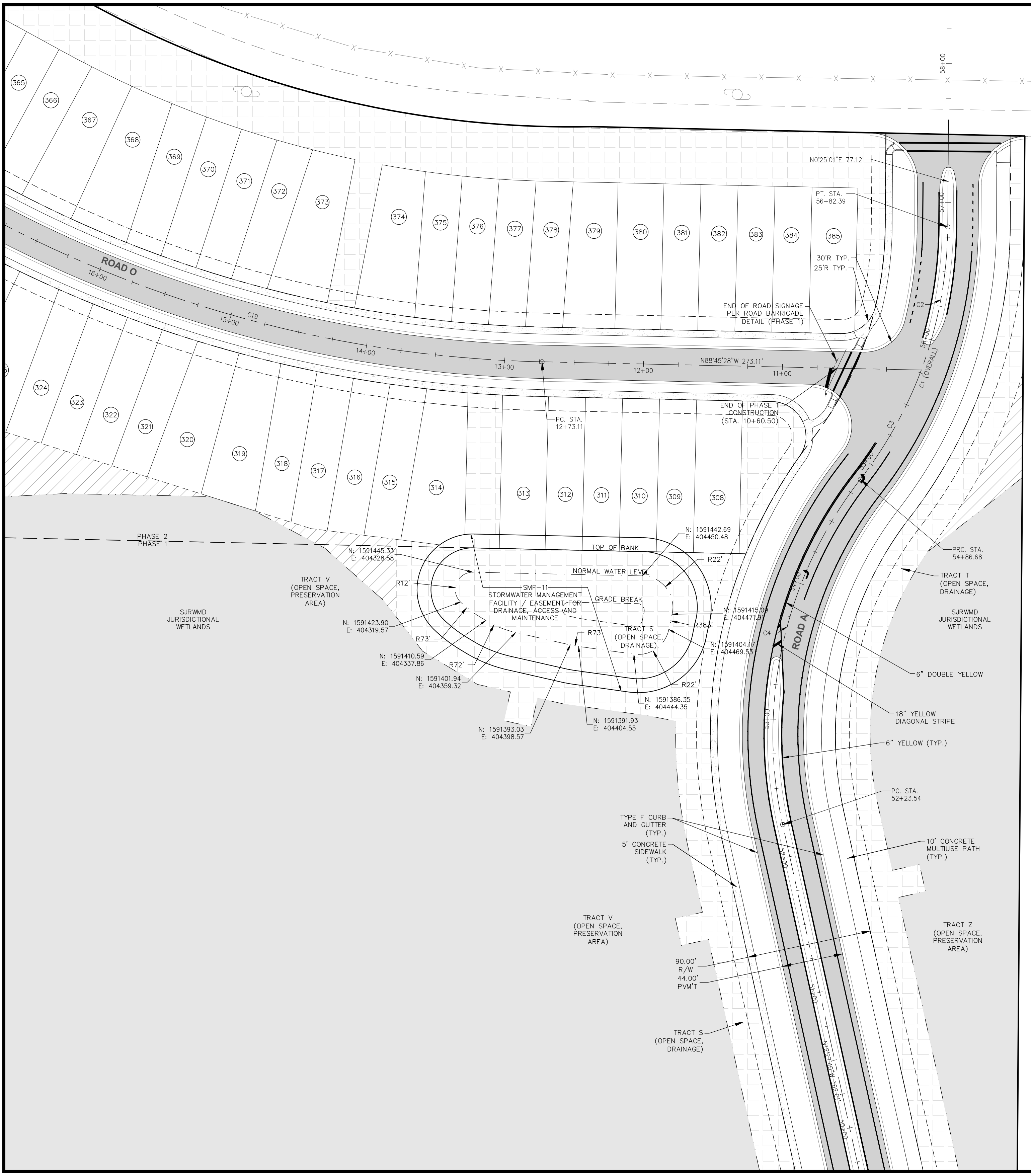
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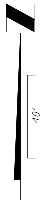
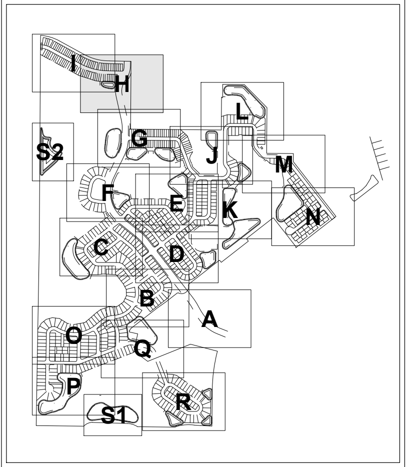
378
379
380
381
382
383
384
385
ROAD O
16+00
15+00
14+00
13+00
12+00
11+00
C19
N88°45'28"W 273.11'
324
323
322
321
320
319
318
317
316
315
314
313
312
311
310
309
308
58+00
N0°25'01"E 77.12'
PT. STA. 56+82.39
30'R TYP.
25'R TYP.
END OF ROAD SIGNAGE PER ROAD BARRICADE DETAIL (PHASE 1)
C2
57+00
56+00
C1 (OVERALL)
END OF PHASE 1 CONSTRUCTION (STA. 10+60.50)
PC. STA. 12+73.11
C3
55+00
PRC. STA. 54+86.68
TRACT T (OPEN SPACE, DRAINAGE)
SJRWMD JURISDICTIONAL WETLANDS
PHASE 2
PHASE 1
TRACT V (OPEN SPACE, PRESERVATION AREA)
SJRWMD JURISDICTIONAL WETLANDS
N: 1591442.69
E: 404450.48
TOP OF BANK
N: 1591445.33
E: 404328.58
R22'
NORMAL WATER LEVEL
R12'
SMF-11
STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
GRADE BREAK
N: 1591415.09
E: 404471.91
R383'
N: 1591423.90
E: 404319.57
TRACT S (OPEN SPACE, DRAINAGE)
R73'
R73'
N: 1591404.17
E: 404469.53
N: 1591410.59
E: 404337.86
R72'
N: 1591401.94
E: 404359.32
R22'
N: 1591386.35
E: 404444.35
N: 1591391.93
E: 404404.55
N: 1591393.03
E: 404398.57
C4
54+00
ROAD A
6" DOUBLE YELLOW
53+00
18" YELLOW DIAGONAL STRIPE
6" YELLOW (TYP.)
PC. STA. 52+23.54
TYPE F CURB AND GUTTER (TYP.)
5' CONCRETE SIDEWALK (TYP.)
10' CONCRETE MULTIUSE PATH (TYP.)
52+00
TRACT V (OPEN SPACE, PRESERVATION AREA)
TRACT Z (OPEN SPACE, PRESERVATION AREA)
90.00' R/W
44.00' PVM'T
51+00
TRACT S (OPEN SPACE, DRAINAGE)



CURVE TABLE						
CURVE	**RADIUS**	**LENGTH**	**TANGENT**	**BEARING**	**CHORD**	**DELTA**
C1	300.00'	195.71'	101.48'	N19°06'21"E	192.26'	37°22'40"
C2	300.00'	105.26'	53.18'	N10°28'07"E	104.72'	20°06'11"
C3	300.00'	90.45'	45.57'	N29°09'27"E	90.11'	17°16'29"
C4	300.00'	263.14'	140.71'	S12°40'01"W	254.78'	50°15'21"
C5	500.00'	113.96'	57.23'	N5°55'55"W	113.71'	13°03'30"
C6	500.00'	218.65'	111.10'	N13°07'30"E	216.91'	25°03'20"


I
H
L
G
S2
J
M
F
E
K
N
C
D
B
A
O
Q
P
R
S1

KEYMAP

NOTES:

1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL PROVIDE CURB RAMPS AT ALL PLACES WHERE SIDEWALK TERMINATES INTO PAVEMENT. CURB RAMPS SHALL COMPLY WITH THE LATEST ADA CODE PER FDOT INDEX 304.
4. STOP BARS SHALL BE LOCATED 4.0' MIN. FROM CROSSWALKS AND / OR CURB RAMPS.
5. ALL ELEMENTS THAT ARE PLACES OF PUBLIC ACCOMMODATIONS AND COMMERCIAL FACILITIES ON THE SITE (INCLUDING ACCESSIBLE ROUTES AND PARKING) SHALL MEET THE REQUIREMENTS OF "FLORIDA AMERICANS WITH DISABILITIES ACCESSIBILITY IMPLEMENTATION ACT", 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND 2012 FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION AND THE FAIR HOUSING ACT, WHEN APPLICABLE.

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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
1	:		
2	:		
3	:		
4	:		
5	:		
6	:		
7	:		

SITE PLAN

HILLSIDE GROVE

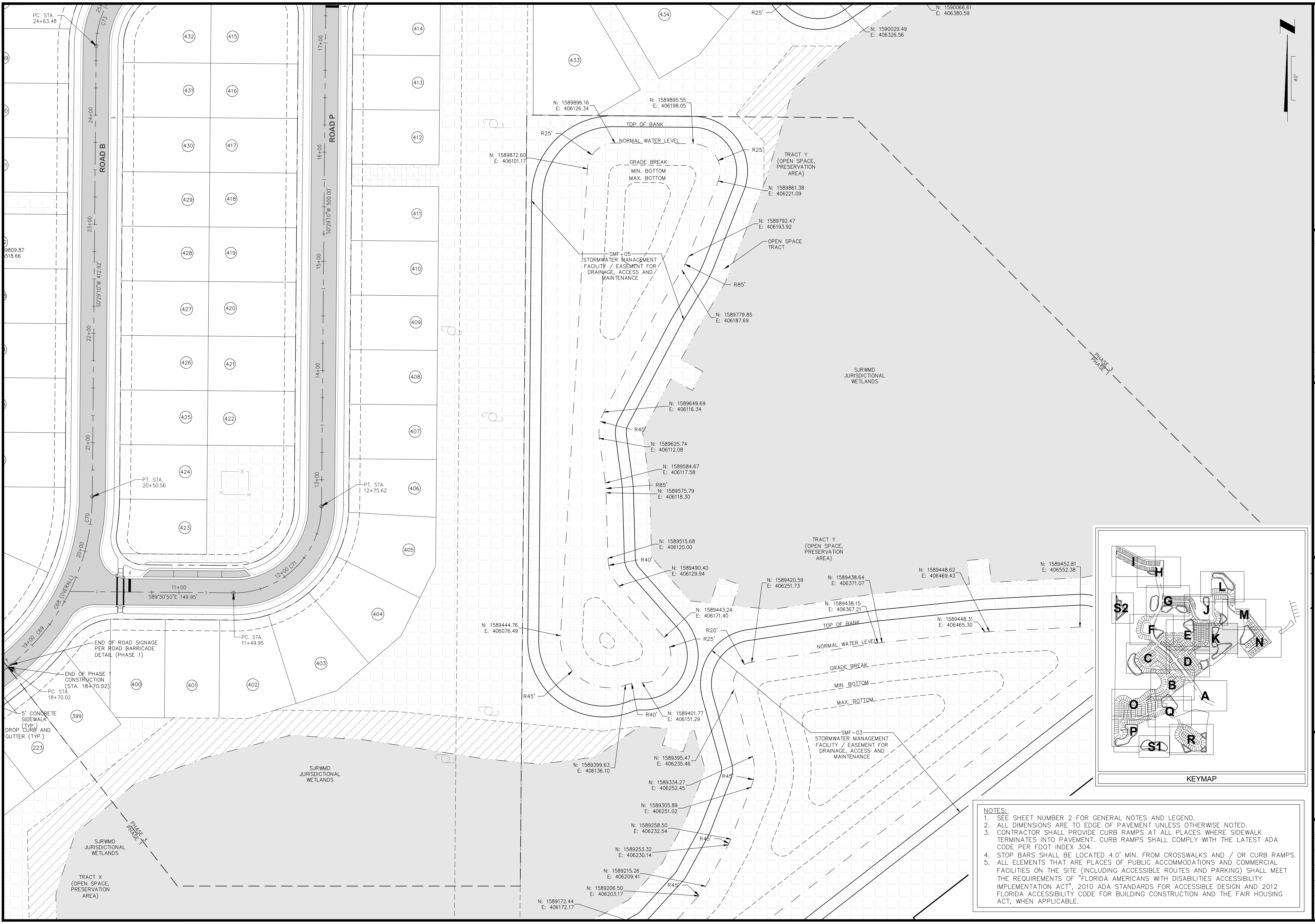
HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 4H	


PC. STA. 24+63.48
ROAD B
ROAD P
24+00
23+00
22+00
21+00
20+00
19+00
17+00
16+00
15+00
14+00
13+00
12+00
11+00
S0°29'10"W 412.92'
S0°29'10"W 500.00'
S89°30'50"E 149.95'
C68 (OVERALL)
C69
C70
C71
C73
PT. STA. 20+50.56
PT. STA. 12+75.62
PC. STA. 11+49.95
PC. STA. 18+70.02
END OF ROAD SIGNAGE PER ROAD BARRICADE DETAIL (PHASE 1)
END OF PHASE 1 CONSTRUCTION (STA. 18+70.02)
5' CONCRETE SIDEWALK (TYP.)
DROP CURB AND GUTTER (TYP.)
223
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM
SMF-05 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
SMF-03 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
TRACT Y (OPEN SPACE, PRESERVATION AREA)
TRACT X (OPEN SPACE, PRESERVATION AREA)
OPEN SPACE TRACT
SJRWMD JURISDICTIONAL WETLANDS
PHASE 3
PHASE 1
R25'
R85'
R40'
R20'
R45'
N: 1590066.61 E: 406380.59
N: 1590029.49 E: 406326.56
N: 1589896.16 E: 406126.34
N: 1589895.55 E: 406198.05
N: 1589872.60 E: 406101.17
N: 1589861.38 E: 406221.09
N: 1589792.47 E: 406193.92
N: 1589779.85 E: 406187.69
N: 1589649.69 E: 406116.34
N: 1589625.74 E: 406112.08
N: 1589584.67 E: 406117.58
N: 1589575.79 E: 406118.30
N: 1589515.68 E: 406120.00
N: 1589490.40 E: 406129.94
N: 1589443.24 E: 406171.40
N: 1589444.76 E: 406076.49
N: 1589420.59 E: 406251.73
N: 1589438.64 E: 406371.07
N: 1589438.15 E: 406367.21
N: 1589448.62 E: 406469.43
N: 1589448.31 E: 406465.30
N: 1589452.81 E: 406552.38
N: 1589401.77 E: 406151.29
N: 1589399.63 E: 406136.10
N: 1589395.47 E: 406235.46
N: 1589334.27 E: 406252.45
N: 1589305.89 E: 406251.02
N: 1589258.50 E: 406232.54
N: 1589253.32 E: 406230.14
N: 1589215.26 E: 406209.41
N: 1589206.50 E: 406203.17
N: 1589172.44 E: 406172.17
9809.87
518.66
40'
I
H
G
S2
J
L
M
F
E
K
N
C
D
B
A
O
Q
P
S1
R
KEYMAP

NOTES:

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2. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
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No.	Date	Revision	By
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2			
3			
4			
5			
6			
7			

SITE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 4K	

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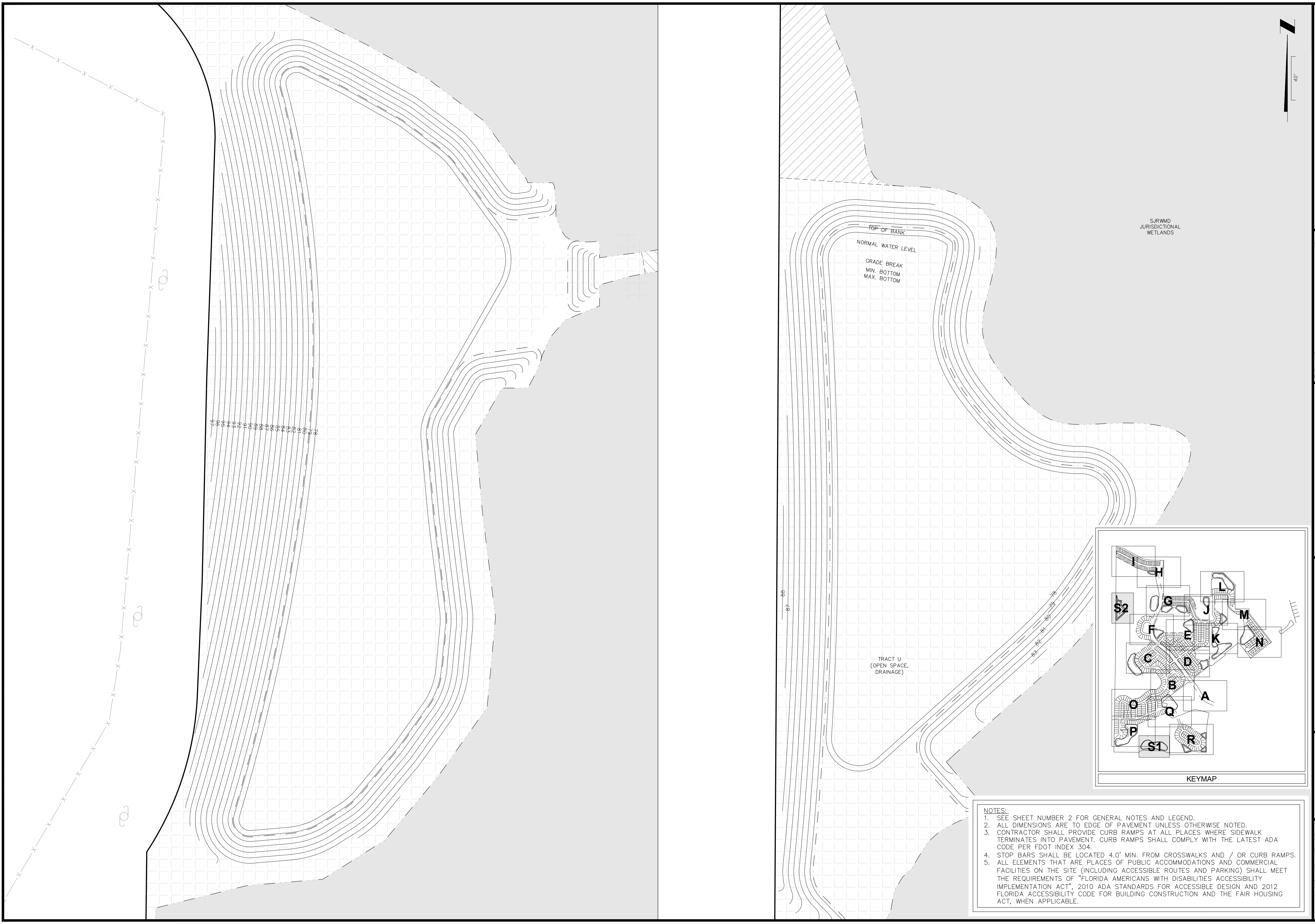

40'
SJRWMD
JURISDICTIONAL
WETLANDS
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM
TRACT U
(OPEN SPACE,
DRAINAGE)
97 96 95 94 93 92 91 90 89 88 87 86 85 84 83 82 81 80 79 78
88
87
78 79 80 81 82 83
I
H
L
G
J
M
S2
F
E
K
N
C
D
B
A
O
Q
P
R
S1
KEYMAP

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SITE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
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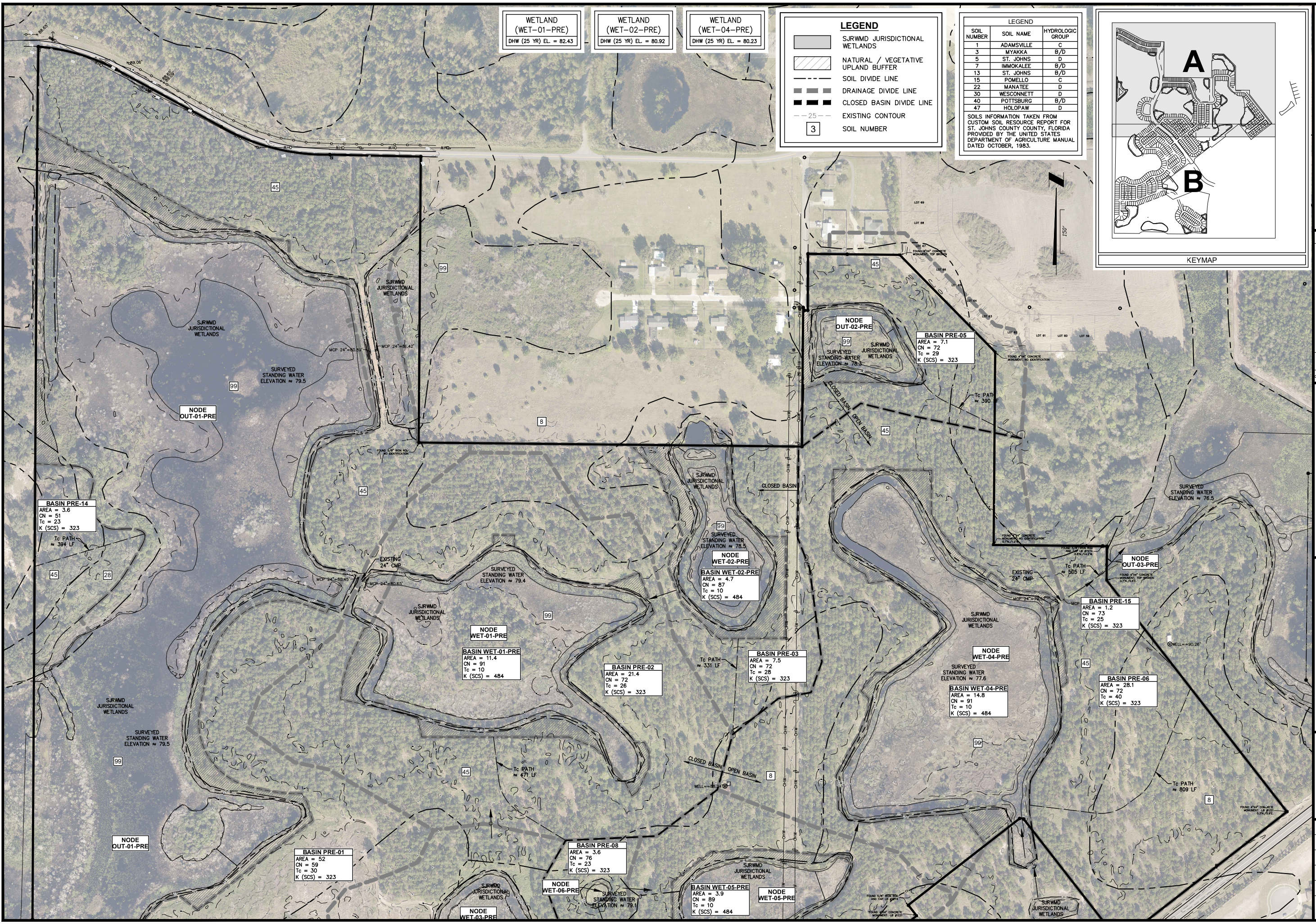
KEYMAP
A
B
NODE OUT-01-PRE
NODE OUT-02-PRE
NODE OUT-03-PRE
NODE WET-01-PRE
NODE WET-02-PRE
NODE WET-03-PRE
NODE WET-04-PRE
NODE WET-05-PRE
NODE WET-06-PRE
BASIN PRE-14 AREA = 3.6 CN = 51 Tc = 23 K (SCS) = 323
BASIN PRE-01 AREA = 52 CN = 59 Tc = 30 K (SCS) = 323
BASIN WET-01-PRE AREA = 11.4 CN = 91 Tc = 10 K (SCS) = 484
BASIN PRE-02 AREA = 21.4 CN = 72 Tc = 26 K (SCS) = 323
BASIN WET-02-PRE AREA = 4.7 CN = 87 Tc = 10 K (SCS) = 484
BASIN PRE-03 AREA = 7.5 CN = 72 Tc = 28 K (SCS) = 323
BASIN PRE-05 AREA = 7.1 CN = 72 Tc = 29 K (SCS) = 323
BASIN WET-04-PRE AREA = 14.8 CN = 91 Tc = 10 K (SCS) = 484
BASIN PRE-15 AREA = 1.2 CN = 73 Tc = 25 K (SCS) = 323
BASIN PRE-06 AREA = 28.1 CN = 72 Tc = 40 K (SCS) = 323
BASIN PRE-08 AREA = 3.6 CN = 76 Tc = 23 K (SCS) = 323
BASIN WET-05-PRE AREA = 3.9 CN = 89 Tc = 10 K (SCS) = 484
SJRWMD JURISDICTIONAL WETLANDS
SURVEYED STANDING WATER ELEVATION ≈ 79.5
SURVEYED STANDING WATER ELEVATION ≈ 79.4
SURVEYED STANDING WATER ELEVATION ≈ 78.5
SURVEYED STANDING WATER ELEVATION ≈ 78.3
SURVEYED STANDING WATER ELEVATION ≈ 77.6
SURVEYED STANDING WATER ELEVATION ≈ 76.5
SURVEYED STANDING WATER ELEVATION ≈ 79.1
Tc PATH ≈ 394 LF
Tc PATH ≈ 471 LF
Tc PATH ≈ 331 LF
Tc PATH ≈ 390 LF
Tc PATH ≈ 505 LF
Tc PATH ≈ 809 LF
EXISTING 24" CMP
MCP 24"=80.89'
MCP 24"=81.42'
MCP 24"=80.45'
MCP 24"=80.65'
MCP 24"=79.52'
CLOSED BASIN
OPEN BASIN
WELL==88.24'
WELL==90.26'
FOUND 5/8" IRON ROD NO IDENTIFICATION
FOUND 4"X4" CONCRETE MONUMENT, NO IDENTIFICATION
FOUND 4"X4" CONCRETE MONUMENT, TOP BROKEN
OHW
150'
45
99
8
28

WETLAND
(WET–01–PRE)
DHW (25 YR) EL. = 82.43

WETLAND
(WET–02–PRE)
DHW (25 YR) EL. = 80.92

WETLAND
(WET–04–PRE)
DHW (25 YR) EL. = 80.23

LEGEND

▨	SJRWMD JURISDICTIONAL WETLANDS
▨	NATURAL / VEGETATIVE UPLAND BUFFER
—·—	SOIL DIVIDE LINE
▬ ▬ ▬	DRAINAGE DIVIDE LINE
▬ ▬ ▬	CLOSED BASIN DIVIDE LINE
– – 25 – –	EXISTING CONTOUR
3	SOIL NUMBER

LEGEND

SOIL NUMBER	SOIL NAME	HYDROLOGIC GROUP
1	ADAMSVILLE	C
3	MYAKKA	B/D
5	ST. JOHNS	D
7	IMMOKALEE	B/D
13	ST. JOHNS	B/D
15	POMELLO	C
22	MANATEE	D
30	WESCONNETT	D
40	POTTSBURG	B/D
47	HOLOPAW	D

SOILS INFORMATION TAKEN FROM CUSTOM SOIL RESOURCE REPORT FOR ST. JOHNS COUNTY COUNTY, FLORIDA PROVIDED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE MANUAL DATED OCTOBER, 1983.

Connelly & Wicker Inc.

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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
1			
2			
3			
4			
5			
6			
7			

PRE DEVELOPMENT DRAINAGE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" =150'	
Sheet 5A	

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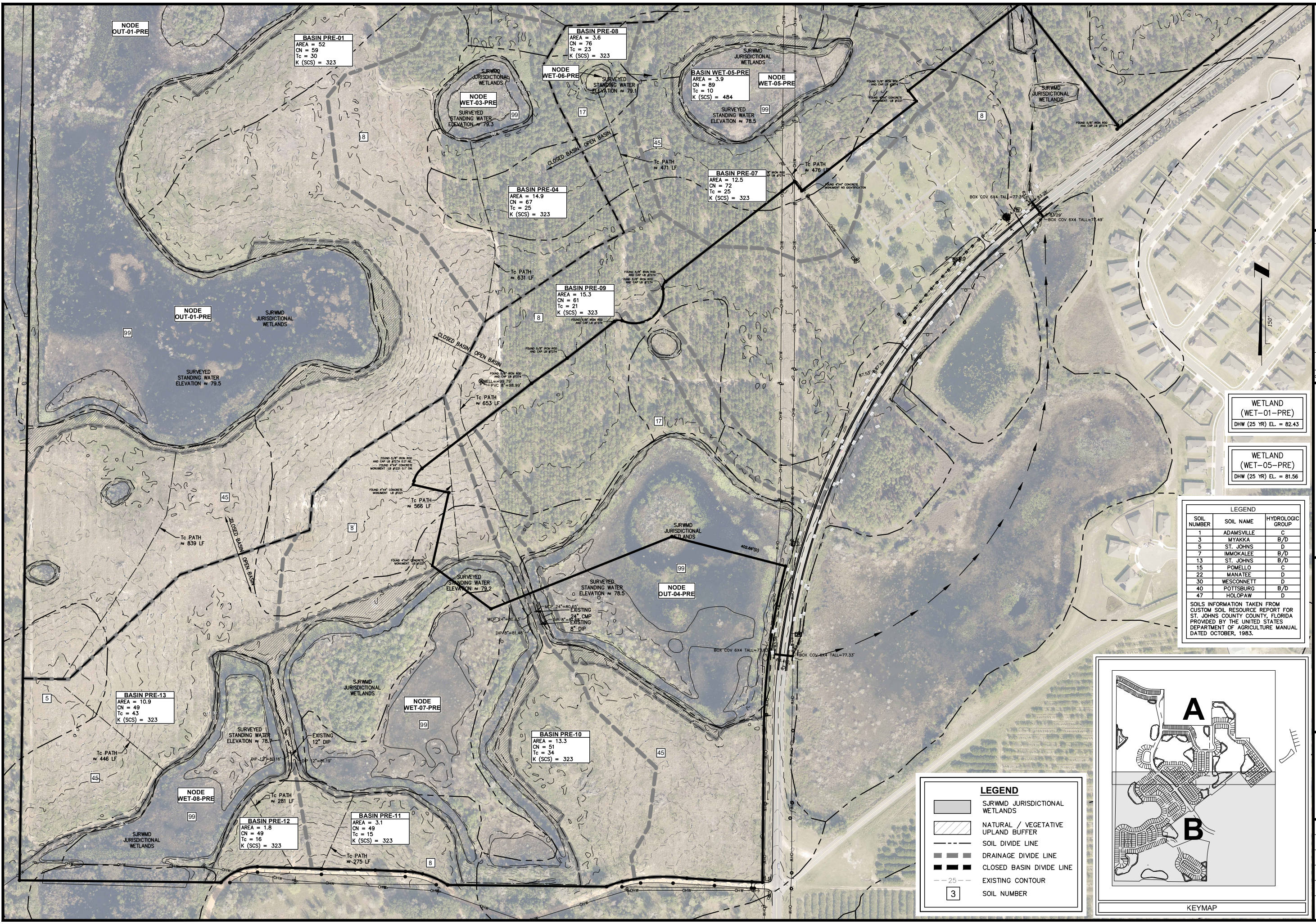
NODE OUT-01-PRE
BASIN PRE-01
AREA = 52
CN = 59
Tc = 30
K (SCS) = 323
SJRWMD JURISDICTIONAL WETLANDS
NODE WET-03-PRE
SURVEYED STANDING WATER ELEVATION ≈ 79.3
BASIN PRE-08
AREA = 3.6
CN = 76
Tc = 23
K (SCS) = 323
NODE WET-06-PRE
SURVEYED STANDING WATER ELEVATION ≈ 79.1
BASIN WET-05-PRE
AREA = 3.9
CN = 89
Tc = 10
K (SCS) = 484
NODE WET-05-PRE
SURVEYED STANDING WATER ELEVATION ≈ 78.5
CLOSED BASIN OPEN BASIN
Tc PATH ≈ 471 LF
Tc PATH ≈ 476 LF
BASIN PRE-07
AREA = 12.5
CN = 72
Tc = 25
K (SCS) = 323
BASIN PRE-04
AREA = 14.9
CN = 67
Tc = 25
K (SCS) = 323
Tc PATH ≈ 631 LF
BASIN PRE-09
AREA = 15.3
CN = 61
Tc = 21
K (SCS) = 323
FOUND 5/8" IRON ROD AND CAP LB #7274
NODE OUT-01-PRE
SURVEYED STANDING WATER ELEVATION ≈ 79.5
WELL = 99.79'
PVC 8" = 98.99'
Tc PATH ≈ 653 LF
FOUND 4"X4" CONCRETE MONUMENT LB #1221
Tc PATH ≈ 566 LF
Tc PATH ≈ 839 LF
402.66'(D)
SURVEYED STANDING WATER ELEVATION ≈ 79.2
SURVEYED STANDING WATER ELEVATION ≈ 78.5
NODE OUT-04-PRE
MCP 24"=80.65'
MCP 24"=80.63'
EXISTING 24" CMP
DIP 8"=81.68'
DIP 8"=81.48'
EXISTING 8" DIP
BOX COV 6X4 TALL=77.33'
BOX COV 6X4 TALL=77.49'
BASIN PRE-13
AREA = 10.9
CN = 49
Tc = 43
K (SCS) = 323
SURVEYED STANDING WATER ELEVATION ≈ 78.7
EXISTING 12" DIP
DIP 12"=80.16'
DIP 12"=81.19'
NODE WET-07-PRE
BASIN PRE-10
AREA = 13.3
CN = 51
Tc = 34
K (SCS) = 323
Tc PATH ≈ 446 LF
NODE WET-08-PRE
Tc PATH ≈ 281 LF
BASIN PRE-12
AREA = 1.8
CN = 49
Tc = 16
K (SCS) = 323
BASIN PRE-11
AREA = 3.1
CN = 49
Tc = 15
K (SCS) = 323
Tc PATH ≈ 275 LF
OHW
A
B
KEYMAP

WETLAND
(WET–01–PRE)
DHW (25 YR) EL. = 82.43

WETLAND
(WET–05–PRE)
DHW (25 YR) EL. = 81.56

LEGEND

SOIL NUMBER	SOIL NAME	HYDROLOGIC GROUP
1	ADAMSVILLE	C
3	MYAKKA	B/D
5	ST. JOHNS	D
7	IMMOKALEE	B/D
13	ST. JOHNS	B/D
15	POMELLO	C
22	MANATEE	D
30	WESCONNETT	D
40	POTTSBURG	B/D
47	HOLOPAW	D

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LEGEND

▒	SJRWMD JURISDICTIONAL WETLANDS
▨	NATURAL / VEGETATIVE UPLAND BUFFER
— - —	SOIL DIVIDE LINE
▬ ▬ ▬	DRAINAGE DIVIDE LINE
▬ ▬ ▬	CLOSED BASIN DIVIDE LINE
– – 25 – –	EXISTING CONTOUR
3	SOIL NUMBER

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6	..		
5	..		
4	..		
3	..		
2	..		
1	..		

PRE DEVELOPMENT DRAINAGE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008
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Sheet 5B

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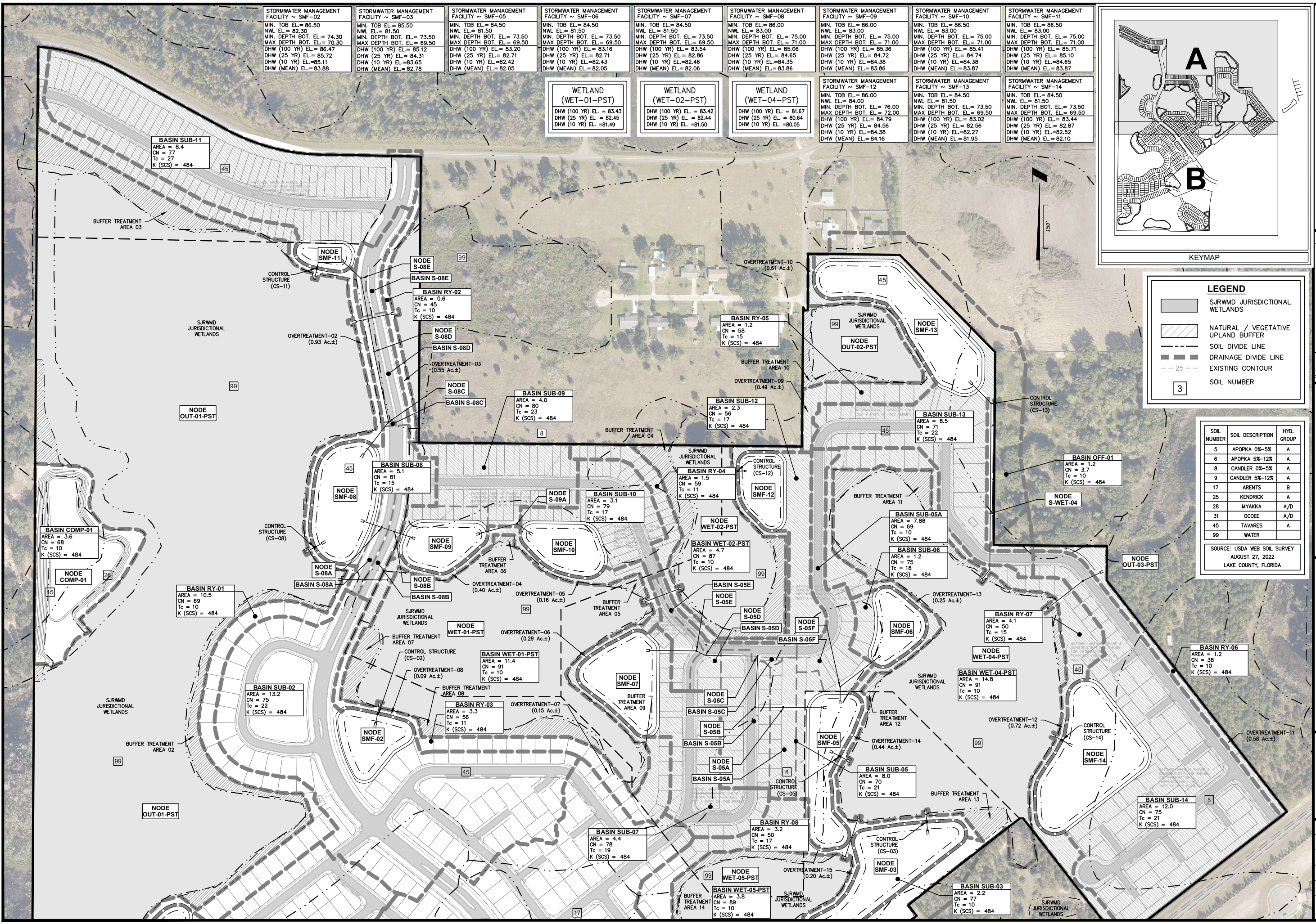
STORMWATER MANAGEMENT FACILITY ~ SMF-02	STORMWATER MANAGEMENT FACILITY ~ SMF-03	STORMWATER MANAGEMENT FACILITY ~ SMF-05	STORMWATER MANAGEMENT FACILITY ~ SMF-06	STORMWATER MANAGEMENT FACILITY ~ SMF-07	STORMWATER MANAGEMENT FACILITY ~ SMF-08
MIN. TOB EL.= 86.50 NWL EL.= 82.30 MIN. DEPTH BOT. EL.= 74.30 MAX DEPTH BOT. EL.= 70.30	MIN. TOB EL.= 85.50 NWL EL.= 81.50 MIN. DEPTH BOT. EL.= 73.50 MAX DEPTH BOT. EL.= 69.50	MIN. TOB EL.= 84.50 NWL EL.= 81.50 MIN. DEPTH BOT. EL.= 73.50 MAX DEPTH BOT. EL.= 69.50	MIN. TOB EL.= 84.50 NWL EL.= 81.50 MIN. DEPTH BOT. EL.= 73.50 MAX DEPTH BOT. EL.= 69.50	MIN. TOB EL.= 84.50 NWL EL.= 81.50 MIN. DEPTH BOT. EL.= 73.50 MAX DEPTH BOT. EL.= 69.50	MIN. TOB EL.= 86.00 NWL EL.= 83.00 MIN. DEPTH BOT. EL.= 75.00 MAX DEPTH BOT. EL.= 71.00
DHW (100 YR) EL.= 86.47 DHW (25 YR) EL.= 85.72 DHW (10 YR) EL.=85.11 DHW (MEAN) EL.= 83.88	DHW (100 YR) EL.= 85.12 DHW (25 YR) EL.= 84.31 DHW (10 YR) EL.=83.65 DHW (MEAN) EL.= 82.78	DHW (100 YR) EL.= 83.20 DHW (25 YR) EL.= 82.71 DHW (10 YR) EL.=82.42 DHW (MEAN) EL.= 82.05	DHW (100 YR) EL.= 83.16 DHW (25 YR) EL.= 82.71 DHW (10 YR) EL.=82.43 DHW (MEAN) EL.= 82.05	DHW (100 YR) EL.= 83.54 DHW (25 YR) EL.= 82.86 DHW (10 YR) EL.=82.46 DHW (MEAN) EL.= 82.06	DHW (100 YR) EL.= 85.06 DHW (25 YR) EL.= 84.65 DHW (10 YR) EL.=84.35 DHW (MEAN) EL.= 83.86

STORMWATER MANAGEMENT FACILITY ~ SMF-09	STORMWATER MANAGEMENT FACILITY ~ SMF-10	STORMWATER MANAGEMENT FACILITY ~ SMF-11
MIN. TOB EL.= 86.00 NWL EL.= 83.00 MIN. DEPTH BOT. EL.= 75.00 MAX DEPTH BOT. EL.= 71.00	MIN. TOB EL.= 86.50 NWL EL.= 83.00 MIN. DEPTH BOT. EL.= 75.00 MAX DEPTH BOT. EL.= 71.00	MIN. TOB EL.= 86.50 NWL EL.= 83.00 MIN. DEPTH BOT. EL.= 75.00 MAX DEPTH BOT. EL.= 71.00
DHW (100 YR) EL.= 85.36 DHW (25 YR) EL.= 84.72 DHW (10 YR) EL.=84.38 DHW (MEAN) EL.= 83.86	DHW (100 YR) EL.= 85.41 DHW (25 YR) EL.= 84.74 DHW (10 YR) EL.=84.38 DHW (MEAN) EL.= 83.87	DHW (100 YR) EL.= 85.71 DHW (25 YR) EL.= 85.10 DHW (10 YR) EL.=84.65 DHW (MEAN) EL.= 83.87

STORMWATER MANAGEMENT FACILITY ~ SMF-12	STORMWATER MANAGEMENT FACILITY ~ SMF-13	STORMWATER MANAGEMENT FACILITY ~ SMF-14
MIN. TOB EL.= 86.00 NWL EL.= 84.00 MIN. DEPTH BOT. EL.= 76.00 MAX DEPTH BOT. EL.= 72.00	MIN. TOB EL.= 84.50 NWL EL.= 81.50 MIN. DEPTH BOT. EL.= 73.50 MAX DEPTH BOT. EL.= 69.50	MIN. TOB EL.= 84.50 NWL EL.= 81.50 MIN. DEPTH BOT. EL.= 73.50 MAX DEPTH BOT. EL.= 69.50
DHW (100 YR) EL.= 84.79 DHW (25 YR) EL.= 84.56 DHW (10 YR) EL.=84.38 DHW (MEAN) EL.= 84.16	DHW (100 YR) EL.= 83.02 DHW (25 YR) EL.= 82.56 DHW (10 YR) EL.=82.27 DHW (MEAN) EL.= 81.95	DHW (100 YR) EL.= 83.44 DHW (25 YR) EL.= 82.87 DHW (10 YR) EL.=82.52 DHW (MEAN) EL.= 82.10

WETLAND (WET-01-PST)	WETLAND (WET-02-PST)	WETLAND (WET-04-PST)
DHW (100 YR) EL. = 83.43 DHW (25 YR) EL. = 82.45 DHW (10 YR) EL. =81.49	DHW (100 YR) EL. = 83.42 DHW (25 YR) EL. = 82.44 DHW (10 YR) EL. =81.50	DHW (100 YR) EL. = 81.67 DHW (25 YR) EL. = 80.64 DHW (10 YR) EL. =80.05


A
B
KEYMAP
150'
BASIN SUB-11
AREA = 8.4
CN = 77
Tc = 27
K (SCS) = 484
BUFFER TREATMENT AREA 03
NODE SMF-11
CONTROL STRUCTURE (CS-11)
NODE S-08E
BASIN S-08E
BASIN RY-02
AREA = 0.6
CN = 45
Tc = 10
K (SCS) = 484
SJRWMD JURISDICTIONAL WETLANDS
OVERTREATMENT-02 (0.93 Ac.±)
NODE S-08D
BASIN S-08D
OVERTREATMENT-03 (0.55 Ac.±)
NODE S-08C
BASIN S-08C
NODE OUT-01-PST
BASIN SUB-09
AREA = 4.0
CN = 80
Tc = 23
K (SCS) = 484
BASIN RY-05
AREA = 1.2
CN = 58
Tc = 15
K (SCS) = 484
OVERTREATMENT-10 (0.61 Ac.±)
BUFFER TREATMENT AREA 10
OVERTREATMENT-09 (0.49 Ac.±)
BASIN SUB-12
AREA = 2.3
CN = 56
Tc = 17
K (SCS) = 484
BUFFER TREATMENT AREA 04
NODE SMF-13
NODE OUT-02-PST
BASIN SUB-13
AREA = 8.5
CN = 71
Tc = 22
K (SCS) = 484
CONTROL STRUCTURE (CS-13)
BASIN OFF-01
AREA = 1.2
CN = 3.7
Tc = 10
K (SCS) = 484
NODE S-WET-04
BASIN SUB-08
AREA = 5.1
CN = 81
Tc = 15
K (SCS) = 484
NODE SMF-08
BASIN COMP-01
AREA = 3.6
CN = 68
Tc = 10
K (SCS) = 484
NODE COMP-01
CONTROL STRUCTURE (CS-08)
NODE S-08A
BASIN S-08A
NODE S-09A
NODE SMF-09
NODE SMF-10
BASIN SUB-10
AREA = 3.1
CN = 79
Tc = 17
K (SCS) = 484
BASIN RY-04
AREA = 1.5
CN = 59
Tc = 11
K (SCS) = 484
CONTROL STRUCTURE (CS-12)
NODE SMF-12
BUFFER TREATMENT AREA 11
BASIN SUB-05A
AREA = 7.88
CN = 69
Tc = 10
K (SCS) = 484
NODE WET-02-PST
BASIN WET-02-PST
AREA = 4.7
CN = 87
Tc = 10
K (SCS) = 484
BASIN SUB-06
AREA = 1.2
CN = 75
Tc = 18
K (SCS) = 484
NODE OUT-03-PST
BUFFER TREATMENT AREA 06
NODE S-08B
BASIN S-08B
OVERTREATMENT-04 (0.40 Ac.±)
OVERTREATMENT-05 (0.16 Ac.±)
BASIN S-05E
NODE S-05E
BUFFER TREATMENT AREA 05
NODE S-05D
BASIN S-05D
NODE S-05F
BASIN S-05F
NODE SMF-06
OVERTREATMENT-13 (0.25 Ac.±)
BASIN RY-07
AREA = 4.1
CN = 50
Tc = 15
K (SCS) = 484
BASIN RY-01
AREA = 10.5
CN = 69
Tc = 10
K (SCS) = 484
NODE WET-01-PST
BUFFER TREATMENT AREA 07
OVERTREATMENT-06 (0.29 Ac.±)
CONTROL STRUCTURE (CS-02)
BASIN WET-01-PST
AREA = 11.4
CN = 91
Tc = 10
K (SCS) = 484
NODE SMF-07
NODE WET-04-PST
BASIN WET-04-PST
AREA = 14.8
CN = 91
Tc = 10
K (SCS) = 484
BASIN RY-06
AREA = 1.2
CN = 38
Tc = 10
K (SCS) = 484
OVERTREATMENT-08 (0.09 Ac.±)
BUFFER TREATMENT AREA 08
BASIN SUB-02
AREA = 13.2
CN = 75
Tc = 22
K (SCS) = 484
BASIN RY-03
AREA = 3.3
CN = 56
Tc = 11
K (SCS) = 484
OVERTREATMENT-07 (0.15 Ac.±)
BUFFER TREATMENT AREA 09
NODE S-05C
BASIN S-05C
NODE S-05B
BASIN S-05B
BUFFER TREATMENT AREA 12
OVERTREATMENT-12 (0.72 Ac.±)
CONTROL STRUCTURE (CS-14)
NODE SMF-14
OVERTREATMENT-11 (0.58 Ac.±)
NODE SMF-02
BUFFER TREATMENT AREA 02
NODE SMF-05
OVERTREATMENT-14 (0.44 Ac.±)
NODE S-05A
BASIN S-05A
CONTROL STRUCTURE (CS-05)
BASIN SUB-05
AREA = 8.0
CN = 70
Tc = 21
K (SCS) = 484
BUFFER TREATMENT AREA 13
BASIN SUB-14
AREA = 12.0
CN = 75
Tc = 21
K (SCS) = 484
NODE OUT-01-PST
BASIN SUB-07
AREA = 4.4
CN = 78
Tc = 19
K (SCS) = 484
BASIN RY-08
AREA = 3.2
CN = 50
Tc = 17
K (SCS) = 484
CONTROL STRUCTURE (CS-03)
NODE SMF-03
NODE WET-05-PST
BASIN WET-05-PST
AREA = 3.8
CN = 89
Tc = 10
K (SCS) = 484
OVERTREATMENT-15 (0.20 Ac.±)
BUFFER TREATMENT AREA 14
BASIN SUB-03
AREA = 2.2
CN = 77
Tc = 10
K (SCS) = 484
45
99
8
17
25

LEGEND

▨	SJRWMD JURISDICTIONAL WETLANDS
▨	NATURAL / VEGETATIVE UPLAND BUFFER
— · —	SOIL DIVIDE LINE
▬ ▬	DRAINAGE DIVIDE LINE
— —25— —	EXISTING CONTOUR
3	SOIL NUMBER

SOIL NUMBER	SOIL DESCRIPTION	HYD. GROUP
5	APOPKA 0%-5%	A
6	APOPKA 5%-12%	A
8	CANDLER 0%-5%	A
9	CANDLER 5%-12%	A
17	ARENTS	B
25	KENDRICK	A
28	MYAKKA	A/D
31	OCOEE	A/D
45	TAVARES	A
99	WATER	

SOURCE: USDA WEB SOIL SURVEY
AUGUST 27, 2022
LAKE COUNTY, FLORIDA

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
1	:		
2	:		
3	:		
4	:		
5	:		
6	:		
7	:		

POST DEVELOPMENT DRAINAGE PLAN

HILLSIDE GROVE
HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" =150'	
Sheet 6A	

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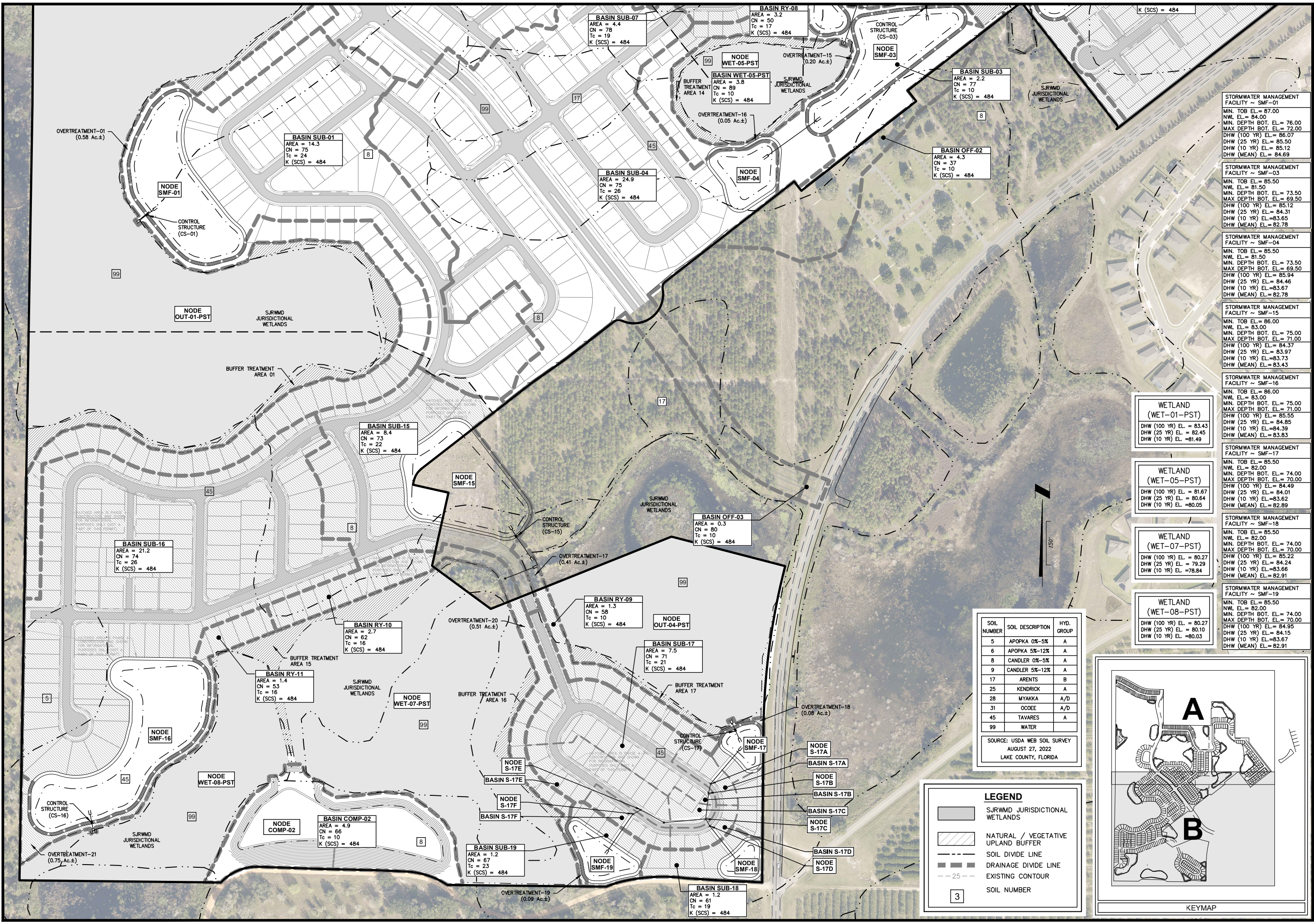
Printed: Sep 28 2022 - 3:54pm

J:\21\21-04-0008 Preserve at Howey\Design\Dwgs\Plots\21-04-0008 Pst.dwg


BASIN SUB-07
AREA = 4.4
CN = 78
Tc = 19
K (SCS) = 484
BASIN RY-08
AREA = 3.2
CN = 50
Tc = 17
K (SCS) = 484
NODE WET-05-PST
BASIN WET-05-PST
AREA = 3.8
CN = 89
Tc = 10
K (SCS) = 484
BUFFER TREATMENT AREA 14
SJRWMD JURISDICTIONAL WETLANDS
OVERTREATMENT-15 (0.20 Ac.±)
OVERTREATMENT-16 (0.05 Ac.±)
CONTROL STRUCTURE (CS-03)
NODE SMF-03
BASIN SUB-03
AREA = 2.2
CN = 77
Tc = 10
K (SCS) = 484
K (SCS) = 484
NODE SMF-04
BASIN OFF-02
AREA = 4.3
CN = 37
Tc = 10
K (SCS) = 484
OVERTREATMENT-01 (0.58 Ac.±)
BASIN SUB-01
AREA = 14.3
CN = 75
Tc = 24
K (SCS) = 484
BASIN SUB-04
AREA = 24.9
CN = 75
Tc = 26
K (SCS) = 484
NODE SMF-01
CONTROL STRUCTURE (CS-01)
NODE OUT-01-PST
SJRWMD JURISDICTIONAL WETLANDS
BUFFER TREATMENT AREA 01
BASIN SUB-15
AREA = 8.4
CN = 73
Tc = 22
K (SCS) = 484
NODE SMF-15
CONTROL STRUCTURE (CS-15)
OVERTREATMENT-17 (0.41 Ac.±)
SJRWMD JURISDICTIONAL WETLANDS
BASIN OFF-03
AREA = 0.3
CN = 80
Tc = 10
K (SCS) = 484
BASIN SUB-16
AREA = 21.2
CN = 74
Tc = 26
K (SCS) = 484
BASIN RY-09
AREA = 1.3
CN = 58
Tc = 10
K (SCS) = 484
NODE OUT-04-PST
OVERTREATMENT-20 (0.51 Ac.±)
BASIN RY-10
AREA = 2.7
CN = 62
Tc = 16
K (SCS) = 484
BUFFER TREATMENT AREA 15
BASIN RY-11
AREA = 1.4
CN = 53
Tc = 16
K (SCS) = 484
SJRWMD JURISDICTIONAL WETLANDS
NODE WET-07-PST
BUFFER TREATMENT AREA 16
BASIN SUB-17
AREA = 7.5
CN = 71
Tc = 21
K (SCS) = 484
BUFFER TREATMENT AREA 17
OVERTREATMENT-18 (0.08 Ac.±)
CONTROL STRUCTURE (CS-17)
NODE SMF-17
NODE SMF-16
NODE WET-08-PST
CONTROL STRUCTURE (CS-16)
SJRWMD JURISDICTIONAL WETLANDS
OVERTREATMENT-21 (0.75 Ac.±)
NODE COMP-02
BASIN COMP-02
AREA = 4.9
CN = 66
Tc = 10
K (SCS) = 484
NODE S-17E
BASIN S-17E
NODE S-17F
BASIN S-17F
BASIN SUB-19
AREA = 1.2
CN = 67
Tc = 23
K (SCS) = 484
NODE SMF-19
OVERTREATMENT-19 (0.09 Ac.±)
NODE SMF-18
BASIN SUB-18
AREA = 1.2
CN = 61
Tc = 19
K (SCS) = 484
NODE S-17A
BASIN S-17A
NODE S-17B
BASIN S-17B
BASIN S-17C
NODE S-17C
BASIN S-17D
NODE S-17D
SJRWMD JURISDICTIONAL WETLANDS
99
17
45
8
5
150'
A
B
KEYMAP

STORMWATER MANAGEMENT FACILITY ~ SMF-01
MIN. TOB EL.= 87.00
NWL EL.= 84.00
MIN. DEPTH BOT. EL.= 76.00
MAX DEPTH BOT. EL.= 72.00
DHW (100 YR) EL.= 86.07
DHW (25 YR) EL.= 85.50
DHW (10 YR) EL.= 85.12
DHW (MEAN) EL.= 84.69

STORMWATER MANAGEMENT FACILITY ~ SMF-03
MIN. TOB EL.= 85.50
NWL EL.= 81.50
MIN. DEPTH BOT. EL.= 73.50
MAX DEPTH BOT. EL.= 69.50
DHW (100 YR) EL.= 85.12
DHW (25 YR) EL.= 84.31
DHW (10 YR) EL.=83.65
DHW (MEAN) EL.= 82.78

STORMWATER MANAGEMENT FACILITY ~ SMF-04
MIN. TOB EL.= 85.50
NWL EL.= 81.50
MIN. DEPTH BOT. EL.= 73.50
MAX DEPTH BOT. EL.= 69.50
DHW (100 YR) EL.= 85.94
DHW (25 YR) EL.= 84.46
DHW (10 YR) EL.=83.67
DHW (MEAN) EL.= 82.78

STORMWATER MANAGEMENT FACILITY ~ SMF-15
MIN. TOB EL.= 86.00
NWL EL.= 83.00
MIN. DEPTH BOT. EL.= 75.00
MAX DEPTH BOT. EL.= 71.00
DHW (100 YR) EL.= 84.37
DHW (25 YR) EL.= 83.97
DHW (10 YR) EL.=83.73
DHW (MEAN) EL.= 83.43

STORMWATER MANAGEMENT FACILITY ~ SMF-16
MIN. TOB EL.= 86.00
NWL EL.= 83.00
MIN. DEPTH BOT. EL.= 75.00
MAX DEPTH BOT. EL.= 71.00
DHW (100 YR) EL.= 85.55
DHW (25 YR) EL.= 84.85
DHW (10 YR) EL.=84.39
DHW (MEAN) EL.= 83.83

STORMWATER MANAGEMENT FACILITY ~ SMF-17
MIN. TOB EL.= 85.50
NWL EL.= 82.00
MIN. DEPTH BOT. EL.= 74.00
MAX DEPTH BOT. EL.= 70.00
DHW (100 YR) EL.= 84.49
DHW (25 YR) EL.= 84.01
DHW (10 YR) EL.=83.62
DHW (MEAN) EL.= 82.89

STORMWATER MANAGEMENT FACILITY ~ SMF-18
MIN. TOB EL.= 85.50
NWL EL.= 82.00
MIN. DEPTH BOT. EL.= 74.00
MAX DEPTH BOT. EL.= 70.00
DHW (100 YR) EL.= 85.22
DHW (25 YR) EL.= 84.24
DHW (10 YR) EL.=83.66
DHW (MEAN) EL.= 82.91

STORMWATER MANAGEMENT FACILITY ~ SMF-19
MIN. TOB EL.= 85.50
NWL EL.= 82.00
MIN. DEPTH BOT. EL.= 74.00
MAX DEPTH BOT. EL.= 70.00
DHW (100 YR) EL.= 84.95
DHW (25 YR) EL.= 84.15
DHW (10 YR) EL.=83.67
DHW (MEAN) EL.= 82.91

WETLAND (WET-01-PST)
DHW (100 YR) EL. = 83.43
DHW (25 YR) EL. = 82.45
DHW (10 YR) EL. =81.49

WETLAND (WET-05-PST)
DHW (100 YR) EL. = 81.67
DHW (25 YR) EL. = 80.64
DHW (10 YR) EL. =80.05

WETLAND (WET-07-PST)
DHW (100 YR) EL. = 80.27
DHW (25 YR) EL. = 79.29
DHW (10 YR) EL. =78.84

WETLAND (WET-08-PST)
DHW (100 YR) EL. = 80.27
DHW (25 YR) EL. = 80.10
DHW (10 YR) EL. =80.03

SOIL NUMBER	SOIL DESCRIPTION	HYD. GROUP
5	APOPKA 0%-5%	A
6	APOPKA 5%-12%	A
8	CANDLER 0%-5%	A
9	CANDLER 5%-12%	A
17	ARENTS	B
25	KENDRICK	A
28	MYAKKA	A/D
31	OCOEE	A/D
45	TAVARES	A
99	WATER	

SOURCE: USDA WEB SOIL SURVEY
AUGUST 27, 2022
LAKE COUNTY, FLORIDA

LEGEND

▩	SJRWMD JURISDICTIONAL WETLANDS
▨	NATURAL / VEGETATIVE UPLAND BUFFER
— - - —	SOIL DIVIDE LINE
▬ ▬ ▬	DRAINAGE DIVIDE LINE
— — 25 — —	EXISTING CONTOUR
3	SOIL NUMBER

Connelly & Wicker Inc.

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No.	Date	Revision	By
7	:		
6	:		
5	:		
4	:		
3	:		
2	:		
1	:		

POST DEVELOPMENT DRAINAGE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" =150'	
Sheet 6B	

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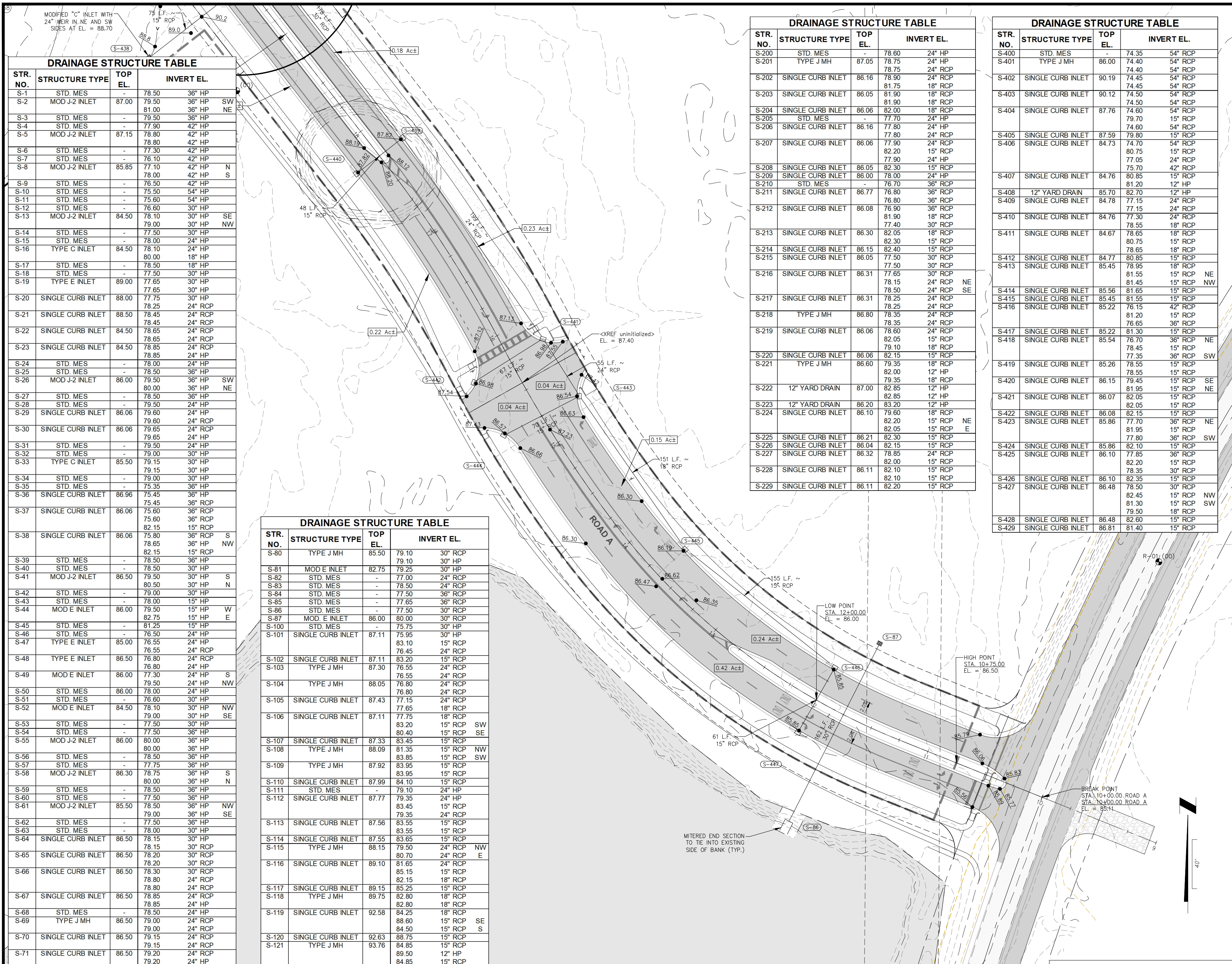


DRAINAGE STRUCTURE TABLE

STR. NO.	STRUCTURE TYPE	TOP EL.	INVERT EL.		
S-1	STD. MES	-	78.50	36" HP	
S-2	MOD J-2 INLET	87.00	79.50 81.00	36" HP 36" HP	SW NE
S-3	STD. MES	-	79.50	36" HP	
S-4	STD. MES	-	77.90	42" HP	
S-5	MOD J-2 INLET	87.15	78.80 78.80	42" HP 42" HP	
S-6	STD. MES	-	77.30	42" HP	
S-7	STD. MES	-	76.10	42" HP	
S-8	MOD J-2 INLET	85.85	77.10 78.00	42" HP 42" HP	N S
S-9	STD. MES	-	76.50	42" HP	
S-10	STD. MES	-	75.50	54" HP	
S-11	STD. MES	-	75.60	54" HP	
S-12	STD. MES	-	76.60	30" HP	
S-13	MOD J-2 INLET	84.50	78.10 79.00	30" HP 30" HP	SE NW
S-14	STD. MES	-	77.50	30" HP	
S-15	STD. MES	-	78.00	24" HP	
S-16	TYPE C INLET	84.50	78.10 80.00	24" HP 18" HP	
S-17	STD. MES	-	78.50	18" HP	
S-18	STD. MES	-	77.50	30" HP	
S-19	TYPE E INLET	89.00	77.65 77.65	30" HP 30" HP	
S-20	SINGLE CURB INLET	88.00	77.75 78.25	30" HP 24" RCP	
S-21	SINGLE CURB INLET	88.50	78.45 78.45	24" RCP 24" RCP	
S-22	SINGLE CURB INLET	84.50	78.65 78.65	24" RCP 24" RCP	
S-23	SINGLE CURB INLET	84.50	78.85 78.85	24" RCP 24" HP	
S-24	STD. MES	-	78.00	24" HP	
S-25	STD. MES	-	78.50	36" HP	
S-26	MOD J-2 INLET	86.00	79.50 80.00	36" HP 36" HP	SW NE
S-27	STD. MES	-	78.50	36" HP	
S-28	STD. MES	-	79.50	24" HP	
S-29	SINGLE CURB INLET	86.06	79.60 79.60	24" HP 24" RCP	
S-30	SINGLE CURB INLET	86.06	79.65 79.65	24" RCP 24" HP	
S-31	STD. MES	-	79.50	24" HP	
S-32	STD. MES	-	79.00	30" HP	
S-33	TYPE C INLET	85.50	79.15 79.15	30" HP 30" HP	
S-34	STD. MES	-	79.00	30" HP	
S-35	STD. MES	-	75.35	36" HP	
S-36	SINGLE CURB INLET	86.96	75.45 75.45	36" HP 36" RCP	
S-37	SINGLE CURB INLET	86.06	75.60 75.60 82.15	36" RCP 36" RCP 15" RCP	
S-38	SINGLE CURB INLET	86.06	75.80 78.65 82.15	36" RCP 36" HP 15" RCP	S NW
S-39	STD. MES	-	78.50	36" HP	
S-40	STD. MES	-	78.50	30" HP	
S-41	MOD J-2 INLET	86.50	79.50 80.50	30" HP 30" HP	S N
S-42	STD. MES	-	79.00	30" HP	
S-43	STD. MES	-	78.00	15" HP	
S-44	MOD E INLET	86.00	79.50 82.75	15" HP 15" HP	W E
S-45	STD. MES	-	81.25	15" HP	
S-46	STD. MES	-	76.50	24" HP	
S-47	TYPE E INLET	85.00	76.55 76.55	24" HP 24" RCP	
S-48	TYPE E INLET	86.50	76.80 76.80	24" RCP 24" HP	
S-49	MOD E INLET	86.00	77.30 79.50	24" HP 24" HP	S NW
S-50	STD. MES	86.00	78.00	24" HP	
S-51	STD. MES	-	76.60	30" HP	
S-52	MOD E INLET	84.50	78.10 79.00	30" HP 30" HP	NW SE
S-53	STD. MES	-	77.50	30" HP	
S-54	STD. MES	-	77.50	36" HP	
S-55	MOD J-2 INLET	86.00	80.00 80.00	36" HP 36" HP	
S-56	STD. MES	-	78.50	36" HP	
S-57	STD. MES	-	77.75	36" HP	
S-58	MOD J-2 INLET	86.30	78.75 80.00	36" HP 36" HP	S N
S-59	STD. MES	-	78.50	36" HP	
S-60	STD. MES	-	77.50	36" HP	
S-61	MOD J-2 INLET	85.50	78.50 79.00	36" HP 36" HP	NW SE
S-62	STD. MES	-	77.50	36" HP	
S-63	STD. MES	-	78.00	30" HP	
S-64	SINGLE CURB INLET	86.50	78.15 78.15	30" HP 30" RCP	
S-65	SINGLE CURB INLET	86.50	78.20 78.20	30" RCP 30" RCP	
S-66	SINGLE CURB INLET	86.50	78.30 78.80 78.80	30" RCP 24" RCP 24" RCP	
S-67	SINGLE CURB INLET	86.50	78.85 78.85	24" RCP 24" HP	
S-68	STD. MES	-	78.50	24" HP	
S-69	TYPE J MH	86.50	79.00 79.00	24" RCP 24" RCP	
S-70	SINGLE CURB INLET	86.50	79.15 79.15	24" RCP 24" RCP	
S-71	SINGLE CURB INLET	86.50	79.20 79.20	24" RCP 24" HP	
S-72	STD. MES	-	78.50	24" HP	
S-73	STD. MES	-	81.20	36" RCP	
S-74	STD. MES	-	81.40	36" RCP	
S-75	STD. MES	-	79.45	36" RCP	
S-76	STD. MES	-	79.70	36" RCP	
S-77	STD. MES	-	79.40	24" RCP	
S-78	STD. MES	-	78.50	24" RCP	
S-79	STD. MES	-	79.00	30" RCP	

DRAINAGE STRUCTURE TABLE

STR. NO.	STRUCTURE TYPE	TOP EL.	INVERT EL.		
S-80	TYPE J MH	85.50	79.10 79.10	30" RCP 30" HP	
S-81	MOD E INLET	82.75	79.25	30" HP	
S-82	STD. MES	-	77.00	24" RCP	
S-83	STD. MES	-	78.50	24" RCP	
S-84	STD. MES	-	77.50	36" RCP	
S-85	STD. MES	-	77.65	36" RCP	
S-86	STD. MES	-	77.50	30" RCP	
S-87	MOD. E INLET	86.00	80.00	30" RCP	
S-100	STD. MES	-	75.75	30" HP	
S-101	SINGLE CURB INLET	87.11	75.95 83.10 76.45	30" HP 15" RCP 24" RCP	
S-102	SINGLE CURB INLET	87.11	83.20	15" RCP	
S-103	TYPE J MH	87.30	76.55 76.55	24" RCP 24" RCP	
S-104	TYPE J MH	88.05	76.80 76.80	24" RCP 24" RCP	
S-105	SINGLE CURB INLET	87.43	77.15 77.65	24" RCP 18" RCP	
S-106	SINGLE CURB INLET	87.11	77.75 83.20 80.40	18" RCP 15" RCP 15" RCP	 SW SE
S-107	SINGLE CURB INLET	87.33	83.45	15" RCP	
S-108	TYPE J MH	88.09	81.35 83.85	15" RCP 15" RCP	NW SW
S-109	TYPE J MH	87.92	83.95 83.95	15" RCP 15" RCP	
S-110	SINGLE CURB INLET	87.99	84.10	15" RCP	
S-111	STD. MES	-	79.10	24" HP	
S-112	SINGLE CURB INLET	87.77	79.35 83.45 79.35	24" HP 15" RCP 24" RCP	
S-113	SINGLE CURB INLET	87.56	83.55 83.55	15" RCP 15" RCP	
S-114	SINGLE CURB INLET	87.55	83.65	15" RCP	
S-115	TYPE J MH	88.15	79.50 80.70	24" RCP 24" RCP	NW E
S-116	SINGLE CURB INLET	89.10	81.65 85.15 82.15	24" RCP 15" RCP 18" RCP	
S-117	SINGLE CURB INLET	89.15	85.25	15" RCP	
S-118	TYPE J MH	89.75	82.80 82.80	18" RCP 18" RCP	
S-119	SINGLE CURB INLET	92.58	84.25 88.60 84.50	18" RCP 15" RCP 15" RCP	 SE S
S-120	SINGLE CURB INLET	92.63	88.75	15" RCP	
S-121	TYPE J MH	93.76	84.85 89.50 84.85	15" RCP 12" HP 15" RCP	
S-122	12" YARD DRAIN	95.00	91.30 91.30	12" HP 12" HP	
S-123	12" YARD DRAIN	94.80	91.80	12" HP	
S-124	SINGLE CURB INLET	93.26	85.25 89.15 89.20	15" RCP 15" RCP 15" RCP	N E SE
S-125	SINGLE CURB INLET	93.15	89.25	15" RCP	
S-126	SINGLE CURB INLET	93.18	89.30	15" RCP	

DRAINAGE STRUCTURE TABLE

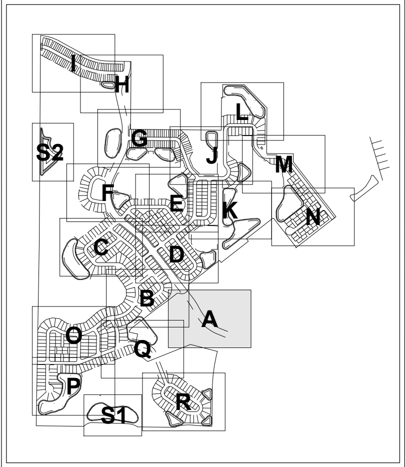
STR. NO.	STRUCTURE TYPE	TOP EL.	INVERT EL.		
S-200	STD. MES	-	78.60	24" HP	
S-201	TYPE J MH	87.05	78.75 78.75	24" HP 24" RCP	
S-202	SINGLE CURB INLET	86.16	78.90 81.75	24" RCP 18" RCP	
S-203	SINGLE CURB INLET	86.05	81.90 81.90	18" RCP 18" RCP	
S-204	SINGLE CURB INLET	86.06	82.00	18" RCP	
S-205	STD. MES	-	77.70	24" HP	
S-206	SINGLE CURB INLET	86.16	77.80 77.80	24" HP 24" RCP	
S-207	SINGLE CURB INLET	86.06	77.90 82.20 77.90	24" RCP 15" RCP 24" HP	
S-208	SINGLE CURB INLET	86.05	82.30	15" RCP	
S-209	SINGLE CURB INLET	86.00	78.00	24" HP	
S-210	STD. MES	-	76.70	36" RCP	
S-211	SINGLE CURB INLET	86.77	76.80 76.80	36" RCP 36" RCP	
S-212	SINGLE CURB INLET	86.08	76.90 81.90 77.40	36" RCP 18" RCP 30" RCP	
S-213	SINGLE CURB INLET	86.30	82.05 82.30	18" RCP 15" RCP	
S-214	SINGLE CURB INLET	86.15	82.40	15" RCP	
S-215	SINGLE CURB INLET	86.05	77.50 77.50	30" RCP 30" RCP	
S-216	SINGLE CURB INLET	86.31	77.65 78.15 78.50	30" RCP 24" RCP 24" RCP	 NE SE
S-217	SINGLE CURB INLET	86.31	78.25 78.25	24" RCP 24" RCP	
S-218	TYPE J MH	86.80	78.35 78.35	24" RCP 24" RCP	
S-219	SINGLE CURB INLET	86.06	78.60 82.05 79.10	24" RCP 15" RCP 18" RCP	
S-220	SINGLE CURB INLET	86.06	82.15	15" RCP	
S-221	TYPE J MH	86.60	79.35 82.00 79.35	18" RCP 12" HP 18" RCP	
S-222	12" YARD DRAIN	87.00	82.85 82.85	12" HP 12" HP	
S-223	12" YARD DRAIN	86.20	83.20	12" HP	
S-224	SINGLE CURB INLET	86.10	79.60 82.20 82.05	18" RCP 15" RCP 15" RCP	 NE E
S-225	SINGLE CURB INLET	86.21	82.30	15" RCP	
S-226	SINGLE CURB INLET	86.04	82.15	15" RCP	
S-227	SINGLE CURB INLET	86.32	78.85 82.00	24" RCP 15" RCP	
S-228	SINGLE CURB INLET	86.11	82.10 82.10	15" RCP 15" RCP	
S-229	SINGLE CURB INLET	86.11	82.20	15" RCP	

DRAINAGE STRUCTURE TABLE

STR. NO.	STRUCTURE TYPE	TOP EL.	INVERT EL.		
S-400	STD. MES	-	74.35	54" RCP	
S-401	TYPE J MH	86.00	74.40 74.40	54" RCP 54" RCP	
S-402	SINGLE CURB INLET	90.19	74.45 74.45	54" RCP 54" RCP	
S-403	SINGLE CURB INLET	90.12	74.50 74.50	54" RCP 54" RCP	
S-404	SINGLE CURB INLET	87.76	74.60 79.70 74.60	54" RCP 15" RCP 54" RCP	
S-405	SINGLE CURB INLET	87.59	79.80	15" RCP	
S-406	SINGLE CURB INLET	84.73	74.70 80.75 77.05 75.70	54" RCP 15" RCP 24" RCP 42" RCP	
S-407	SINGLE CURB INLET	84.76	80.85 81.20	15" RCP 12" HP	
S-408	12" YARD DRAIN	85.70	82.70	12" HP	
S-409	SINGLE CURB INLET	84.78	77.15 77.15	24" RCP 24" RCP	
S-410	SINGLE CURB INLET	84.76	77.30 78.55	24" RCP 18" RCP	
S-411	SINGLE CURB INLET	84.67	78.65 80.75 78.65	18" RCP 15" RCP 18" RCP	
S-412	SINGLE CURB INLET	84.77	80.85	15" RCP	
S-413	SINGLE CURB INLET	85.45	78.95 81.55 81.45	18" RCP 15" RCP 15" RCP	 NE NW
S-414	SINGLE CURB INLET	85.56	81.65	15" RCP	
S-415	SINGLE CURB INLET	85.45	81.55	15" RCP	
S-416	SINGLE CURB INLET	85.22	76.15 81.20 76.65	42" RCP 15" RCP 36" RCP	
S-417	SINGLE CURB INLET	85.22	81.30	15" RCP	
S-418	SINGLE CURB INLET	85.54	76.70 78.45 77.35	36" RCP 15" RCP 36" RCP	NE SW
S-419	SINGLE CURB INLET	85.26	78.55 78.55	15" RCP 15" RCP	
S-420	SINGLE CURB INLET	86.15	79.45 81.95	15" RCP 15" RCP	SE NE
S-421	SINGLE CURB INLET	86.07	82.05 82.05	15" RCP 15" RCP	
S-422	SINGLE CURB INLET	86.08	82.15	15" RCP	
S-423	SINGLE CURB INLET	85.86	77.70 81.95 77.80	36" RCP 15" RCP 36" RCP	NE SW
S-424	SINGLE CURB INLET	85.86	82.10	15" RCP	
S-425	SINGLE CURB INLET	86.10	77.85 82.20 78.35	36" RCP 15" RCP 30" RCP	
S-426	SINGLE CURB INLET	86.10	82.35	15" RCP	
S-427	SINGLE CURB INLET	86.48	78.50 82.45 81.30 79.50	30" RCP 15" RCP 15" RCP 18" RCP	 NW SW
S-428	SINGLE CURB INLET	86.48	82.60	15" RCP	
S-429	SINGLE CURB INLET	86.81	81.40	15" RCP	

DRAINAGE STRUCTURE TABLE

STR. NO.	STRUCTURE TYPE	TOP EL.	INVERT EL.		
S-430	SINGLE CURB INLET	90.00	81.90 82.15	18" RCP 15" RCP	
S-431	SINGLE CURB INLET	89.60	82.30 83.90	15" RCP 15" RCP	NE SE
S-432	SINGLE CURB INLET	90.19	84.05	15" RCP	
S-433	STD. MES	-	77.50	30" HP	
S-434	MOD C INLET	92.60	78.60 78.60	30" HP 30" HP	
S-435	MOD C INLET	89.20	78.85 78.85	30" HP 30" HP	
S-436	SINGLE CURB INLET	89.37	79.00 82.95 79.00	30" HP 15" RCP 30" RCP	
S-437	SINGLE CURB INLET	89.37	83.10 83.10	15" RCP 15" HP	
S-438	MOD C INLET	89.20	84.95	15" HP	
S-439	SINGLE CURB INLET	87.82	79.20 83.90 79.70	30" RCP 15" RCP 24" RCP	
S-440	SINGLE CURB INLET	87.82	84.05	15" RCP	
S-441	SINGLE CURB INLET	86.98	80.00 83.00 80.00	24" RCP 15" RCP 24" RCP	
S-442	SINGLE CURB INLET	86.98	83.20	15" RCP	
S-443	SINGLE CURB INLET	86.50	80.10 82.55 80.60	24" RCP 15" RCP 18" RCP	
S-444	SINGLE CURB INLET	86.50	82.75	15" RCP	
S-445	SINGLE CURB INLET	86.08	80.90 81.15	18" RCP 15" RCP	
S-446	SINGLE CURB INLET	85.43	81.50 81.50	15" RCP 15" RCP	
S-447	SINGLE CURB INLET	85.43	81.65	15" RCP	
S-800	STD. MES	-	80.25	15" HP	
S-801	SINGLE CURB INLET	86.46	80.80 82.35	15" HP 15" RCP	W SE
S-802	SINGLE CURB INLET	86.36	82.50 82.50	15" RCP 15" RCP	
S-803	SINGLE CURB INLET	86.37	82.60	15" RCP	
S-804	SINGLE CURB INLET	86.06	82.30	15" RCP	
S-805	SINGLE CURB INLET	86.06	82.30	15" RCP	
S-806	STD. MES	-	80.25	15" HP	
S-807	SINGLE CURB INLET	86.44	80.50 80.50	15" HP 15" RCP	
S-808	SINGLE CURB INLET	86.60	80.80 80.80	15" RCP 15" RCP	
S-809	SINGLE CURB INLET	86.74	80.95 80.95	15" RCP 15" RCP	
S-810	SINGLE CURB INLET	86.26	81.20 82.00	15" RCP 15" RCP	S E
S-811	SINGLE CURB INLET	85.89	82.15	15" RCP	



KEYMAP

NOTES:
1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL NOT SCALE PLAN BUT SHALL REFER TO SITE PLAN FOR ALL LINE DIMENSIONS.
3. ALL PIPE LENGTHS SHOWN HEREON ARE APPROXIMATE AND ARE TAKEN FROM THE APPROXIMATE CENTER OF GRATE/RING AND COVER TO THE BACK OF THE MITERED END SECTIONS.
4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry 3650 L.A. Number: LC26000311

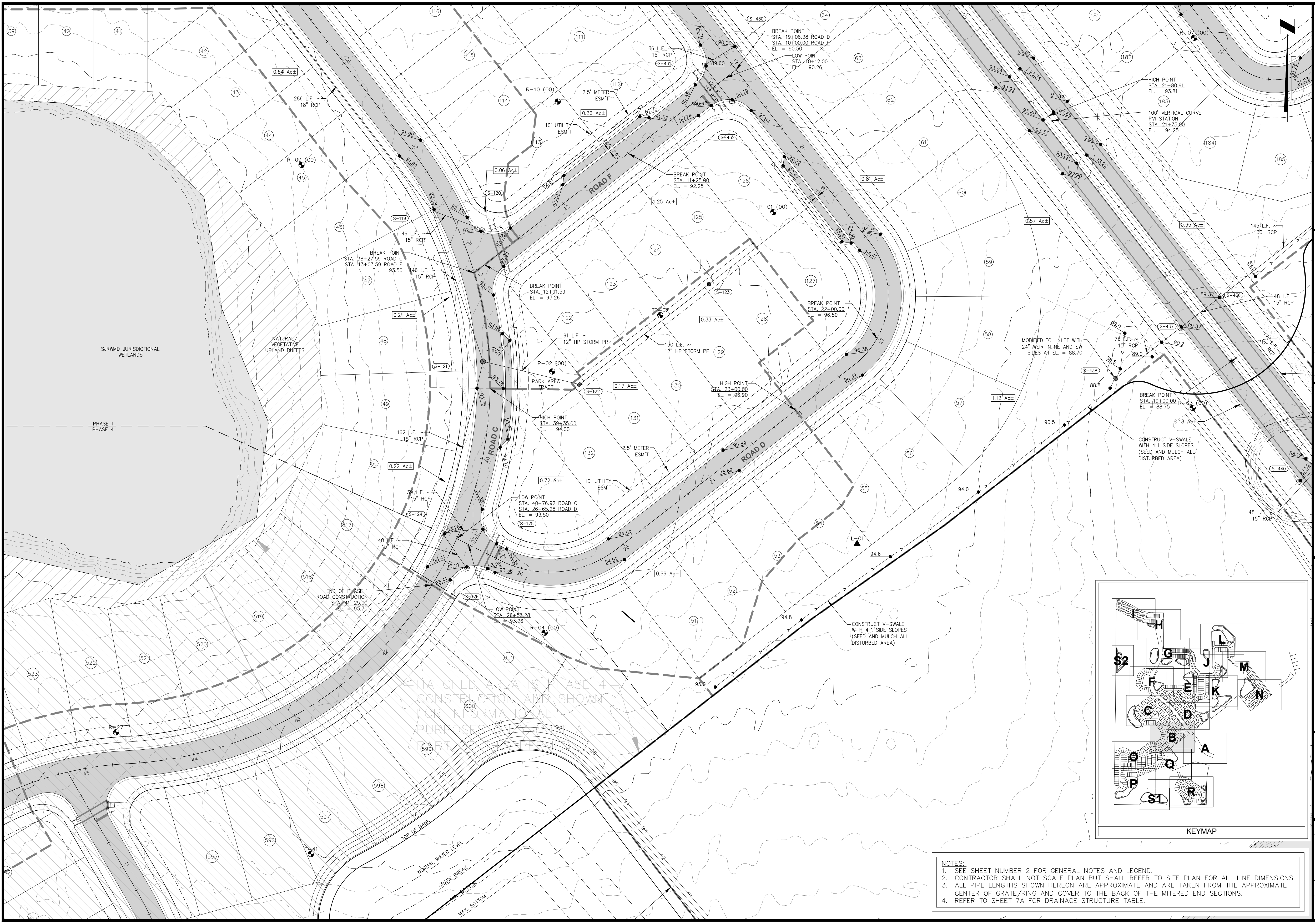
No.	Date	Revision	By
1			
2			
3			
4			
5			
6			
7			

PAVING AND DRAINAGE PLAN

HILLSIDE GROVE
HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
O.C.: RCW
Date: AUGUST 2022
Scale: 1" = 40'
Sheet 7A


ROAD C
ROAD D
ROAD F
SJRWMD JURISDICTIONAL WETLANDS
NATURAL/ VEGETATIVE UPLAND BUFFER
PHASE 1
PHASE 4
BREAK POINT STA. 19+06.38 ROAD D STA. 10+00.00 ROAD F EL. = 90.50
LOW POINT STA. 10+12.00 EL. = 90.26
BREAK POINT STA. 11+25.00 EL. = 92.25
BREAK POINT STA. 38+27.59 ROAD C STA. 13+03.59 ROAD F EL. = 93.50
BREAK POINT STA. 12+91.59 EL. = 93.26
BREAK POINT STA. 22+00.00 EL. = 96.50
HIGH POINT STA. 23+00.00 EL. = 96.90
HIGH POINT STA. 39+35.00 EL. = 94.00
LOW POINT STA. 40+76.92 ROAD C STA. 26+65.28 ROAD D EL. = 93.50
LOW POINT STA. 26+53.28 EL. = 93.26
END OF PHASE 1 ROAD CONSTRUCTION STA. 41+25.00 EL. = 93.70
HIGH POINT STA. 21+80.61 EL. = 93.81
100' VERTICAL CURVE PVI STATION STA. 21+75.00 EL. = 94.25
BREAK POINT STA. 19+00.00 EL. = 88.75
MODIFIED "C" INLET WITH 24" WEIR IN NE AND SW SIDES AT EL. = 88.70
CONSTRUCT V-SWALE WITH 4:1 SIDE SLOPES (SEED AND MULCH ALL DISTURBED AREA)
PARK AREA TRACT
2.5' METER ESM'T
10' UTILITY ESM'T
286 L.F. ~ 18" RCP
36 L.F. ~ 15" RCP
42 L.F. ~ 15" RCP
49 L.F. ~ 15" RCP
146 L.F. ~ 15" RCP
162 L.F. ~ 15" RCP
39 L.F. ~ 15" RCP
40 L.F. ~ 15" RCP
91 L.F. ~ 12" HP STORM PP
150 L.F. ~ 12" HP STORM PP
145 L.F. ~ 30" RCP
178 L.F. ~ 30" RCP
48 L.F. ~ 15" RCP
75 L.F. ~ 15" RCP
S-119
S-120
S-121
S-122
S-123
S-124
S-125
S-126
S-430
S-431
S-432
S-436
S-437
S-438
S-440
R-03 (00)
R-04 (00)
R-07 (00)
R-09 (00)
R-10 (00)
P-01 (00)
P-02 (00)
L-01
0.54 Ac±
0.36 Ac±
0.06 Ac±
1.25 Ac±
0.81 Ac±
0.57 Ac±
0.35 Ac±
0.21 Ac±
0.33 Ac±
0.17 Ac±
0.22 Ac±
0.72 Ac±
1.12 Ac±
0.18 Ac±
0.66 Ac±
HATCHED AREA IS PHASE 4 CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MAX. BOTTOM
KEYMAP
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S1
S2

NOTES:
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PAVING AND DRAINAGE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS
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LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
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Designed: JEW	Drawn: JEW
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Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 7B	

NOTES:
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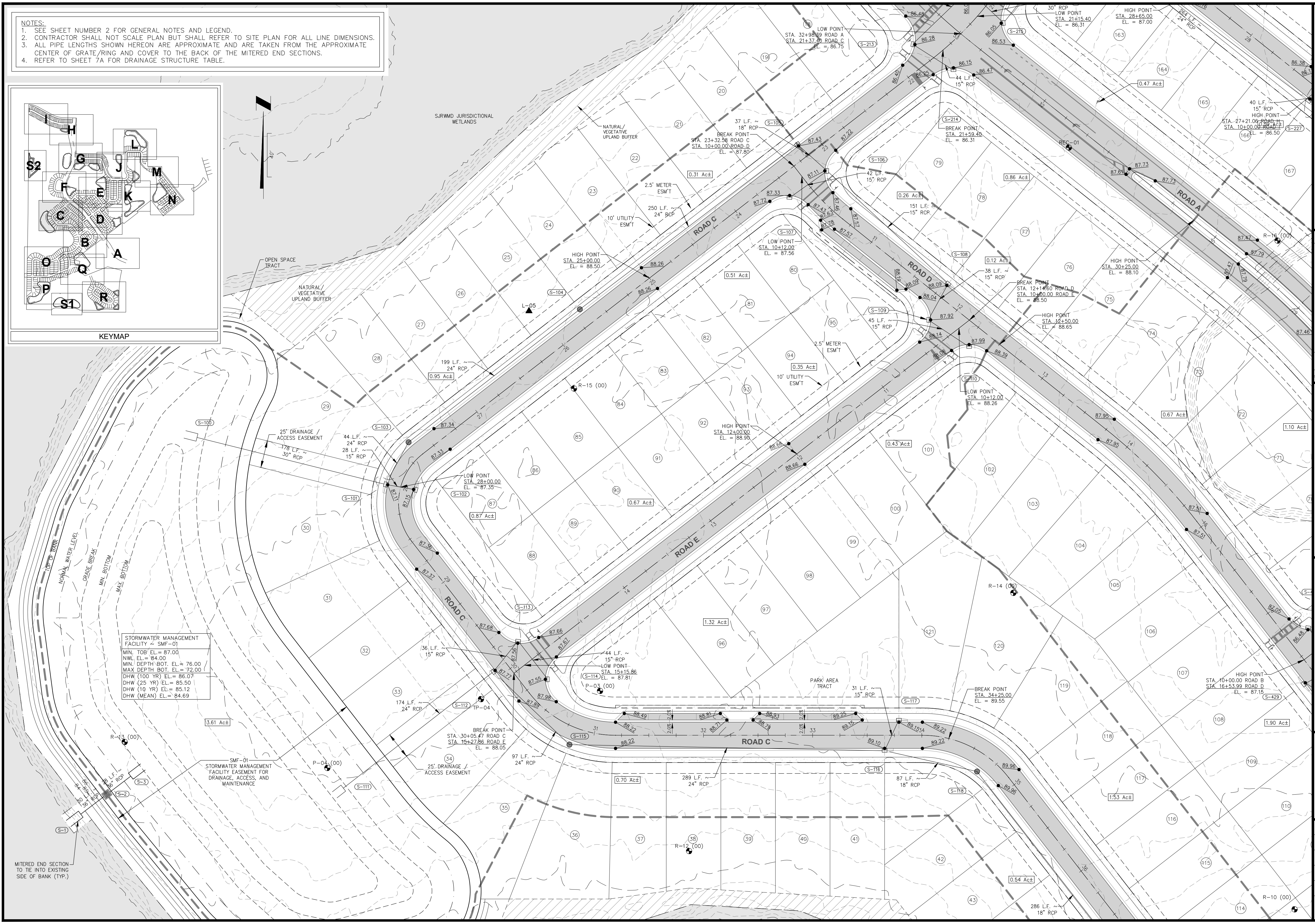

KEYMAP
I
H
G
L
J
S2
M
F
E
K
N
C
D
B
A
O
Q
P
S1
R
40'
SJRWMD JURISDICTIONAL WETLANDS
NATURAL/ VEGETATIVE UPLAND BUFFER
OPEN SPACE TRACT
ROAD A
ROAD C
ROAD D
ROAD E
PARK AREA TRACT
L-05
R-15 (00)
R-14 (00)
R-13 (00)
R-12 (00)
R-10 (00)
R-16 (00)
REC-01
P-03 (00)
P-04 (00)
TP-04
2.5' METER ESM'T
10' UTILITY ESM'T
25' DRAINAGE / ACCESS EASEMENT
LOW POINT STA. 32+98.39 ROAD A STA. 21+37.40 ROAD C EL. = 86.75
LOW POINT STA. 21+15.40 EL. = 86.31
HIGH POINT STA. 28+65.00 EL. = 87.00
BREAK POINT STA. 21+59.40 EL. = 86.31
BREAK POINT STA. 23+32.58 ROAD C STA. 10+00.00 ROAD D EL. = 87.80
LOW POINT STA. 10+12.00 EL. = 87.56
HIGH POINT STA. 25+00.00 EL. = 88.50
HIGH POINT STA. 30+25.00 EL. = 88.10
BREAK POINT STA. 12+14.60 ROAD D STA. 10+00.00 ROAD E EL. = 88.50
HIGH POINT STA. 12+50.00 EL. = 88.65
LOW POINT STA. 10+12.00 EL. = 88.26
HIGH POINT STA. 12+00.00 EL. = 88.90
LOW POINT STA. 28+00.00 EL. = 87.35
LOW POINT STA. 15+15.86 EL. = 87.81
BREAK POINT STA. 30+05.47 ROAD C STA. 15+27.86 ROAD E EL. = 88.05
BREAK POINT STA. 34+25.00 EL. = 89.55
HIGH POINT STA. 10+00.00 ROAD B STA. 16+53.99 ROAD D EL. = 87.15
HIGH POINT STA. 27+21.06 ROAD H STA. 10+00.00 ROAD F EL. = 86.50
30" RCP
44 L.F. ~ 15" RCP
37 L.F. ~ 18" RCP
42 L.F. ~ 15" RCP
151 L.F. ~ 15" RCP
38 L.F. ~ 15" RCP
45 L.F. ~ 15" RCP
40 L.F. ~ 15" RCP
250 L.F. ~ 24" RCP
199 L.F. ~ 24" RCP
178 L.F. ~ 30" RCP
44 L.F. ~ 24" RCP
28 L.F. ~ 15" RCP
36 L.F. ~ 15" RCP
44 L.F. ~ 15" RCP
174 L.F. ~ 24" RCP
97 L.F. ~ 24" RCP
289 L.F. ~ 24" RCP
31 L.F. ~ 15" RCP
87 L.F. ~ 18" RCP
286 L.F. ~ 18" RCP
SMF-01 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
MITERED END SECTION TO TIE INTO EXISTING SIDE OF BANK (TYP.)
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM
S-1
S-2
S-3
S-100
S-101
S-102
S-103
S-104
S-105
S-106
S-107
S-108
S-109
S-110
S-111
S-112
S-113
S-114
S-115
S-116
S-117
S-118
S-213
S-214
S-215
S-227
S-429
0.31 Ac±
0.26 Ac±
0.86 Ac±
0.47 Ac±
0.51 Ac±
0.12 Ac±
0.35 Ac±
0.95 Ac±
0.67 Ac±
1.10 Ac±
0.43 Ac±
0.87 Ac±
0.67 Ac±
1.32 Ac±
3.61 Ac±
0.70 Ac±
1.53 Ac±
1.90 Ac±
0.54 Ac±

STORMWATER MANAGEMENT FACILITY ~ SMF-01
MIN. TOB EL.= 87.00
NWL EL.= 84.00
MIN. DEPTH BOT. EL.= 76.00
MAX DEPTH BOT. EL.= 72.00
DHW (100 YR) EL.= 86.07
DHW (25 YR) EL.= 85.50
DHW (10 YR) EL.= 85.12
DHW (MEAN) EL.= 84.69

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10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
7	:		
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1	:		

PAVING AND DRAINAGE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 7C	

Printed By: Garrett

Printed: Sep 29, 2022 - 9:24am

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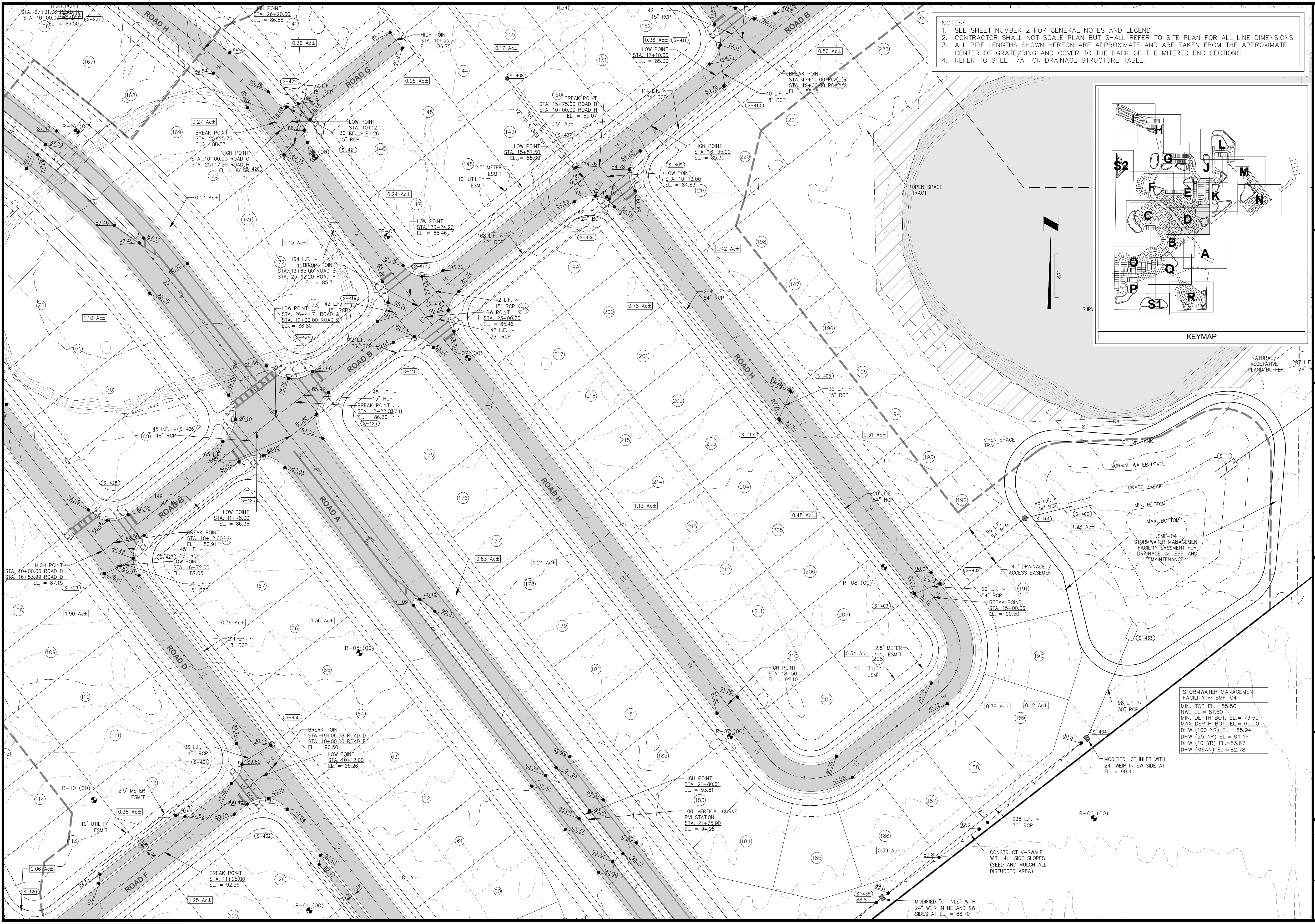
ROAD H
ROAD G
ROAD B
ROAD A
ROAD D
ROAD F
HIGH POINT STA. 26+20.00 EL. = 86.85
HIGH POINT STA. 11+33.50 EL. = 86.75
LOW POINT STA. 17+10.00 EL. = 85.00
BREAK POINT STA. 17+50.00 ROAD B STA. 10+00.00 ROAD C EL. = 85.15
BREAK POINT STA. 15+75.00 ROAD B STA. 10+00.00 ROAD H EL. = 85.07
LOW POINT STA. 15+57.50 EL. = 85.00
HIGH POINT STA. 16+35.00 EL. = 85.30
LOW POINT STA. 10+12.00 EL. = 84.83
LOW POINT STA. 23+24.20 EL. = 85.46
LOW POINT STA. 10+12.00 EL. = 86.26
BREAK POINT STA. 25+25.75 EL. = 86.53
HIGH POINT STA. 10+00.00 ROAD G STA. 25+17.20 ROAD H EL. = 86.66
BREAK POINT STA. 13+65.00 ROAD B STA. 23+12.20 ROAD H EL. = 85.70
LOW POINT STA. 26+41.71 ROAD A STA. 12+00.00 ROAD B EL. = 86.80
LOW POINT STA. 23+00.20 EL. = 85.46
BREAK POINT STA. 12+22.00 EL. = 86.36
LOW POINT STA. 11+78.00 EL. = 86.36
BREAK POINT STA. 10+12.00 EL. = 86.91
LOW POINT STA. 16+72.00 EL. = 87.05
HIGH POINT STA. 10+00.00 ROAD B STA. 16+53.99 ROAD D EL. = 87.15
BREAK POINT STA. 15+00.00 EL. = 90.50
HIGH POINT STA. 18+50.00 EL. = 92.10
BREAK POINT STA. 19+06.38 ROAD D STA. 10+00.00 ROAD F EL. = 90.50
LOW POINT STA. 10+12.00 EL. = 90.26
HIGH POINT STA. 21+80.61 EL. = 93.81
100' VERTICAL CURVE PVI STATION STA. 21+75.00 EL. = 94.25
BREAK POINT STA. 11+25.00 EL. = 92.25
OPEN SPACE TRACT
NATURAL VEGETATIVE UPLAND BUFFER
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM
SMF-04 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
40' DRAINAGE / ACCESS EASEMENT
2.5' METER ESM'T
10' UTILITY ESM'T
MODIFIED "C" INLET WITH 24" WEIR IN SW SIDE AT EL. = 90.40
MODIFIED "C" INLET WITH 24" WEIR IN NE AND SW SIDES AT EL. = 88.70
CONSTRUCT V-SWALE WITH 4:1 SIDE SLOPES (SEED AND MULCH ALL DISTURBED AREA)
238 L.F. ~ 30" RCP
98 L.F. ~ 30" RCP
264 L.F. ~ 54" RCP
201 L.F. ~ 54" RCP
KEYMAP
I
H
G
S2
L
J
M
F
E
K
N
C
D
B
A
O
Q
P
S1
R

NOTES:
1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL NOT SCALE PLAN BUT SHALL REFER TO SITE PLAN FOR ALL LINE DIMENSIONS.
3. ALL PIPE LENGTHS SHOWN HEREON ARE APPROXIMATE AND ARE TAKEN FROM THE APPROXIMATE CENTER OF GRATE/RING AND COVER TO THE BACK OF THE MITERED END SECTIONS.
4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.

STORMWATER MANAGEMENT FACILITY ~ SMF-04
MIN. TOB EL.= 85.50
NWL EL.= 81.50
MIN. DEPTH BOT. EL.= 73.50
MAX DEPTH BOT. EL.= 69.50
DHW (100 YR) EL.= 85.94
DHW (25 YR) EL.= 84.46
DHW (10 YR) EL.=83.67
DHW (MEAN) EL.= 82.78

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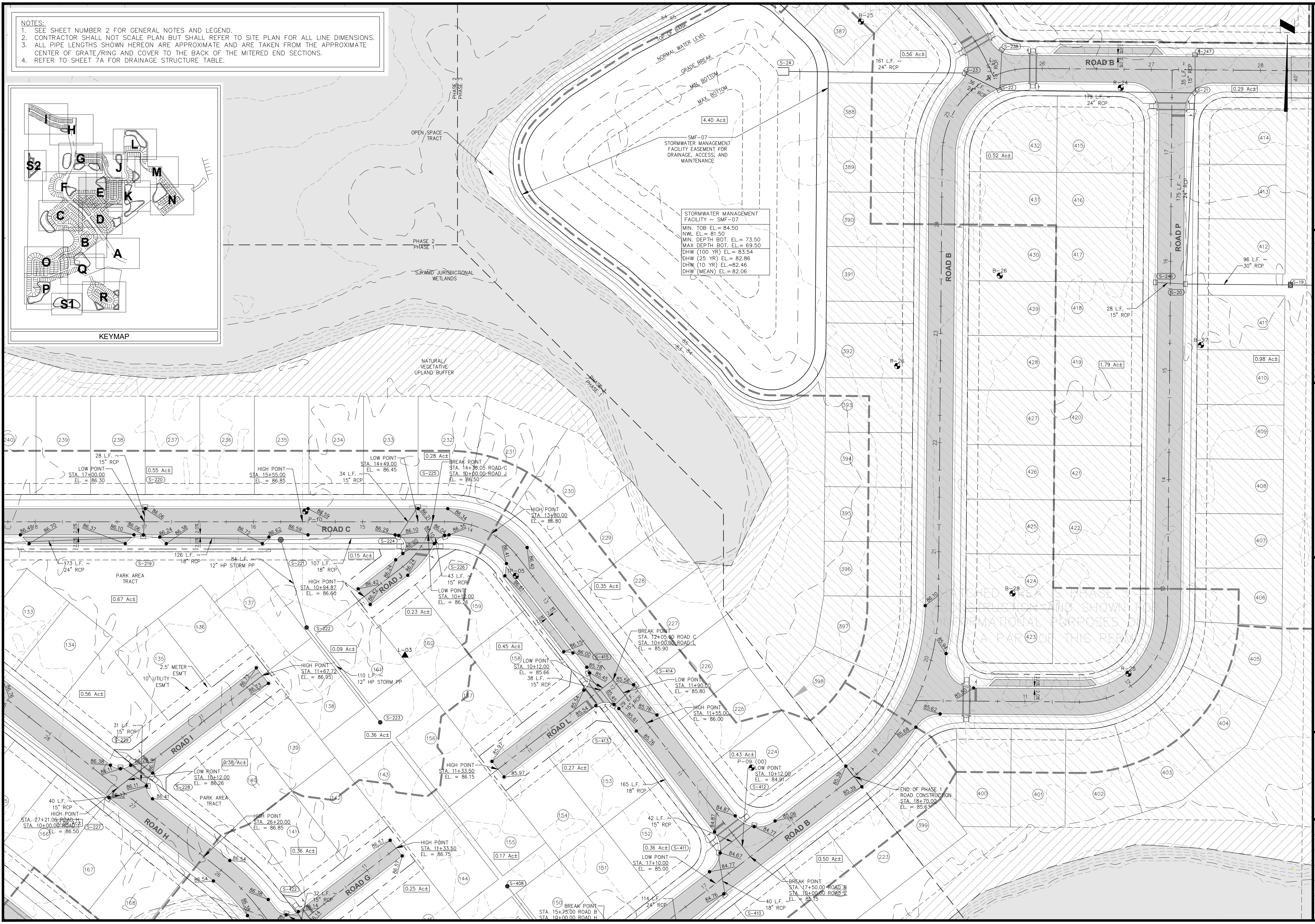
KEYMAP
I
H
L
S2
G
J
M
F
E
K
N
C
D
B
A
O
Q
P
R
S1
OPEN SPACE TRACT
PHASE 2
PHASE 3
PHASE 2
PHASE 1
SJRWMD JURISDICTIONAL WETLANDS
NATURAL VEGETATIVE UPLAND BUFFER
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX BOTTOM
4.40 Ac±
SMF-07
STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
ROAD B
ROAD C
ROAD P
ROAD J
ROAD L
ROAD I
ROAD H
ROAD G
161 L.F. ~ 24" RCP
179 L.F. ~ 24" RCP
175 L.F. ~ 24" RCP
35 L.F. ~ 15" RCP
36 L.F. ~ 24" RCP
96 L.F. ~ 30" RCP
28 L.F. ~ 15" RCP
28 L.F. ~ 15" RCP
173 L.F. ~ 24" RCP
126 L.F. ~ 18" RCP
84 L.F. ~ 12" HP STORM PP
107 L.F. ~ 18" RCP
34 L.F. ~ 15" RCP
43 L.F. ~ 15" RCP
110 L.F. ~ 12" HP STORM PP
38 L.F. ~ 15" RCP
31 L.F. ~ 15" RCP
40 L.F. ~ 15" RCP
165 L.F. ~ 18" RCP
42 L.F. ~ 15" RCP
32 L.F. ~ 15" RCP
114 L.F. ~ 24" RCP
40 L.F. ~ 18" RCP
LOW POINT STA. 17+00.00 EL. = 86.30
HIGH POINT STA. 15+55.00 EL. = 86.85
LOW POINT STA. 14+49.00 EL. = 86.45
BREAK POINT STA. 14+36.05 ROAD C STA. 10+00.00 ROAD J EL. = 86.50
HIGH POINT STA. 13+80.00 EL. = 86.80
HIGH POINT STA. 10+94.87 EL. = 86.66
LOW POINT STA. 10+12.00 EL. = 86.26
BREAK POINT STA. 12+05.00 ROAD C STA. 10+00.00 ROAD L EL. = 85.90
LOW POINT STA. 10+12.00 EL. = 85.66
LOW POINT STA. 11+90.00 EL. = 85.80
HIGH POINT STA. 11+55.00 EL. = 86.00
HIGH POINT STA. 11+67.72 EL. = 86.95
LOW POINT STA. 10+12.00 EL. = 86.26
HIGH POINT STA. 27+21.06 ROAD H STA. 10+00.00 ROAD I EL. = 86.50
HIGH POINT STA. 26+20.00 EL. = 86.85
HIGH POINT STA. 11+33.50 EL. = 86.15
HIGH POINT STA. 11+33.50 EL. = 86.75
LOW POINT STA. 10+12.00 EL. = 84.91
LOW POINT STA. 17+10.00 EL. = 85.00
END OF PHASE 1 ROAD CONSTRUCTION STA. 18+70.00 EL. = 85.63
BREAK POINT STA. 17+50.00 ROAD B STA. 10+00.00 ROAD C EL. = 85.15
BREAK POINT STA. 15+25.00 ROAD B STA. 10+00.00 ROAD H
P-09 (00)
P-10
P-05
L-03
PARK AREA TRACT
PARK AREA TRACT
2.5" METER ESM'T
10' UTILITY ESM'T
0.56 Ac±
0.52 Ac±
1.79 Ac±
0.29 Ac±
0.98 Ac±
0.55 Ac±
0.28 Ac±
0.15 Ac±
0.67 Ac±
0.35 Ac±
0.23 Ac±
0.09 Ac±
0.45 Ac±
0.56 Ac±
0.36 Ac±
0.38 Ac±
0.27 Ac±
0.43 Ac±
0.36 Ac±
0.17 Ac±
0.36 Ac±
0.50 Ac±
0.25 Ac±
S-19
S-20
S-21
S-22
S-23
S-24
S-246
S-247
S-219
S-220
S-221
S-222
S-223
S-224
S-225
S-226
S-227
S-228
S-229
S-408
S-410
S-411
S-412
S-413
S-414
S-415
S-422
B-25
B-26
B-27
B-28
R-24
R-25
R-26
2.0%
40'

STORMWATER MANAGEMENT FACILITY ~ SMF-07
MIN. TOB EL.= 84.50
NWL EL.= 81.50
MIN. DEPTH BOT. EL.= 73.50
MAX DEPTH BOT. EL.= 69.50
DHW (100 YR) EL.= 83.54
DHW (25 YR) EL.= 82.86
DHW (10 YR) EL.=82.46
DHW (MEAN) EL.= 82.06

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PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
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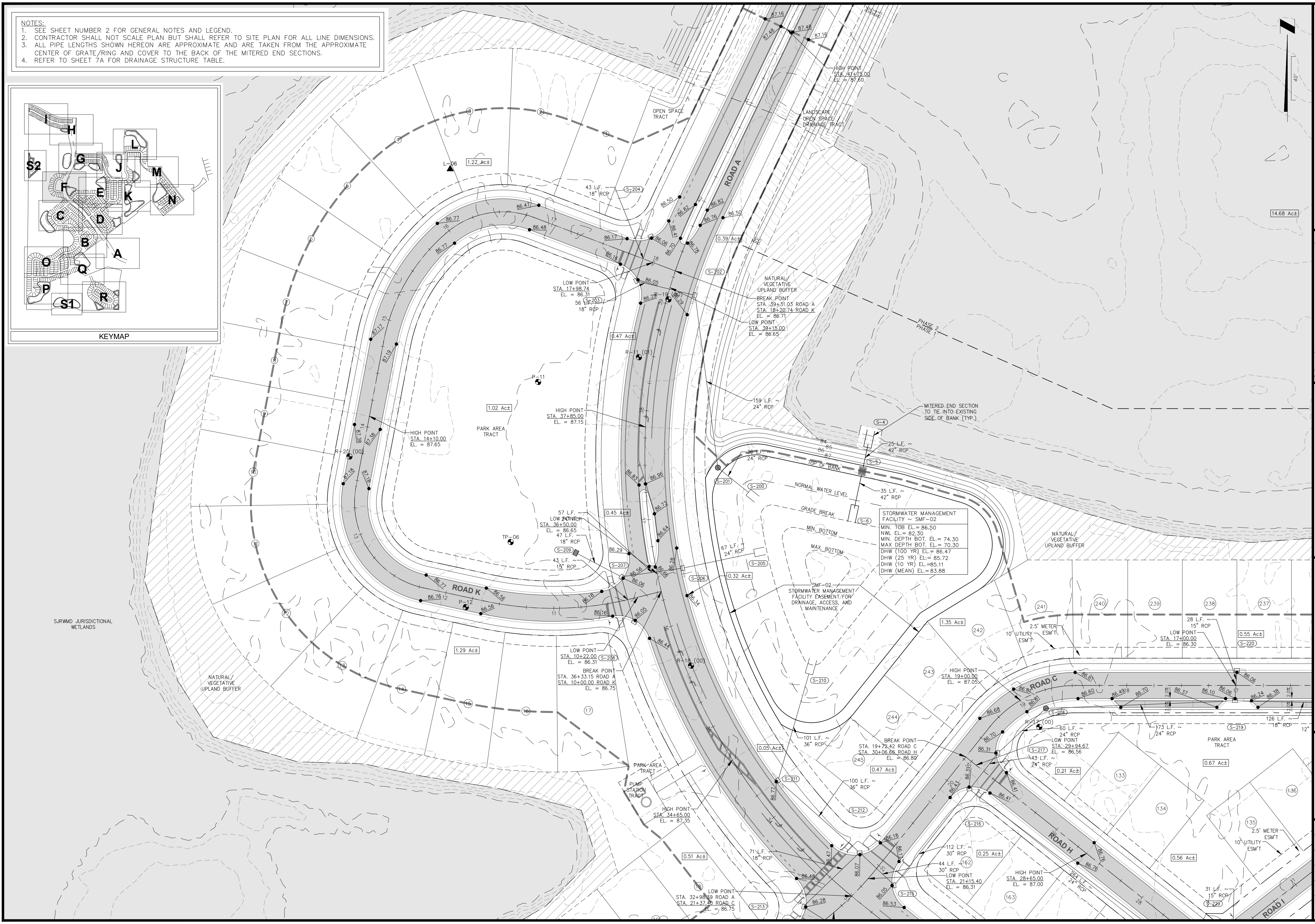
KEYMAP
I
H
S2
G
J
L
M
F
E
K
N
C
D
B
A
O
Q
P
S1
R
OPEN SPACE TRACT
LANDSCAPE/OPEN SPACE/DRAINAGE TRACT
HIGH POINT STA. 47+75.00 EL. = 87.60
ROAD A
ROAD K
ROAD C
ROAD H
ROAD I
L-06
1.27 Ac±
43 L.F. ~ 18" RCP
S-204
S-202
0.39 Ac±
14.68 Ac±
NATURAL/VEGETATIVE UPLAND BUFFER
BREAK POINT STA. 39+31.03 ROAD A STA. 18+20.74 ROAD K EL. = 86.71
LOW POINT STA. 39+15.00 EL. = 86.65
LOW POINT STA. 17+98.74 EL. = 86.31
56 L.F. ~ 18" RCP
S-203
PHASE 2
PHASE 1
0.47 Ac±
R-11 (01)
P-11
1.02 Ac±
PARK AREA TRACT
HIGH POINT STA. 37+85.00 EL. = 87.15
HIGH POINT STA. 14+10.00 EL. = 87.65
R-20 (00)
159 L.F. ~ 24" RCP
MITERED END SECTION TO TIE INTO EXISTING SIDE OF BANK (TYP.)
S-4
25 L.F. ~ 42" RCP
S-5
36 L.F. ~ 24" RCP
S-201
S-200
TOP OF BANK
NORMAL WATER LEVEL
35 L.F. ~ 42" RCP
GRADE BREAK
S-6
MIN. BOTTOM
MAX. BOTTOM
57 L.F. ~ 24" RCP
LOW POINT STA. 36+50.00 EL. = 86.65
47 L.F. ~ 18" RCP
TP-06
0.45 Ac±
S-209
43 L.F. ~ 18" RCP
S-207
67 L.F. ~ 24" RCP
S-205
S-206
0.32 Ac±
SMF-02 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
P-12
1.35 Ac±
SJRWMD JURISDICTIONAL WETLANDS
LOW POINT STA. 10+22.00 EL. = 86.31
S-208
BREAK POINT STA. 36+33.15 ROAD A STA. 10+00.00 ROAD K EL. = 86.75
1.29 Ac±
R-18 (00)
NATURAL/VEGETATIVE UPLAND BUFFER
S-210
HIGH POINT STA. 19+00.00 EL. = 87.05
2.5' METER ESM'T
10' UTILITY ESM'T
28 L.F. ~ 15" RCP
LOW POINT STA. 17+00.00 EL. = 86.30
0.55 Ac±
S-220
126 L.F. ~ 18" RCP
S-218
R-17 (00)
60 L.F. ~ 24" RCP
LOW POINT STA. 29+94.67 EL. = 86.56
173 L.F. ~ 24" RCP
S-219
PARK AREA TRACT
BREAK POINT STA. 19+72.42 ROAD C STA. 30+06.66 ROAD H EL. = 86.80
101 L.F. ~ 36" RCP
S-217
43 L.F. ~ 24" RCP
0.21 Ac±
0.67 Ac±
0.05 Ac±
0.47 Ac±
PARK AREA TRACT
PUMP STATION TRACT
S-211
100 L.F. ~ 36" RCP
S-212
HIGH POINT STA. 34+65.00 EL. = 87.35
S-216
112 L.F. ~ 30" RCP
44 L.F. ~ 30" RCP
LOW POINT STA. 21+15.40 EL. = 86.31
0.25 Ac±
HIGH POINT STA. 28+65.00 EL. = 87.00
264 L.F. ~ 24" RCP
0.56 Ac±
2.5' METER ESM'T
10' UTILITY ESM'T
31 L.F. ~ 15" RCP
S-221
0.51 Ac±
71 L.F. ~ 18" RCP
LOW POINT STA. 32+98.49 ROAD A STA. 21+37.40 ROAD C EL. = 86.75
S-213
S-215
17
133
134
135
136
162
163
237
238
239
240
241
242
243
244
245
40'

STORMWATER MANAGEMENT FACILITY ~ SMF-02

MIN. TOB EL.= 86.50
NWL EL.= 82.30
MIN. DEPTH BOT. EL.= 74.30
MAX DEPTH BOT. EL.= 70.30

DHW (100 YR) EL.= 86.47
DHW (25 YR) EL.= 85.72
DHW (10 YR) EL.=85.11
DHW (MEAN) EL.= 83.88

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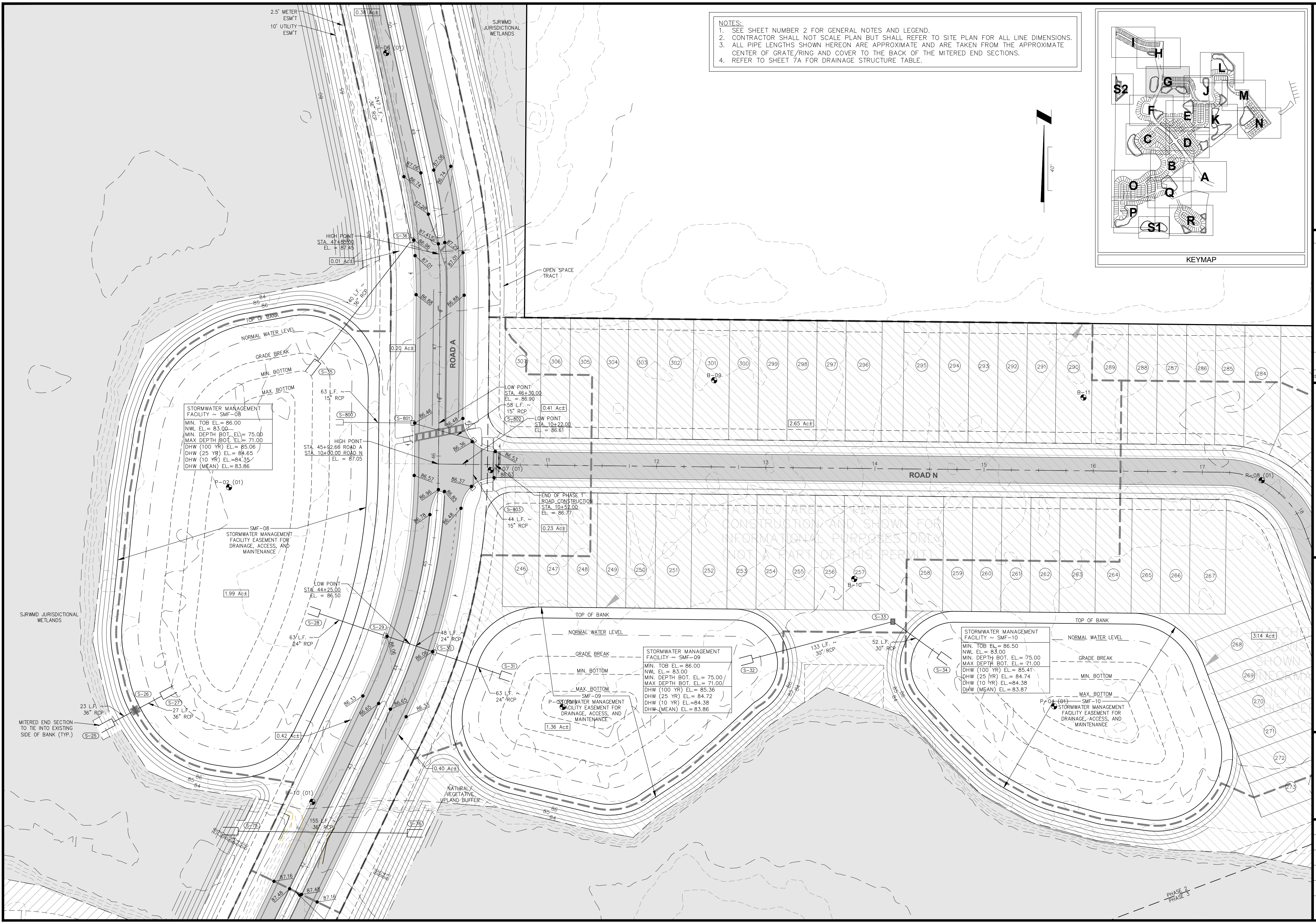
2.5' METER ESM'T
10' UTILITY ESM'T
0.35 Ac±
SJRWMD JURISDICTIONAL WETLANDS
B-06 (01)
247 L.F. ~ 36" RCP
HIGH POINT STA. 47+83.00 EL. = 87.45
S-36
0.01 Ac±
OPEN SPACE TRACT
140 L.F. ~ 36" RCP
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM
S-35
0.20 Ac±
ROAD A
63 L.F. ~ 15" RCP
S-800
S-801
HIGH POINT STA. 45+92.66 ROAD A STA. 10+00.00 ROAD N EL. = 87.05
LOW POINT STA. 46+30.00 EL. = 86.90
58 L.F. ~ 15" RCP
S-802
LOW POINT STA. 10+22.00 EL. = 86.61
0.41 Ac±
B-07 (01)
END OF PHASE 1 ROAD CONSTRUCTION STA. 10+52.00 EL. = 86.77
S-803
44 L.F. ~ 15" RCP
0.23 Ac±
ROAD N
R-08 (01)
B-09
B-11
B-10
2.65 Ac±
307 306 305 304 303 302 301 300 299 298 297 296 295 294 293 292 291 290 289 288 287 286 285 284
246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267
268 269 270 271 272 273
3.14 Ac±
HATCHED AREA DESIGNATES CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES ONLY (NOT A PART OF THIS PERMIT)
P-02 (01)
SMF-08 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
1.99 Ac±
SJRWMD JURISDICTIONAL WETLANDS
LOW POINT STA. 44+25.00 EL. = 86.50
S-28
S-29
63 L.F. ~ 24" RCP
48 L.F. ~ 24" RCP
S-30
S-31
63 L.F. ~ 24" RCP
S-26
S-27
23 L.F. ~ 36" RCP
27 L.F. ~ 36" RCP
MITERED END SECTION TO TIE INTO EXISTING SIDE OF BANK (TYP.)
S-25
0.42 Ac±
0.40 Ac±
P-03 (01)
SMF-09 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
1.36 Ac±
S-32
S-33
133 L.F. ~ 30" RCP
52 L.F. ~ 30" RCP
S-34
P-04 (01)
SMF-10 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
NATURAL VEGETATIVE UPLAND BUFFER
B-10 (01)
155 L.F. ~ 36" RCP
S-75
S-76
PHASE 2
PHASE 3
40'
KEYMAP
I H G L J M S2 F E K N C D B A O Q P R S1

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STORMWATER MANAGEMENT FACILITY ~ SMF-08

MIN. TOB EL.= 86.00
NWL EL.= 83.00
MIN. DEPTH BOT. EL.= 75.00
MAX DEPTH BOT. EL.= 71.00
DHW (100 YR) EL.= 85.06
DHW (25 YR) EL.= 84.65
DHW (10 YR) EL.=84.35
DHW (MEAN) EL.= 83.86

STORMWATER MANAGEMENT FACILITY ~ SMF-09

MIN. TOB EL.= 86.00
NWL EL.= 83.00
MIN. DEPTH BOT. EL.= 75.00
MAX DEPTH BOT. EL.= 71.00
DHW (100 YR) EL.= 85.36
DHW (25 YR) EL.= 84.72
DHW (10 YR) EL.=84.38
DHW (MEAN) EL.= 83.86

STORMWATER MANAGEMENT FACILITY ~ SMF-10

MIN. TOB EL.= 86.50
NWL EL.= 83.00
MIN. DEPTH BOT. EL.= 75.00
MAX DEPTH BOT. EL.= 71.00
DHW (100 YR) EL.= 85.41
DHW (25 YR) EL.= 84.74
DHW (10 YR) EL.=84.38
DHW (MEAN) EL.= 83.87

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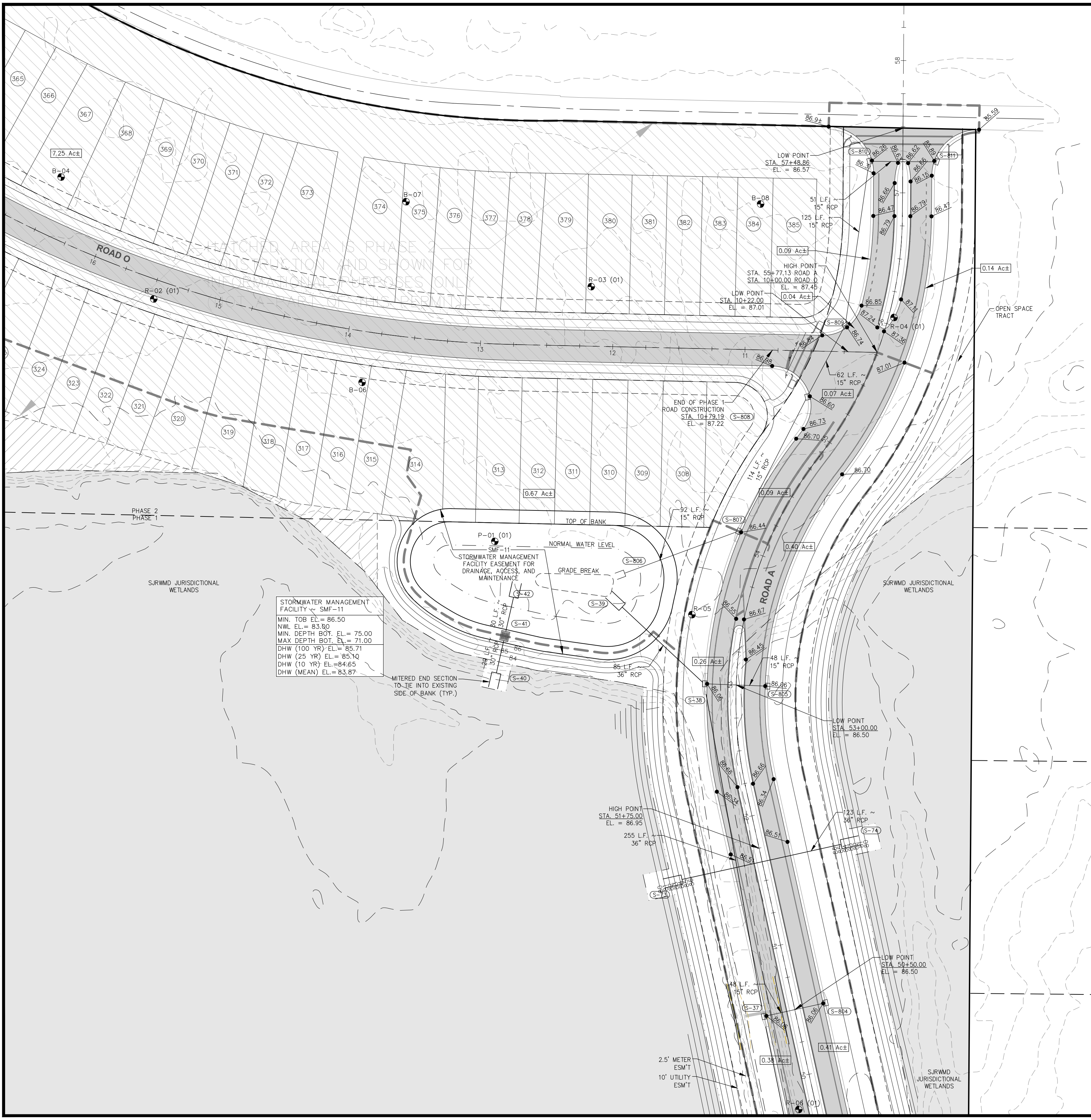
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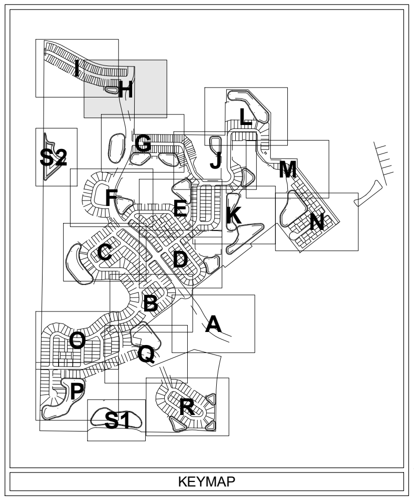
381
382
383
384
385
7.25 Ac±
B-04
B-07
B-08
ROAD O
16
15
14
13
12
11
R-02 (01)
R-03 (01)
HATCHED AREA IS PHASE 2 CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES ONLY (NOT A PART OF THIS PERMIT)
324
323
322
321
320
319
318
317
316
315
314
313
312
311
310
309
308
B-06
58
86.9±
85.59
LOW POINT
STA. 57+48.86
EL. = 86.57
S-810
S-811
86.26
86.31
86.63
86.62
85.89
86.66
86.15
86.66
86.47
86.79
86.47
86.79
51 L.F. ~
15" RCP
125 L.F. ~
15" RCP
0.09 Ac±
HIGH POINT
STA. 55+77.13 ROAD A
STA. 10+00.00 ROAD O
EL. = 87.45
0.14 Ac±
LOW POINT
STA. 10+22.00
EL. = 87.01
0.04 Ac±
86.85
87.11
87.24
R-04 (01)
87.36
S-809
86.74
86.84
86.98
87.01
OPEN SPACE
TRACT
62 L.F. ~
15" RCP
0.07 Ac±
86.60
END OF PHASE 1
ROAD CONSTRUCTION
STA. 10+79.19
EL. = 87.22
S-808
86.73
86.70
86.70
114 L.F. ~
15" RCP
0.09 Ac±
0.67 Ac±
92 L.F. ~
15" RCP
PHASE 2
PHASE 1
TOP OF BANK
S-807
86.44
0.40 Ac±
P-01 (01)
SMF-11
NORMAL WATER LEVEL
STORMWATER MANAGEMENT
FACILITY EASEMENT FOR
DRAINAGE, ACCESS, AND
MAINTENANCE
GRADE BREAK
S-806
S-42
S-39
S-41
30 L.F. ~
30" RCP
29 L.F. ~
30" RCP
86
85
84
S-40
MITERED END SECTION
TO TIE INTO EXISTING
SIDE OF BANK (TYP.)
85 L.F. ~
36" RCP
SJRWMD JURISDICTIONAL
WETLANDS
SJRWMD JURISDICTIONAL
WETLANDS
R-05
ROAD A
86.55
86.67
86.45
0.26 Ac±
48 L.F. ~
15" RCP
86.06
S-805
86.06
S-38
LOW POINT
STA. 53+00.00
EL. = 86.50
86.66
86.66
86.34
86.34
HIGH POINT
STA. 51+75.00
EL. = 86.95
255 L.F. ~
36" RCP
123 L.F. ~
36" RCP
86.51
86.51
S-74
S-73
48 L.F. ~
15" RCP
S-37
86.06
S-804
86.06
LOW POINT
STA. 50+50.00
EL. = 86.50
0.41 Ac±
0.38 Ac±
2.5' METER
ESM'T
10' UTILITY
ESM'T
SJRWMD
JURISDICTIONAL
WETLANDS
R-06 (01)
40'

STORMWATER MANAGEMENT FACILITY ~ SMF-11
MIN. TOB EL.= 86.50
NWL EL.= 83.00
MIN. DEPTH BOT. EL.= 75.00
MAX DEPTH BOT. EL.= 71.00
DHW (100 YR) EL.= 85.71
DHW (25 YR) EL.= 85.10
DHW (10 YR) EL.=84.65
DHW (MEAN) EL.= 83.87


I
H
S2
G
L
J
M
F
E
K
N
C
D
B
A
O
Q
P
R
S1

KEYMAP

NOTES:
1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL NOT SCALE PLAN BUT SHALL REFER TO SITE PLAN FOR ALL LINE DIMENSIONS.
3. ALL PIPE LENGTHS SHOWN HEREON ARE APPROXIMATE AND ARE TAKEN FROM THE APPROXIMATE CENTER OF GRATE/RING AND COVER TO THE BACK OF THE MITERED END SECTIONS.
4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.

Connelly & Wicker Inc.
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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
7	:		
6	:		
5	:		
4	:		
3	:		
2	:		
1	:		

PAVING AND DRAINAGE PLAN

HILLSIDE GROVE
HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	O.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 7H	

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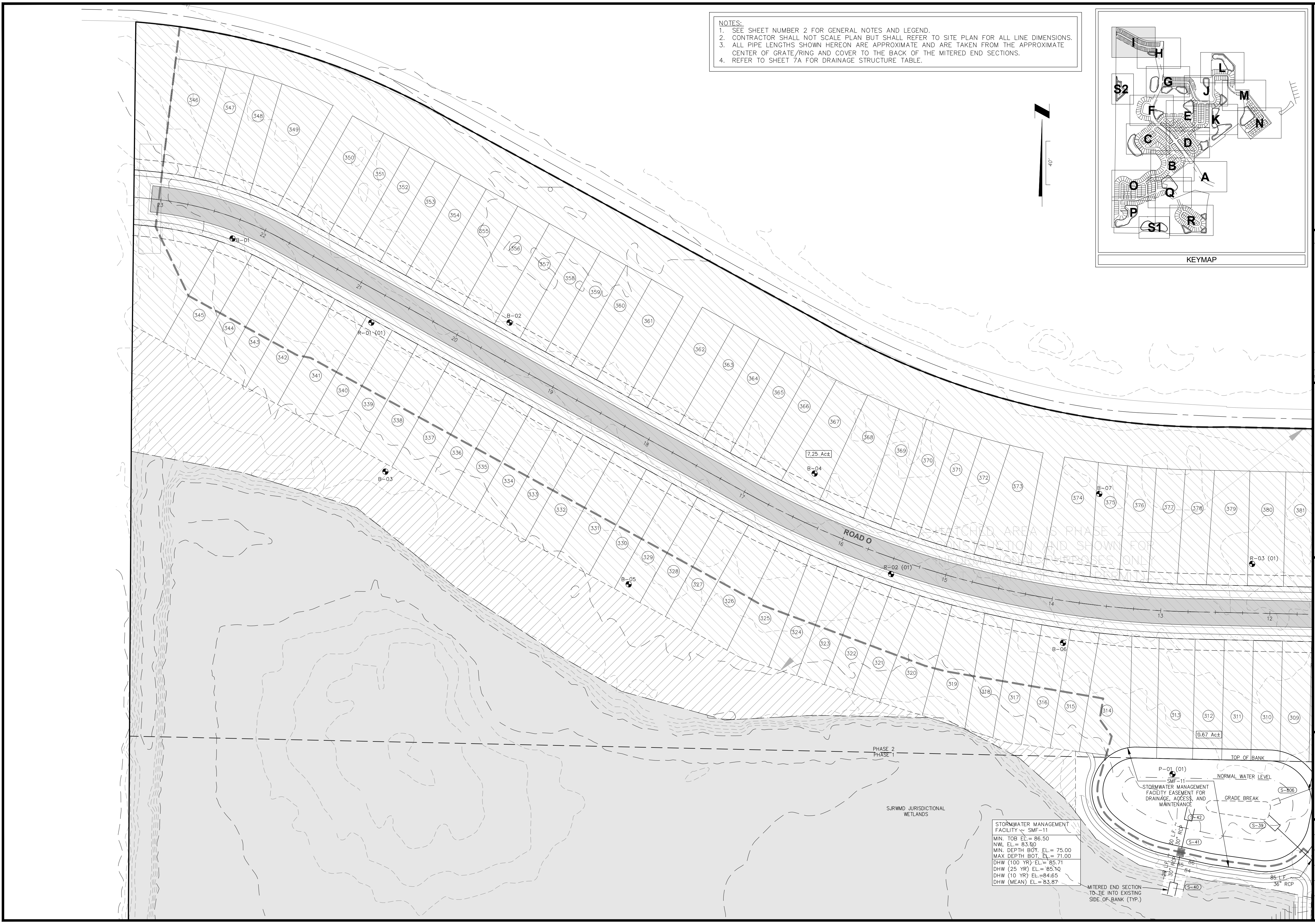
KEYMAP
I
H
L
S2
G
J
M
F
E
K
N
C
D
B
A
O
Q
P
R
S1
40'
ROAD O
23
22
21
20
19
18
17
16
15
14
13
12
B-01
B-02
B-03
B-04
B-05
B-06
B-07
R-01 (01)
R-02 (01)
R-03 (01)
P-01 (01)
7.25 Ac±
0.67 Ac±
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
345
344
343
342
341
340
339
338
337
336
335
334
333
332
331
330
329
328
327
326
325
324
323
322
321
320
319
318
317
316
315
314
313
312
311
310
309
HATCHED AREA IS PHASE 2 CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES ONLY (NOT A PART OF THIS PERMIT)
PHASE 2
PHASE 1
SJRWMD JURISDICTIONAL WETLANDS
TOP OF BANK
NORMAL WATER LEVEL
SMF-11
STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
GRADE BREAK
S-806
S-42
S-39
S-41
S-40
30 L.F. ~ 30" RCP
29 L.F. ~ 30" RCP
85 L.F. ~ 36" RCP
86
85
84
MITERED END SECTION TO TIE INTO EXISTING SIDE OF BANK (TYP.)

NOTES:

1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL NOT SCALE PLAN BUT SHALL REFER TO SITE PLAN FOR ALL LINE DIMENSIONS.
3. ALL PIPE LENGTHS SHOWN HEREON ARE APPROXIMATE AND ARE TAKEN FROM THE APPROXIMATE CENTER OF GRATE/RING AND COVER TO THE BACK OF THE MITERED END SECTIONS.
4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.

STORMWATER MANAGEMENT FACILITY ~ SMF-11
MIN. TOB EL.= 86.50 NWL EL.= 83.00 MIN. DEPTH BOT. EL.= 75.00 MAX DEPTH BOT. EL.= 71.00
DHW (100 YR) EL.= 85.71 DHW (25 YR) EL.= 85.10 DHW (10 YR) EL.=84.65 DHW (MEAN) EL.=83.87

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No.	Date	Revision	By
1	..		
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3	..		
4	..		
5	..		
6	..		
7	..		

PAVING AND DRAINAGE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	O.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 7I	

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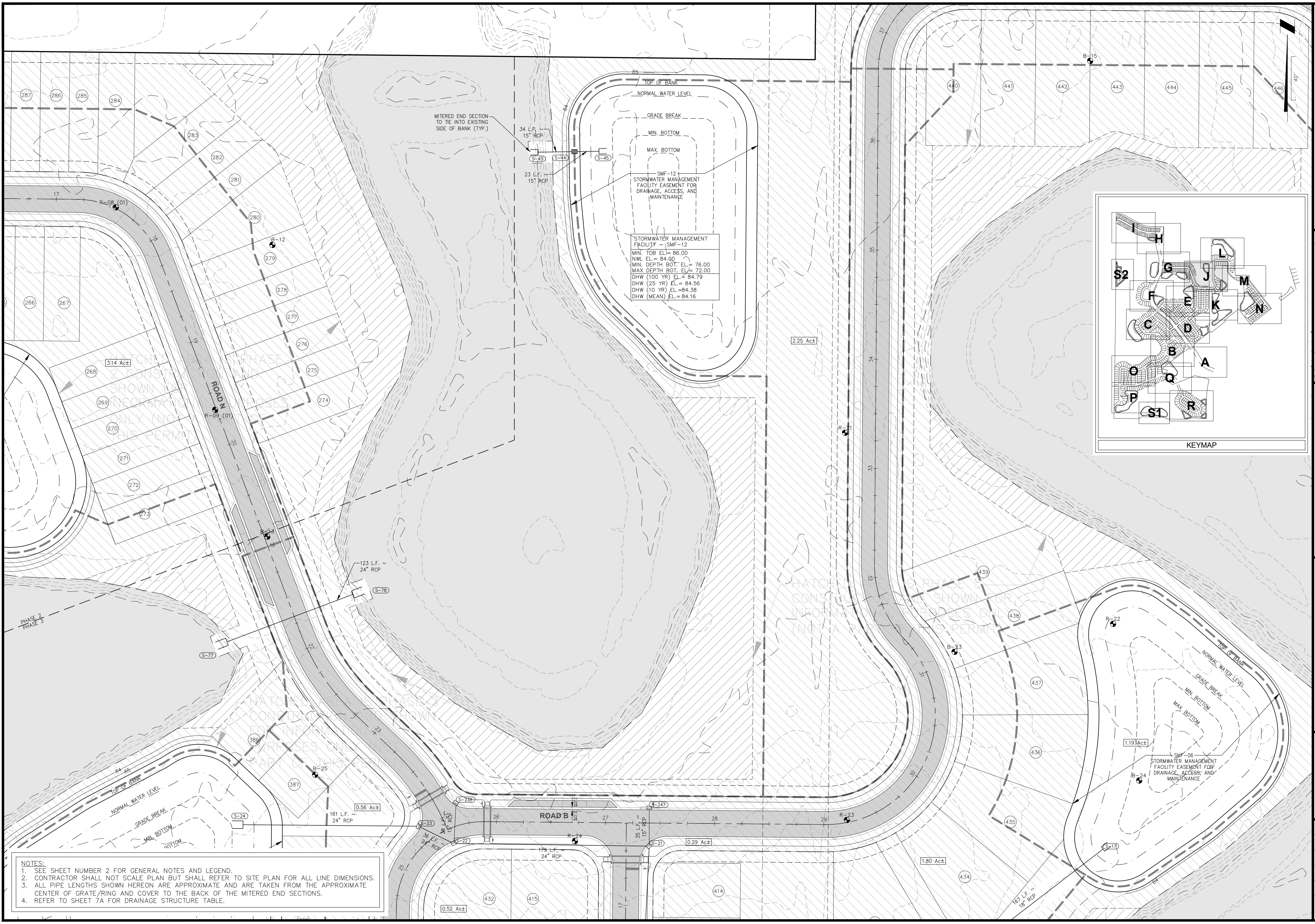
ROAD N
ROAD B
R-08 (01)
R-09 (01)
R-21
R-22
R-23
R-24
B-12
B-15
B-23
B-24
B-25
B-33
S-17
S-21
S-22
S-23
S-23B
S-24
S-43
S-44
S-45
S-77
S-78
S-247
MITERED END SECTION TO TIE INTO EXISTING SIDE OF BANK (TYP.)
34 L.F. ~ 15" RCP
23 L.F. ~ 15" RCP
123 L.F. ~ 24" RCP
161 L.F. ~ 24" RCP
36 L.F. ~ 15" RCP
179 L.F. ~ 24" RCP
35 L.F. ~ 15" RCP
167 L.F. ~ 18" RCP
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM
SMF-12
STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
STORMWATER MANAGEMENT FACILITY ~ SMF-12
MIN. TOB EL.= 86.00
NWL EL.= 84.00
MIN. DEPTH BOT. EL.= 76.00
MAX DEPTH BOT. EL.= 72.00
DHW (100 YR) EL.= 84.79
DHW (25 YR) EL.= 84.56
DHW (10 YR) EL.=84.38
DHW (MEAN) EL.= 84.16
SMF-06
STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
HATCHED AREA IS PHASE 2 CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES ONLY (NOT A PART OF THIS PERMIT)
PHASE 2
PHASE 3
3.14 Ac±
2.25 Ac±
1.19 Ac±
0.56 Ac±
0.29 Ac±
1.80 Ac±
0.52 Ac±
40'
284
285
286
287
283
282
281
280
279
278
277
276
275
274
266
267
268
269
270
271
272
273
386
387
414
415
432
434
435
436
437
438
439
440
441
442
443
444
445
446
KEYMAP
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S1
S2

NOTES:
1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL NOT SCALE PLAN BUT SHALL REFER TO SITE PLAN FOR ALL LINE DIMENSIONS.
3. ALL PIPE LENGTHS SHOWN HEREON ARE APPROXIMATE AND ARE TAKEN FROM THE APPROXIMATE CENTER OF GRATE/RING AND COVER TO THE BACK OF THE MITERED END SECTIONS.
4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.

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No.	Date	Revision	By
1			
2			
3			
4			
5			
6			
7			

PAVING AND DRAINAGE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 7J	

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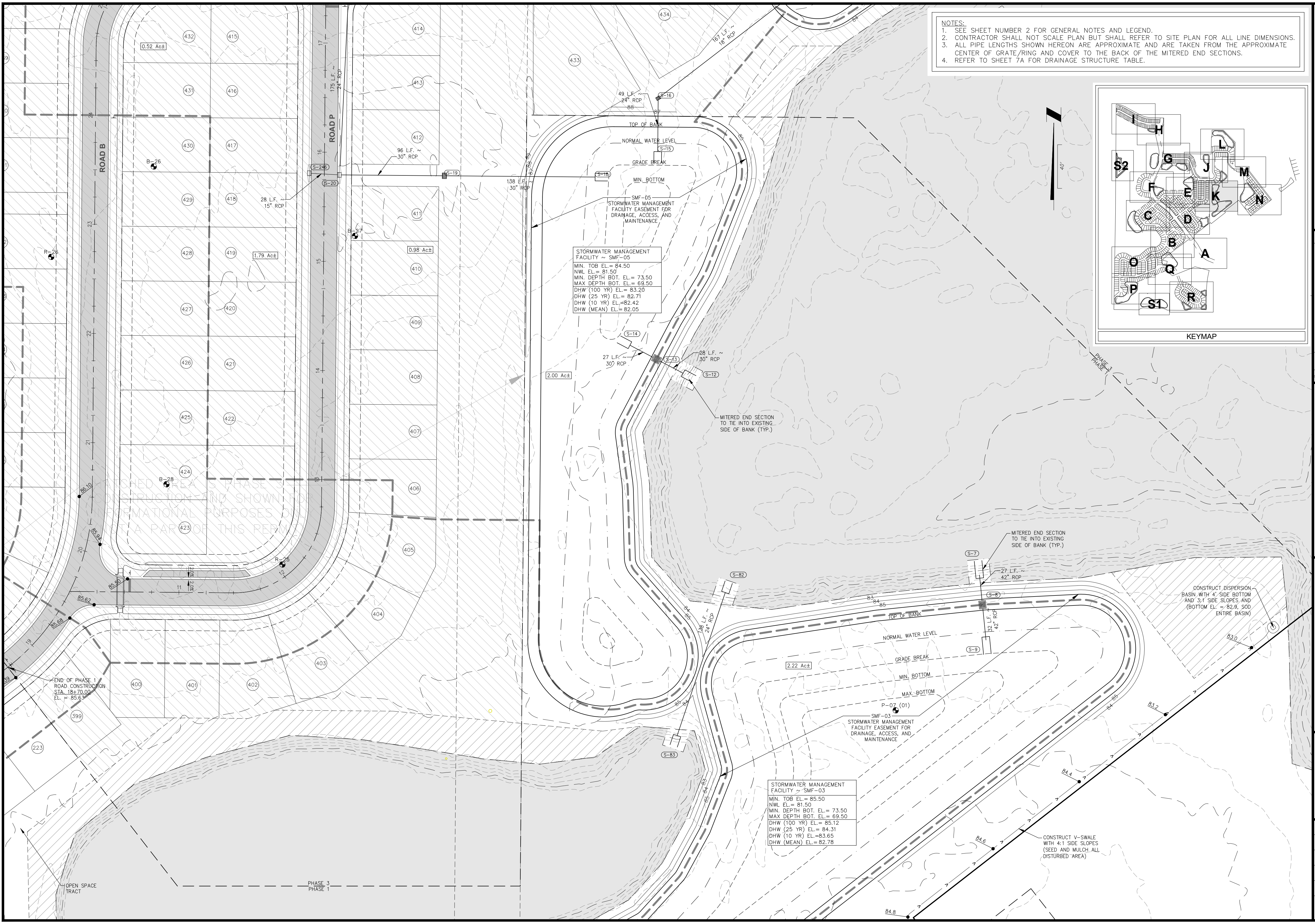
ROAD B
ROAD P
KEYMAP
I
H
L
S2
G
J
M
F
E
K
N
C
D
B
A
O
Q
P
S1
R
40'
PHASE 3
PHASE 1
HATCHED AREA IS PHASE 3 CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES ONLY (NOT A PART OF THIS PERMIT)
0.52 Ac±
1.79 Ac±
0.98 Ac±
2.00 Ac±
2.22 Ac±
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
223
B-26
B-27
B-28
R-25
R-26
P-07 (01)
175 L.F. ~ 24" RCP
167 L.F. ~ 18" RCP
49 L.F. ~ 24" RCP
96 L.F. ~ 30" RCP
28 L.F. ~ 15" RCP
138 L.F. ~ 30" RCP
27 L.F. ~ 30" RCP
28 L.F. ~ 30" RCP
46 L.F. ~ 24" RCP
27 L.F. ~ 42" RCP
32 L.F. ~ 42" RCP
S-7
S-8
S-9
S-12
S-13
S-14
S-15
S-16
S-18
S-19
S-20
S-24
S-82
S-83
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM
SMF-05
STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
SMF-03
STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
MITERED END SECTION TO TIE INTO EXISTING SIDE OF BANK (TYP.)
MITERED END SECTION TO TIE INTO EXISTING SIDE OF BANK (TYP.)
CONSTRUCT DISPERSION BASIN WITH 4' SIDE BOTTOM AND 3:1 SIDE SLOPES AND (BOTTOM EL. = 82.9, SOD ENTIRE BASIN)
CONSTRUCT V-SWALE WITH 4:1 SIDE SLOPES (SEED AND MULCH ALL DISTURBED AREA)
END OF PHASE 1 ROAD CONSTRUCTION STA. 18+70.00 EL. = 85.63
OPEN SPACE TRACT
86.10
85.94
85.50
85.62
85.68
2.0%
2.0%
83.0
83.2
84.4
84.6
84.8
83
84
85
11
12
13
14
15
16
17
19
20
21
22
23
24

NOTES:

1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL NOT SCALE PLAN BUT SHALL REFER TO SITE PLAN FOR ALL LINE DIMENSIONS.
3. ALL PIPE LENGTHS SHOWN HEREON ARE APPROXIMATE AND ARE TAKEN FROM THE APPROXIMATE CENTER OF GRATE/RING AND COVER TO THE BACK OF THE MITERED END SECTIONS.
4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.

STORMWATER MANAGEMENT FACILITY ~ SMF-05
MIN. TOB EL.= 84.50 NWL EL.= 81.50 MIN. DEPTH BOT. EL.= 73.50 MAX DEPTH BOT. EL.= 69.50
DHW (100 YR) EL.= 83.20 DHW (25 YR) EL.= 82.71 DHW (10 YR) EL.=82.42 DHW (MEAN) EL.= 82.05

STORMWATER MANAGEMENT FACILITY ~ SMF-03
MIN. TOB EL.= 85.50 NWL EL.= 81.50 MIN. DEPTH BOT. EL.= 73.50 MAX DEPTH BOT. EL.= 69.50
DHW (100 YR) EL.= 85.12 DHW (25 YR) EL.= 84.31 DHW (10 YR) EL.=83.65 DHW (MEAN) EL.= 82.78

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PAVING AND DRAINAGE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 7K	

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NOTES:
1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
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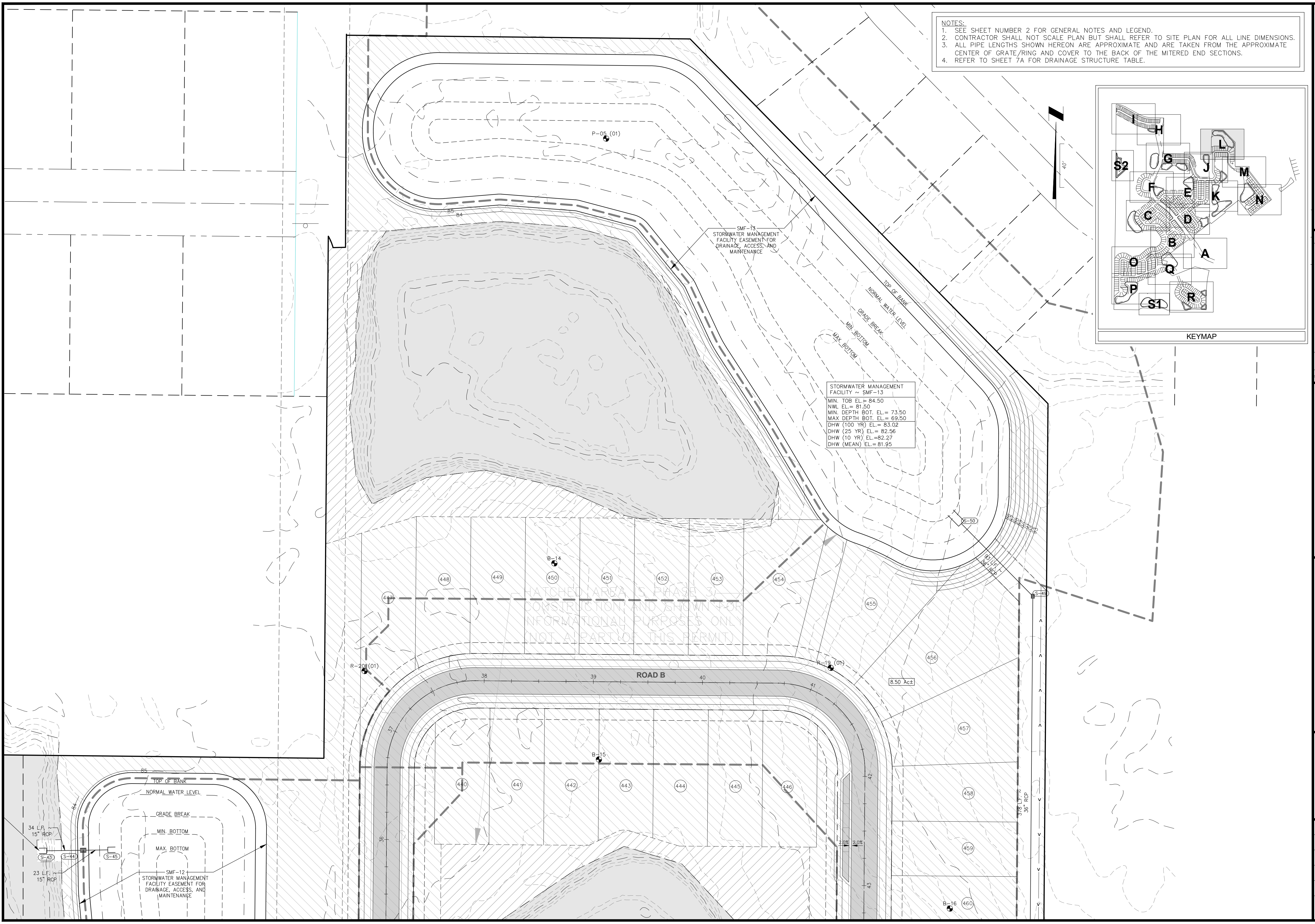
3. ALL PIPE LENGTHS SHOWN HEREON ARE APPROXIMATE AND ARE TAKEN FROM THE APPROXIMATE CENTER OF GRATE/RING AND COVER TO THE BACK OF THE MITERED END SECTIONS.
4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.


P-05 (01)
85
84
SMF-13
STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM
S-50
93 L.F. ~ 36" RCP
S-49
378 L.F. ~ 36" RCP
B-14
447
448
449
450
451
452
453
454
455
456
457
458
459
460
8.50 Ac±
HATCHED AREA IS PHASE 3 CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES ONLY (NOT A PART OF THIS PERMIT)
R-20 (01)
R-19 (01)
ROAD B
37
38
39
40
41
42
43
36
B-15
B-16
440
441
442
443
444
445
446
2.0%
2.0%
85
84
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM
34 L.F. ~ 15" RCP
23 L.F. ~ 15" RCP
S-43
S-44
S-45
SMF-12
STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
40'
I
H
G
L
J
M
S2
F
E
K
N
C
D
B
A
O
Q
P
R
S1
KEYMAP

STORMWATER MANAGEMENT FACILITY ~ SMF-13
MIN. TOB EL.= 84.50
NWL EL.= 81.50
MIN. DEPTH BOT. EL.= 73.50
MAX DEPTH BOT. EL.= 69.50
DHW (100 YR) EL.= 83.02
DHW (25 YR) EL.= 82.56
DHW (10 YR) EL.=82.27
DHW (MEAN) EL.= 81.95

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PAVING AND DRAINAGE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
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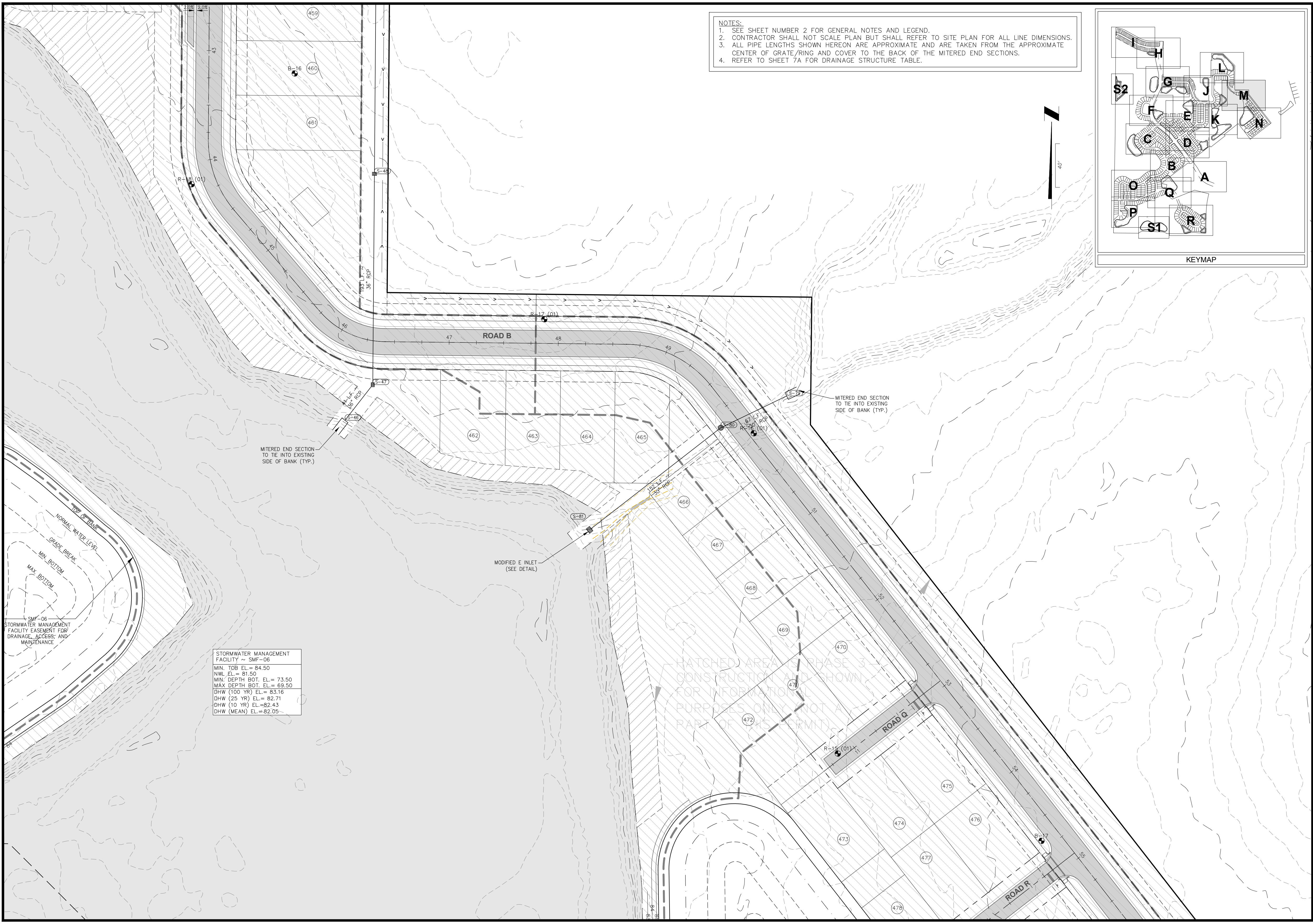
2.0%
2.0%
43
44
45
46
47
48
49
51
52
53
54
55
ROAD B
ROAD Q
ROAD R
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
B-16
R-18 (01)
R-17 (01)
R-16 (01)
R-15 (01)
B-17
S-48
S-47
S-46
S-80
S-79
S-81
193 L.F. 36" RCP
41 L.F. 36" RCP
67 L.F. 30" RCP
152 L.F. 30" RCP
40'
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM
SMF-06
STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
MITERED END SECTION TO TIE INTO EXISTING SIDE OF BANK (TYP.)
MITERED END SECTION TO TIE INTO EXISTING SIDE OF BANK (TYP.)
MODIFIED E INLET (SEE DETAIL)
HATCHED AREA IS PHASE 3 CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES ONLY (NOT A PART OF THIS PERMIT)
I
H
G
S2
J
L
M
F
E
K
N
C
D
B
A
O
Q
P
S1
R
KEYMAP

NOTES:

1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL NOT SCALE PLAN BUT SHALL REFER TO SITE PLAN FOR ALL LINE DIMENSIONS.
3. ALL PIPE LENGTHS SHOWN HEREON ARE APPROXIMATE AND ARE TAKEN FROM THE APPROXIMATE CENTER OF GRATE/RING AND COVER TO THE BACK OF THE MITERED END SECTIONS.
4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.

STORMWATER MANAGEMENT FACILITY ~ SMF-06

MIN. TOB EL.= 84.50
NWL EL.= 81.50
MIN. DEPTH BOT. EL.= 73.50
MAX DEPTH BOT. EL.= 69.50

DHW (100 YR) EL.= 83.16
DHW (25 YR) EL.= 82.71
DHW (10 YR) EL.=82.43
DHW (MEAN) EL.= 82.05

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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
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PAVING AND DRAINAGE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 7M	

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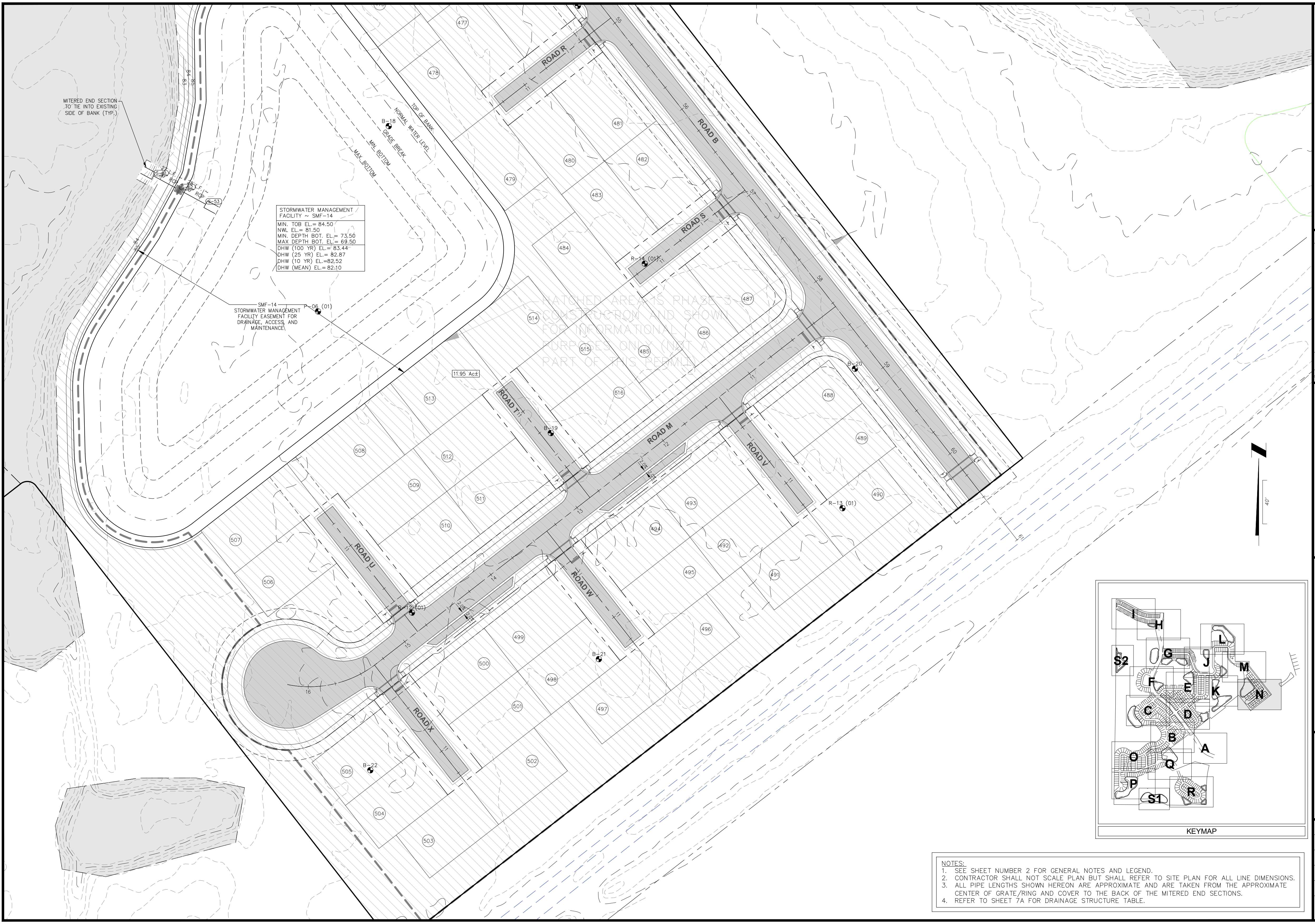
MITERED END SECTION
TO TIE INTO EXISTING
SIDE OF BANK (TYP.)
S-51
S-52
S-53
27 L.F. ~ 30" RCP
28 L.F. ~ 30" RCP
83
84
85
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM
B-18
SMF-14
STORMWATER MANAGEMENT
FACILITY EASEMENT FOR
DRAINAGE, ACCESS, AND
MAINTENANCE
P-06 (01)
11.95 Ac±
HATCHED AREA IS PHASE 3
CONSTRUCTION AND SHOWN
FOR INFORMATIONAL
PURPOSES ONLY (NOT A
PART OF THIS PERMIT)
ROAD R
ROAD B
ROAD S
ROAD T
ROAD M
ROAD V
ROAD U
ROAD W
ROAD X
R-14 (01)
R-13 (01)
B-19
B-20
B-21
B-22
R-12 (01)
477
478
479
480
481
482
483
484
485
486
487
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489
490
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60
61
11
12
13
14
15
16
40'
KEYMAP
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S1
S2

STORMWATER MANAGEMENT
FACILITY ~ SMF-14

MIN. TOB EL.= 84.50
NWL EL.= 81.50
MIN. DEPTH BOT. EL.= 73.50
MAX DEPTH BOT. EL.= 69.50

DHW (100 YR) EL.= 83.44
DHW (25 YR) EL.= 82.87
DHW (10 YR) EL.=82.52
DHW (MEAN) EL.= 82.10

NOTES:
1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL NOT SCALE PLAN BUT SHALL REFER TO SITE PLAN FOR ALL LINE DIMENSIONS.
3. ALL PIPE LENGTHS SHOWN HEREON ARE APPROXIMATE AND ARE TAKEN FROM THE APPROXIMATE CENTER OF GRATE/RING AND COVER TO THE BACK OF THE MITERED END SECTIONS.
4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.

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PAVING AND DRAINAGE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008
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Checked: JEW
O.C.: RCW
Date: AUGUST 2022
Scale: 1" = 40'
Sheet 7N

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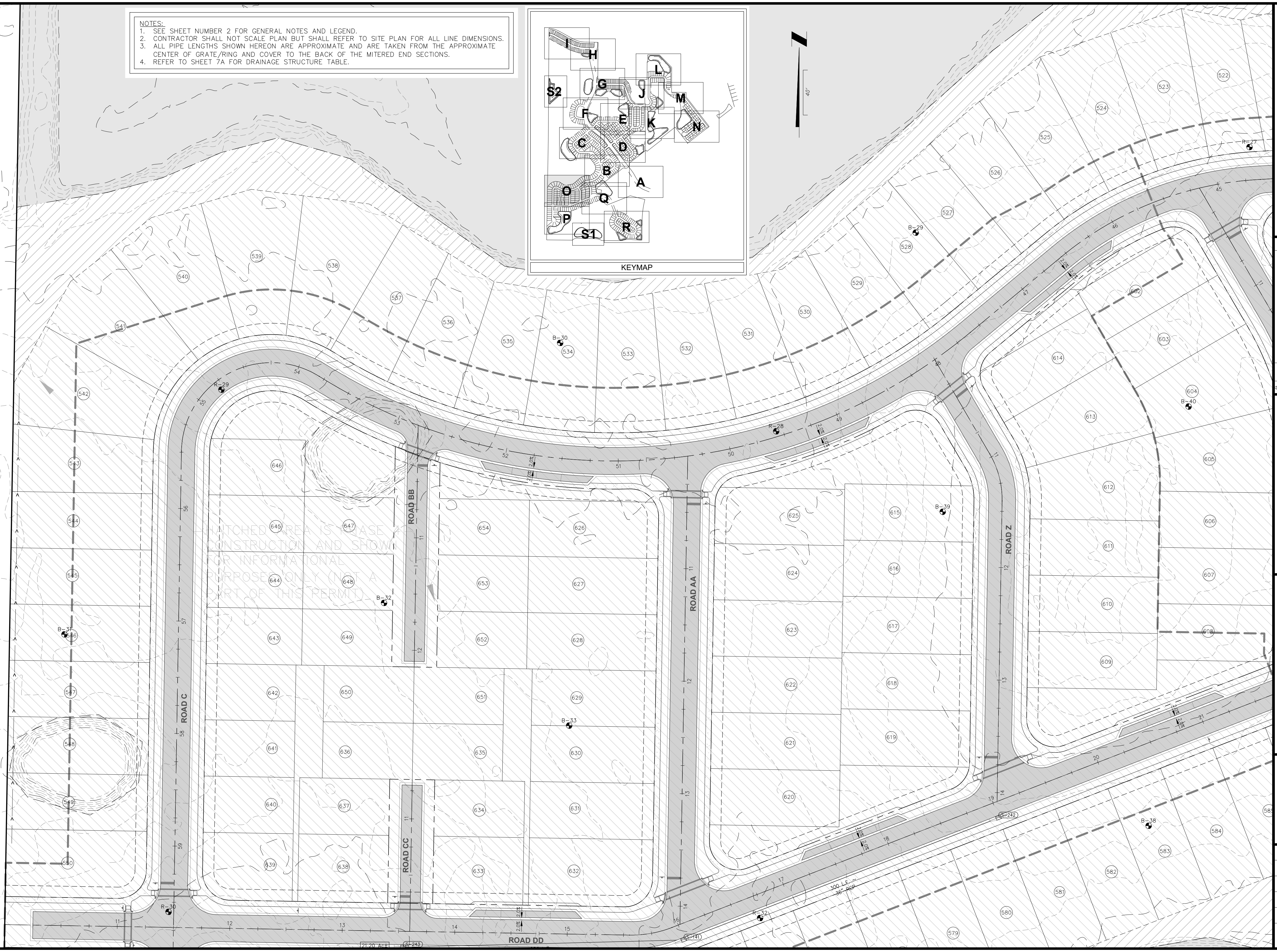
KEYMAP
I
H
L
S2
G
J
M
F
E
K
N
C
D
B
A
O
Q
P
R
S1
40'
HATCHED AREA IS PHASE 4 CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES ONLY (NOT A PART OF THIS PERMIT)
ROAD C
ROAD BB
ROAD AA
ROAD Z
ROAD CC
ROAD DD
B-27
B-28
B-29
B-30
B-31
B-32
B-33
B-38
B-39
B-40
300 L.F. - 30" RCP
2.0%
522
523
524
525
526
527
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531
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654

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PAVING AND DRAINAGE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 7O	

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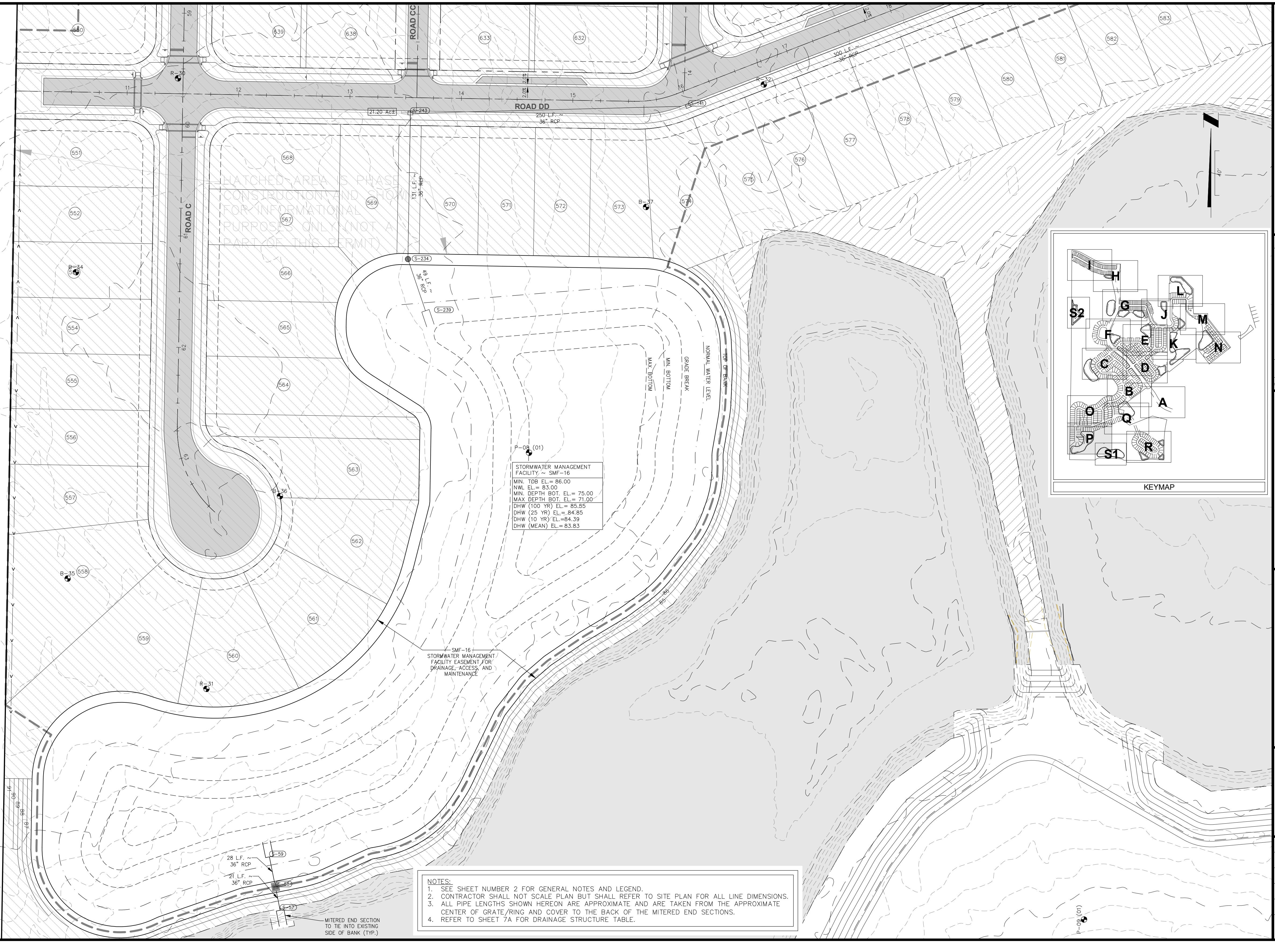
ROAD DD
ROAD C
ROAD CC
21.20 Ac±
S-243
S-141
S-234
S-239
S-59
S-58
S-57
250 L.F. ~ 36" RCP
300 L.F. ~ 36" RCP
131 L.F. ~ 36" RCP
49 L.F. ~ 36" RCP
2.0%
2.0%
R-30
R-31
R-32
B-34
B-35
B-36
B-37
P-08 (01)
P-09 (01)
551
552
554
555
556
557
558
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560
561
562
563
564
565
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567
568
569
570
571
572
573
574
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576
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578
579
580
581
582
583
632
633
638
639
HATCHED AREA IS PHASE 4 CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES ONLY (NOT A PART OF THIS PERMIT)
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM
SMF-16
STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
28 L.F. ~ 36" RCP
21 L.F. ~ 36" RCP
MITERED END SECTION TO TIE INTO EXISTING SIDE OF BANK (TYP.)
I
H
G
L
J
M
S2
F
E
K
N
C
D
B
A
O
Q
P
S1
R
KEYMAP

STORMWATER MANAGEMENT FACILITY ~ SMF-16

MIN. TOB EL.= 86.00
NWL EL.= 83.00
MIN. DEPTH BOT. EL.= 75.00
MAX DEPTH BOT. EL.= 71.00

DHW (100 YR) EL.= 85.55
DHW (25 YR) EL.= 84.85
DHW (10 YR) EL.=84.39
DHW (MEAN) EL.= 83.83

NOTES:

1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL NOT SCALE PLAN BUT SHALL REFER TO SITE PLAN FOR ALL LINE DIMENSIONS.
3. ALL PIPE LENGTHS SHOWN HEREON ARE APPROXIMATE AND ARE TAKEN FROM THE APPROXIMATE CENTER OF GRATE/RING AND COVER TO THE BACK OF THE MITERED END SECTIONS.
4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.

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PAVING AND DRAINAGE
PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
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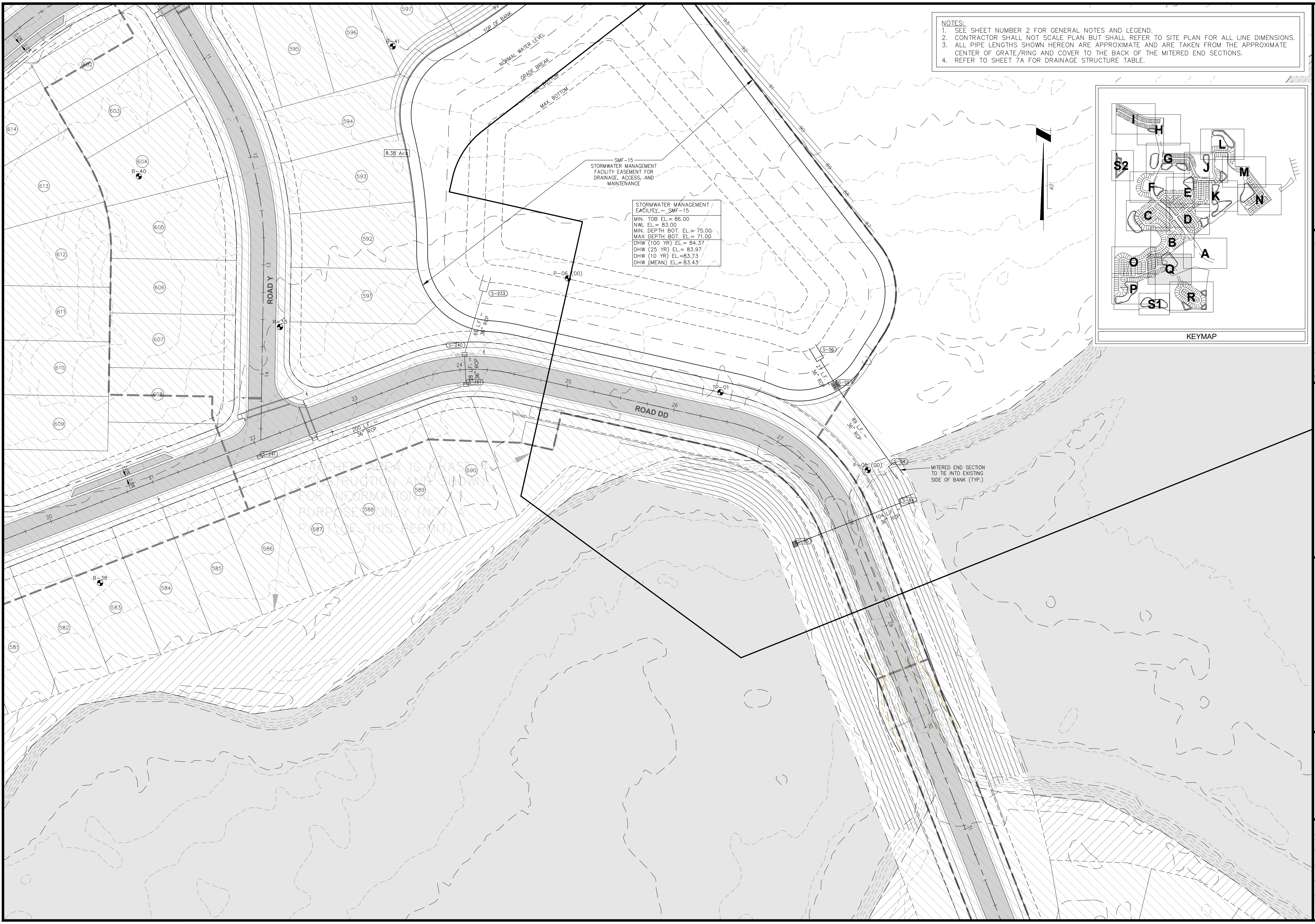
Scale: Custom	
Sheet 7P	


ROAD Y
ROAD DD
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM
8.38 Ac±
SMF-15
STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
P-06 (00)
P-05 (00)
TP-01
B-41
B-40
B-38
R-33
S-233
S-240
S-161
S-241
S-56
S-55
S-54
S-84
S-85
60 L.F. ~ 36" RCP
28 L.F. ~ 36" RCP
200 L.F. ~ 36" RCP
27 L.F. ~ 36" RCP
89 L.F. ~ 36" RCP
104 L.F. ~ 36" RCP
MITERED END SECTION TO TIE INTO EXISTING SIDE OF BANK (TYP.)
HATCHED AREA IS PHASE 4 CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES ONLY (NOT A PART OF THIS PERMIT)
581
582
583
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588
589
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I
H
G
L
S2
J
M
F
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K
N
C
D
B
A
O
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P
R
S1
KEYMAP

NOTES:

1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL NOT SCALE PLAN BUT SHALL REFER TO SITE PLAN FOR ALL LINE DIMENSIONS.
3. ALL PIPE LENGTHS SHOWN HEREON ARE APPROXIMATE AND ARE TAKEN FROM THE APPROXIMATE CENTER OF GRATE/RING AND COVER TO THE BACK OF THE MITERED END SECTIONS.
4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.

STORMWATER MANAGEMENT FACILITY ~ SMF-15

MIN. TOB EL.= 86.00
NWL EL.= 83.00
MIN. DEPTH BOT. EL.= 75.00
MAX DEPTH BOT. EL.= 71.00

DHW (100 YR) EL.= 84.37
DHW (25 YR) EL.= 83.97
DHW (10 YR) EL.=83.73
DHW (MEAN) EL.= 83.43

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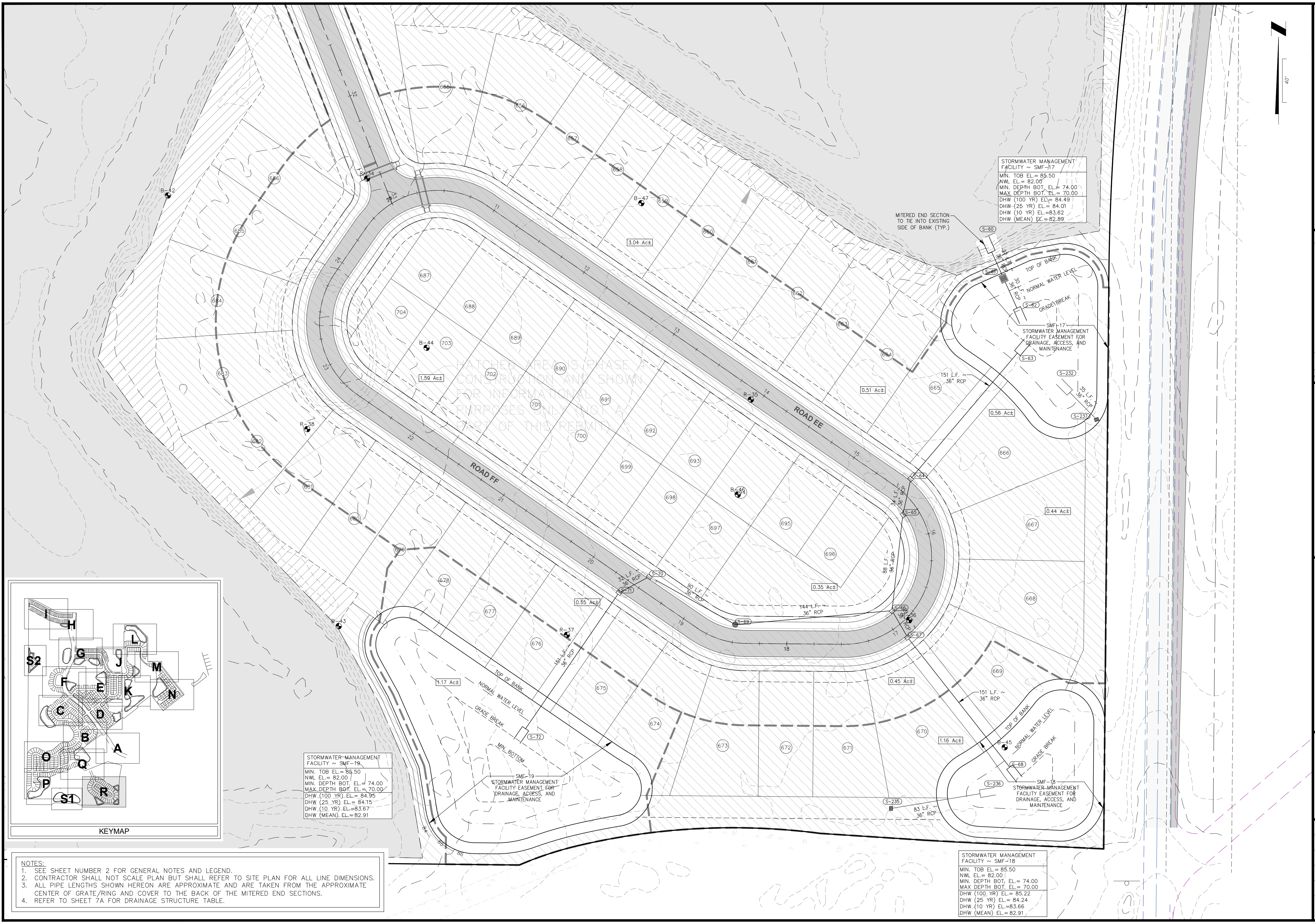
40'
ROAD EE
ROAD FF
HATCHED AREA IS PHASE 4 CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES ONLY (NOT A PART OF THIS PERMIT)
MITERED END SECTION TO TIE INTO EXISTING SIDE OF BANK (TYP.)
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
SMF-17 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
SMF-18 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
SMF-19 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
S-60
S-61
S-62
S-63
S-64
S-65
S-66
S-67
S-68
S-69
S-70
S-71
S-72
S-232
S-235
S-236
S-237
27 L.F. ~ 36" RCP
30 L.F. ~ 36" RCP
151 L.F. ~ 36" RCP
35 L.F. ~ 36" RCP
34 L.F. ~ 36" RCP
88 L.F. ~ 36" RCP
144 L.F. ~ 36" RCP
90 L.F. ~ 36" RCP
32 L.F. ~ 36" RCP
29 L.F. ~ 36" RCP
83 L.F. ~ 36" RCP
B-42
B-43
B-44
B-45
B-46
B-47
R-34
R-35
R-36
R-37
R-38
3.04 Ac±
1.59 Ac±
0.51 Ac±
0.56 Ac±
0.44 Ac±
0.35 Ac±
0.55 Ac±
0.45 Ac±
1.16 Ac±
1.17 Ac±
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S1
R
KEYMAP

STORMWATER MANAGEMENT FACILITY ~ SMF-17

MIN. TOB EL.= 85.50
NWL EL.= 82.00
MIN. DEPTH BOT. EL.= 74.00
MAX DEPTH BOT. EL.= 70.00

DHW (100 YR) EL.= 84.49
DHW (25 YR) EL.= 84.01
DHW (10 YR) EL.=83.62
DHW (MEAN) EL.= 82.89

STORMWATER MANAGEMENT FACILITY ~ SMF-19

MIN. TOB EL.= 85.50
NWL EL.= 82.00
MIN. DEPTH BOT. EL.= 74.00
MAX DEPTH BOT. EL.= 70.00

DHW (100 YR) EL.= 84.95
DHW (25 YR) EL.= 84.15
DHW (10 YR) EL.=83.67
DHW (MEAN) EL.= 82.91

STORMWATER MANAGEMENT FACILITY ~ SMF-18

MIN. TOB EL.= 85.50
NWL EL.= 82.00
MIN. DEPTH BOT. EL.= 74.00
MAX DEPTH BOT. EL.= 70.00

DHW (100 YR) EL.= 85.22
DHW (25 YR) EL.= 84.24
DHW (10 YR) EL.=83.66
DHW (MEAN) EL.= 82.91

NOTES:
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4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.

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HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

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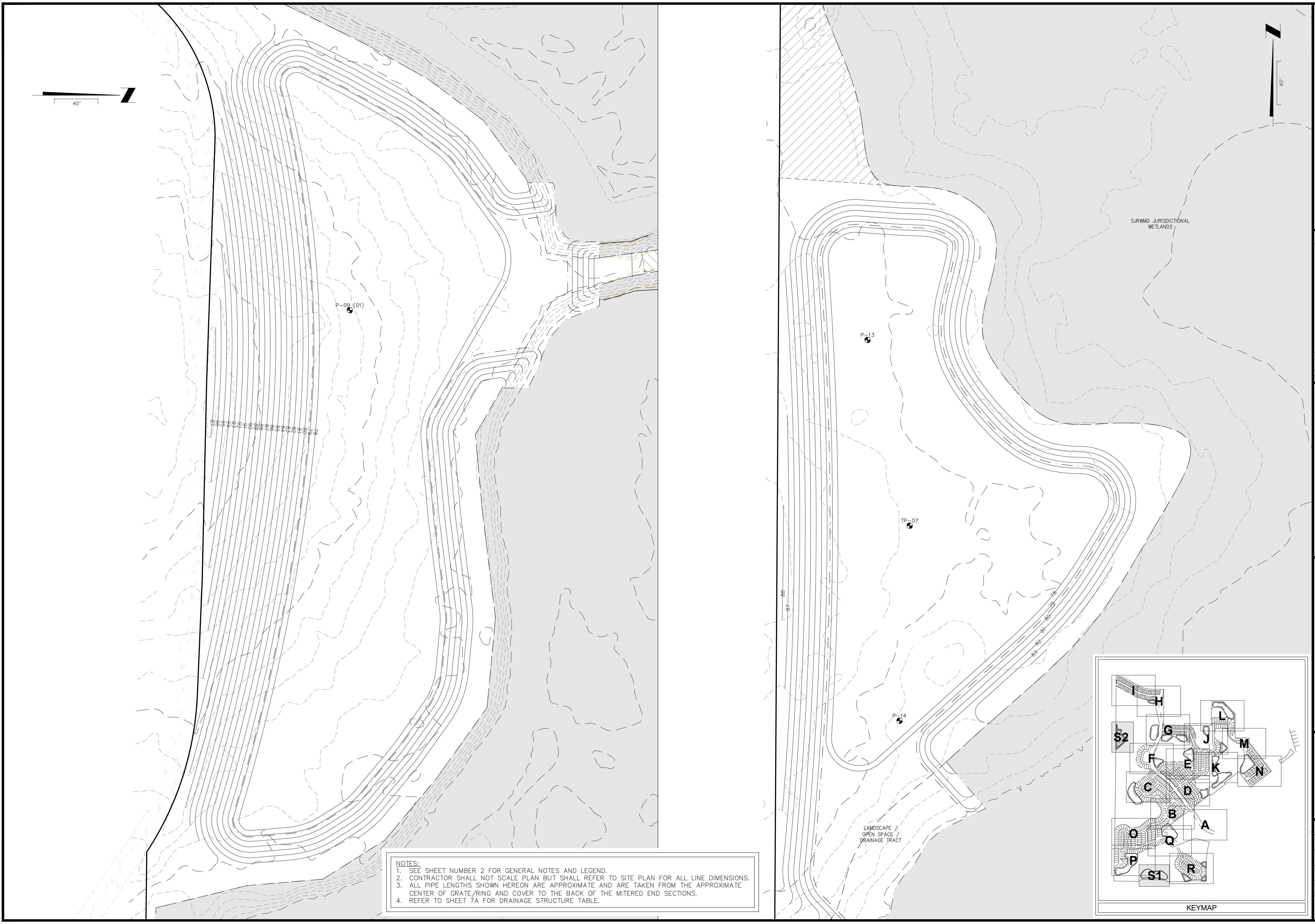
40'
P-09 (01)
97
96
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86
85
84
83
82
81
80
79
78
40'
SJRWMD JURISDICTIONAL
WETLANDS
P-13
TP-07
P-14
88
87
78
79
80
81
82
83
LANDSCAPE
OPEN SPACE
DRAINAGE TRACT
I
H
L
G
S2
J
M
F
E
K
N
C
D
B
A
O
Q
P
R
S1
KEYMAP

NOTES:
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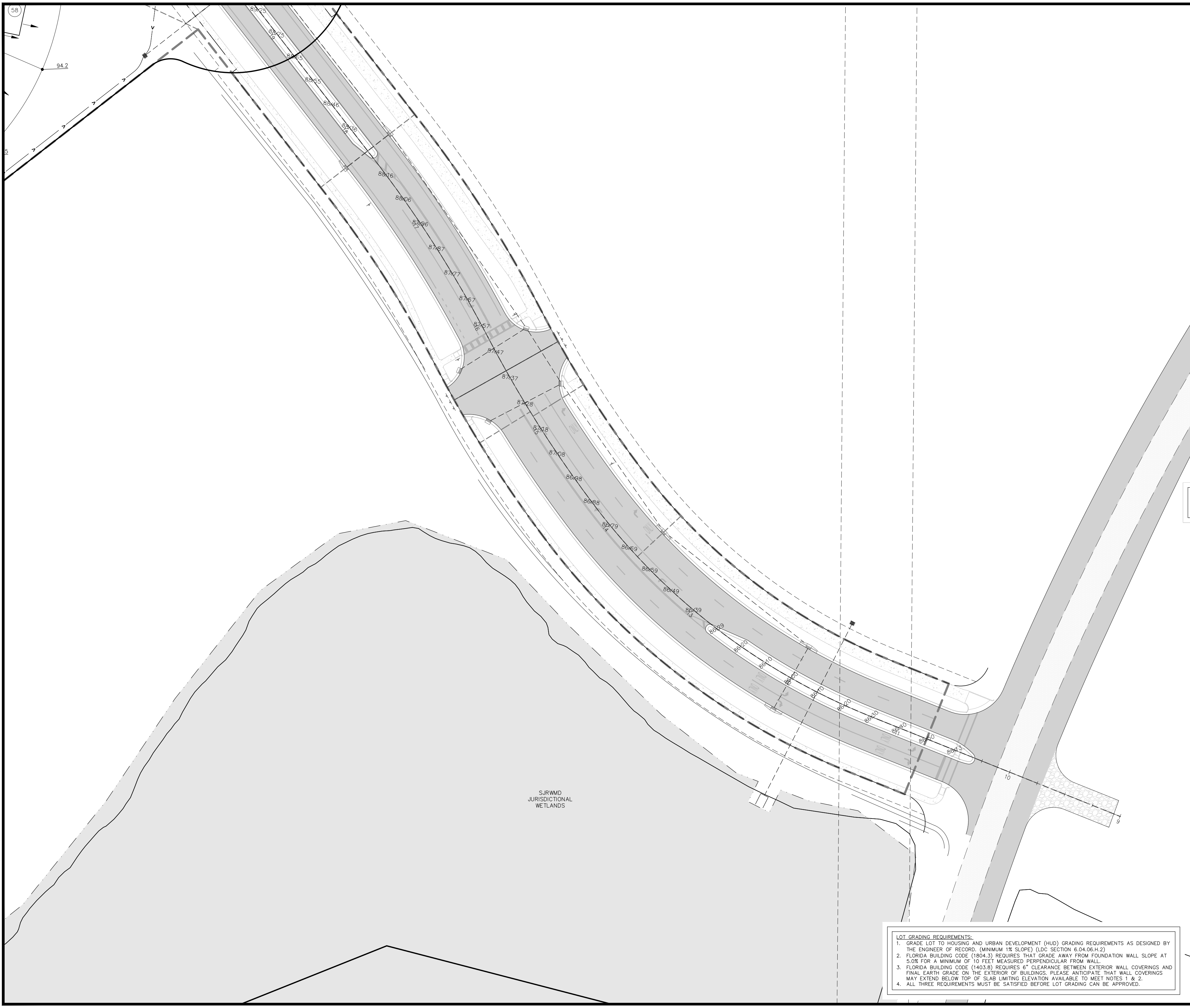

WETLAND AND BUFFER NOTES:

1. JURISDICTIONAL WETLAND LINE, WETLAND IMPACTS, WETLAND MITIGATION AREAS, AND UPLAND BUFFERS AS DEPICTED MATCH THOSE SUBMITTED TO THE SJRWMD.

NOTES:

1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. REFER TO MASTER SITE PLAN (SHEET NO. 3) FOR BUILDING HEIGHT AND SETBACK INFORMATION.
3. ALL TOP SOILS AND UNSUITABLE MATERIAL UNDER ROADWAY OR HOUSE PADS SHALL BE REMOVED IN ACCORDANCE WITH PROJECT GEOTECHNICAL REPORT AND STRUCTURAL FILL PLACED IN 12" MAXIMUM LIFTS AND COMPACTED TO 98% MAXIMUM DENSITY (AASHTO T–180). DENSITY TESTS TO BE PERFORMED AT A RATE OF ONE TEST PER LIFT PER 6'000 S.F. (MIN. ONE TEST PER LOT) (TYPICAL ALL FILL AREAS). ALL FILL SHALL BE CLEARED AND GRUBBED.
4. FINISHED FLOOR ELEVATIONS GIVEN ON PLANS ARE MINIMUM. EXACT ELEVATION SHALL BE DETERMINED WHEN THE SIZE AND LOCATION OF BUILDING IS SET. FINISHED FLOOR ELEVATIONS SHALL NOT EXCEED THOSE SHOWN ON THE APPROVED PLANS BY MORE THAN 6". (BY OTHERS)
5. "A" & "B" DENOTE STD. LOT TYPE GRADING. EXACT LOCATION OF SWALES SHALL BE DETERMINED WHEN THE SIZE AND LOCATION OF BUILDING IS SET. (BY OTHERS)
6. FLOOD ZONE INFORMATION TAKEN FROM FEMA FLOOD INSURANCE RATE MAPS FOR LAKE COUNTY, FLORIDA MAP NUMBER 12069C0485E DATED JANUARY 30, 2020. ELEVATIONS PROVIDED ON FEMA FLOOD MAP REFERENCE TO THE NAVD88.
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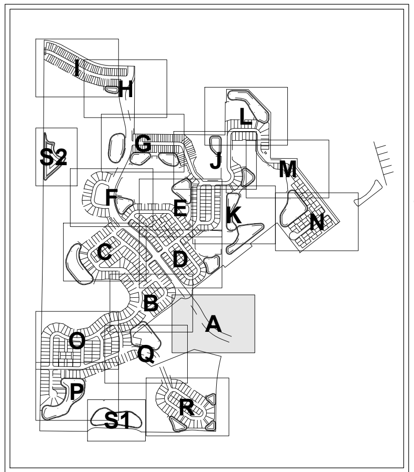

KEYMAP

LOT GRADING REQUIREMENTS:

1. GRADE LOT TO HOUSING AND URBAN DEVELOPMENT (HUD) GRADING REQUIREMENTS AS DESIGNED BY THE ENGINEER OF RECORD. (MINIMUM 1% SLOPE) (LDC SECTION 6.04.06.H.2)
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3. FLORIDA BUILDING CODE (1403.8) REQUIRES 6" CLEARANCE BETWEEN EXTERIOR WALL COVERINGS AND FINAL EARTH GRADE ON THE EXTERIOR OF BUILDINGS. PLEASE ANTICIPATE THAT WALL COVERINGS MAY EXTEND BELOW TOP OF SLAB LIMITING ELEVATION AVAILABLE TO MEET NOTES 1 & 2.
4. ALL THREE REQUIREMENTS MUST BE SATISFIED BEFORE LOT GRADING CAN BE APPROVED.

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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
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6	..		
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NEIGHBORHOOD GRADING PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	O.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 8A	

Printed By: Garrett

Printed: Sep 29 2022 - 9:30am

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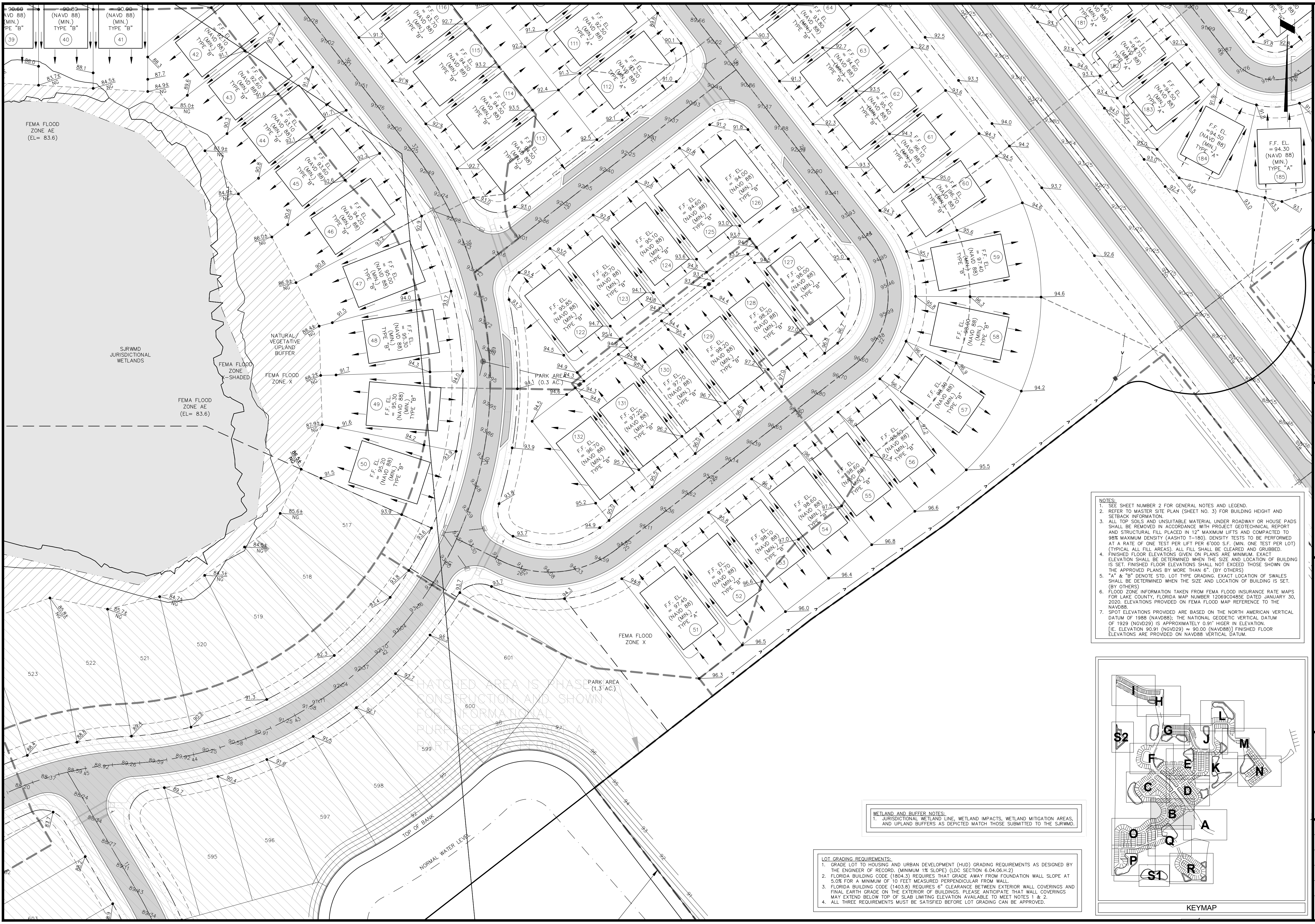
FEMA FLOOD ZONE AE (EL= 83.6)
SJRWMD JURISDICTIONAL WETLANDS
NATURAL/ VEGETATIVE UPLAND BUFFER
FEMA FLOOD ZONE X-SHADED
FEMA FLOOD ZONE X
PARK AREA (0.3 AC.)
PARK AREA (1.3 AC.)
HATCHED AREA IS PHASE CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES A PART
TOP OF BANK
NORMAL WATER LEVEL
F.F. EL. (NAVD 88) (MIN.) TYPE "B"
F.F. EL. = 94.30 (NAVD 88) (MIN.) TYPE "A"
KEYMAP
I
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NOTES:
1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
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HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
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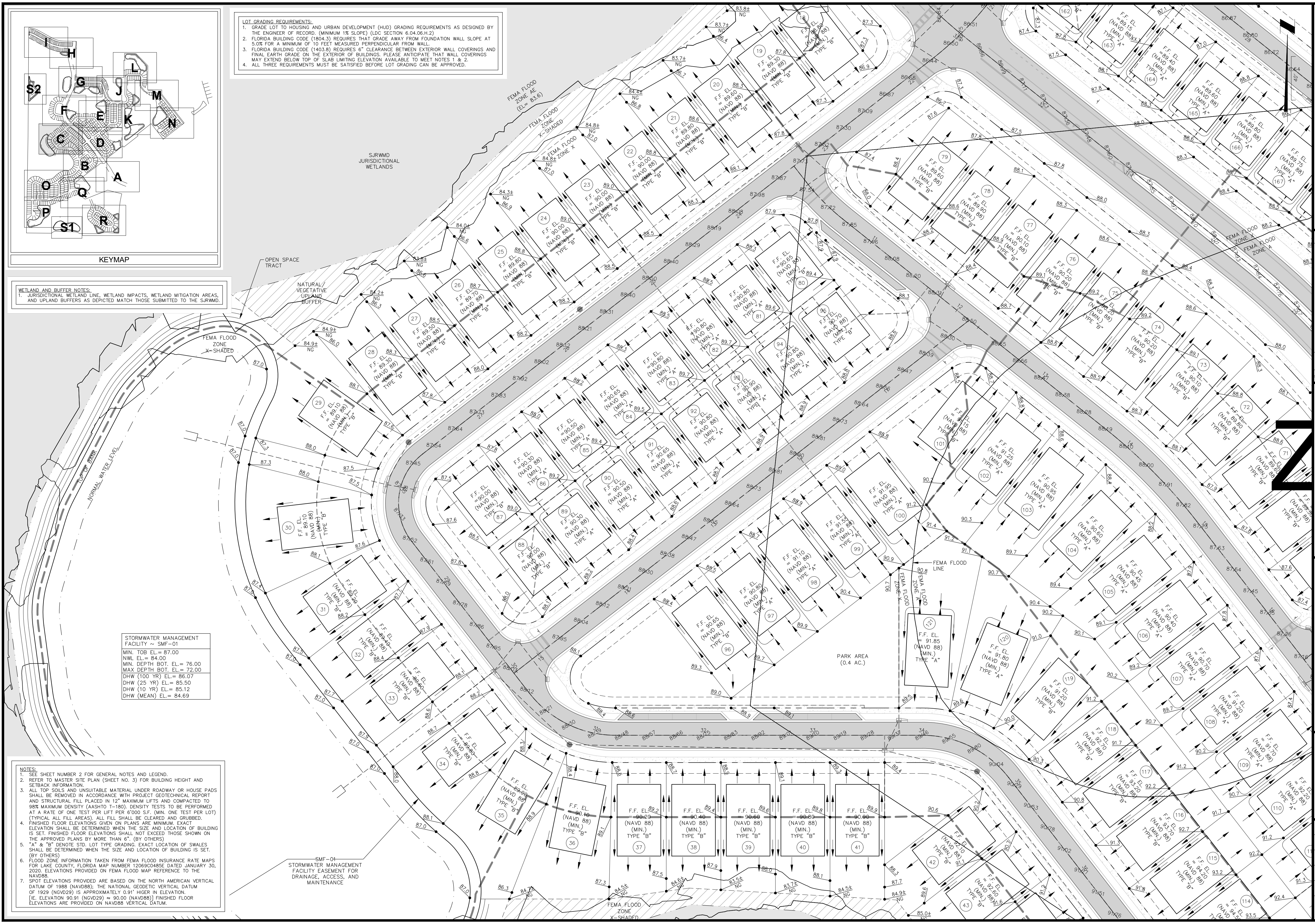
KEYMAP
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S1
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FEMA FLOOD ZONE AE (EL= 83.6)
FEMA FLOOD ZONE X-SHADED
FEMA FLOOD ZONE X
SJRWMD JURISDICTIONAL WETLANDS
OPEN SPACE TRACT
NATURAL/ VEGETATIVE UPLAND BUFFER
TOP OF BANK
NORMAL WATER LEVEL
PARK AREA (0.4 AC.)
FEMA FLOOD LINE
SMF-01 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
F.F. EL. (NAVD 88) (MIN.) TYPE "A"
F.F. EL. (NAVD 88) (MIN.) TYPE "B"
NG
N

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STORMWATER MANAGEMENT FACILITY ~ SMF-01

MIN. TOB EL.= 87.00
NWL EL.= 84.00
MIN. DEPTH BOT. EL.= 76.00
MAX DEPTH BOT. EL.= 72.00

DHW (100 YR) EL.= 86.07
DHW (25 YR) EL.= 85.50
DHW (10 YR) EL.= 85.12
DHW (MEAN) EL.= 84.69

NOTES:
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HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

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P.E. NUMBER: 69260
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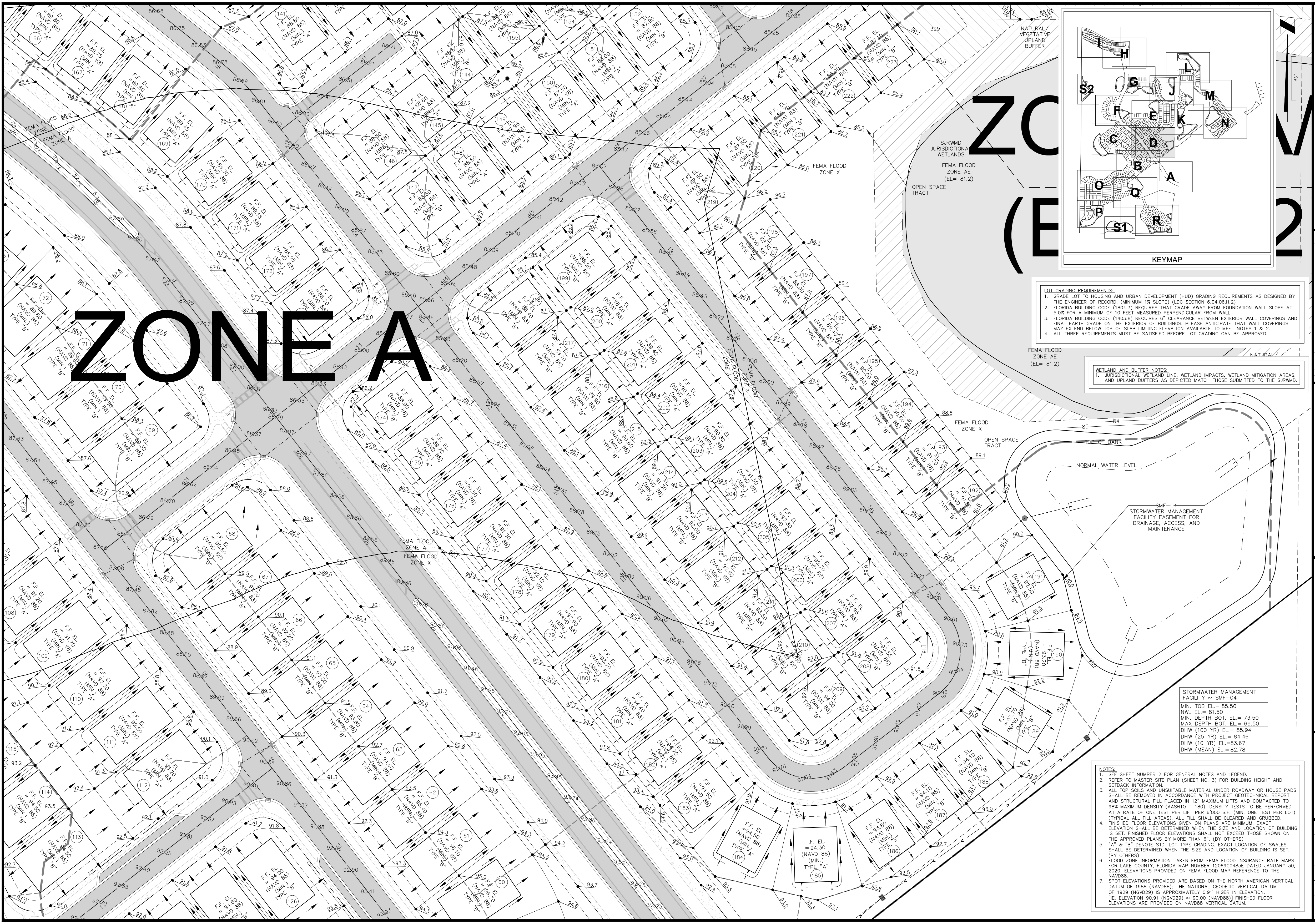
ZONE A
ZONE X
(EL= 81.2)
FEMA FLOOD ZONE A
FEMA FLOOD ZONE X
FEMA FLOOD ZONE AE (EL= 81.2)
SJRWMD JURISDICTIONAL WETLANDS
NATURAL VEGETATIVE UPLAND BUFFER
OPEN SPACE TRACT
TOP OF BANK
NORMAL WATER LEVEL
SMF-04 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
F.F. EL.
(NAVD 88)
(MIN.)
TYPE "A"
TYPE "B"
KEYMAP
A
B
C
D
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F
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J
K
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N
O
P
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S2
40'

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STORMWATER MANAGEMENT FACILITY ~ SMF-04
MIN. TOB EL.= 85.50
NWL EL.= 81.50
MIN. DEPTH BOT. EL.= 73.50
MAX DEPTH BOT. EL.= 69.50
DHW (100 YR) EL.= 85.94
DHW (25 YR) EL.= 84.46
DHW (10 YR) EL.=83.67
DHW (MEAN) EL.= 82.78

NOTES:
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HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

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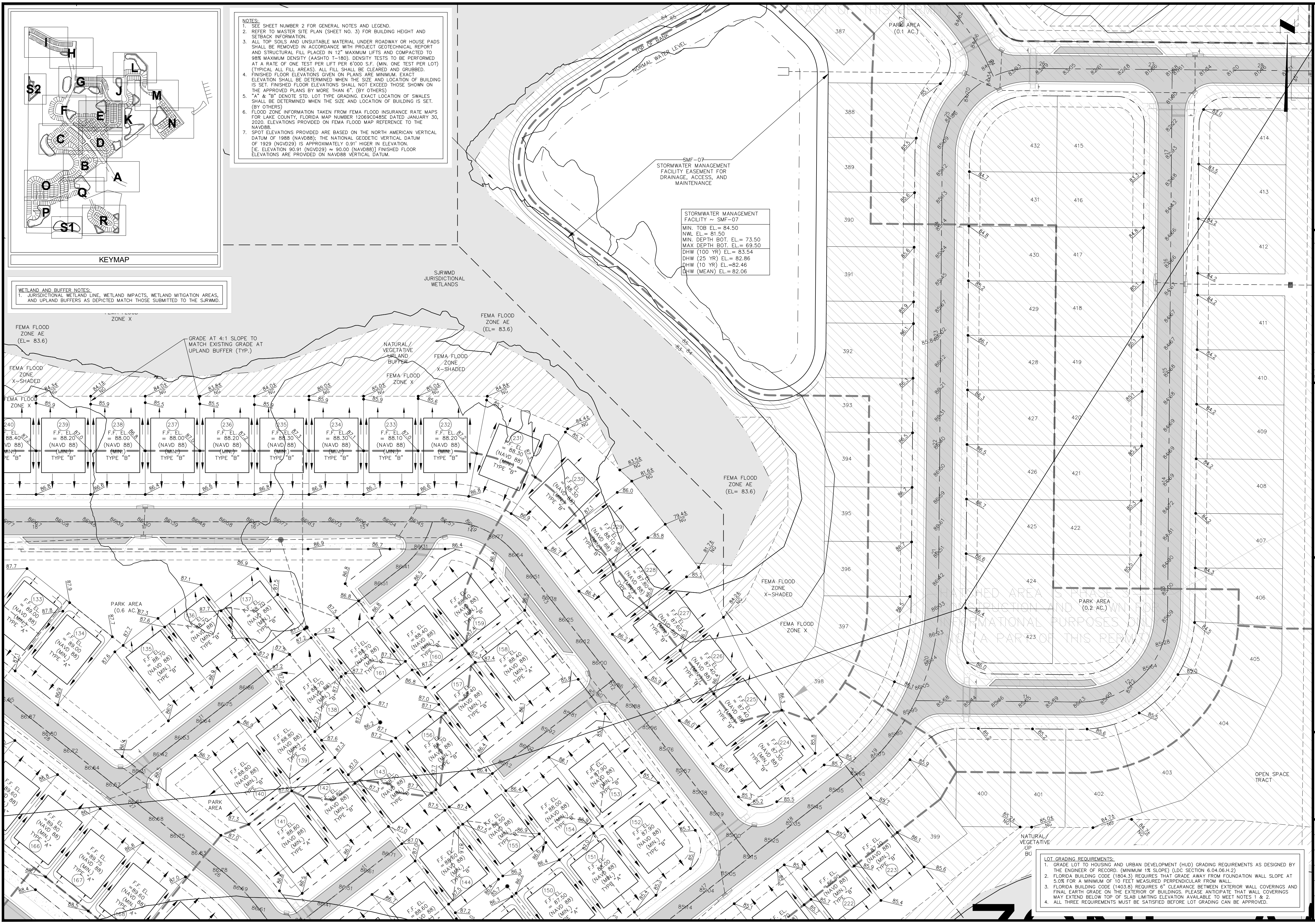
KEYMAP
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R
S1
SJRWMD JURISDICTIONAL WETLANDS
FEMA FLOOD ZONE X
FEMA FLOOD ZONE AE (EL= 83.6)
FEMA FLOOD ZONE X-SHADED
GRADE AT 4:1 SLOPE TO MATCH EXISTING GRADE AT UPLAND BUFFER (TYP.)
NATURAL/VEGETATIVE UPLAND BUFFER
TOP OF BANK
NORMAL WATER LEVEL
PARK AREA (0.1 AC.)
PARK AREA (0.6 AC.)
PARK AREA (0.2 AC.)
PARK AREA
OPEN SPACE TRACT
F.F. EL. = 88.20 (NAVD 88) (MIN.) TYPE "B"
TYPE "A"
HATCHED AREA IS UNDER CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES ONLY. NOT A PART OF THIS PERMIT
NG

SMF-07
STORMWATER MANAGEMENT
FACILITY EASEMENT FOR
DRAINAGE, ACCESS, AND
MAINTENANCE

STORMWATER MANAGEMENT FACILITY ~ SMF-07

MIN. TOB EL.= 84.50
NWL EL.= 81.50
MIN. DEPTH BOT. EL.= 73.50
MAX DEPTH BOT. EL.= 69.50

DHW (100 YR) EL.= 83.54
DHW (25 YR) EL.= 82.86
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DHW (MEAN) EL.= 82.06

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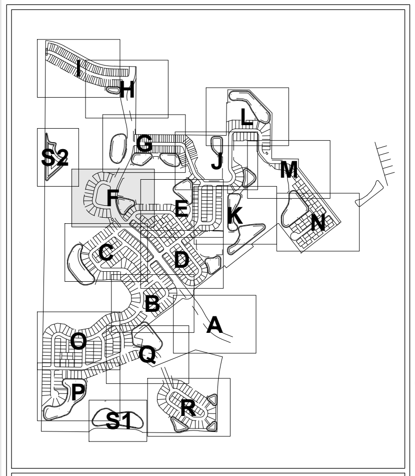
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KEYMAP

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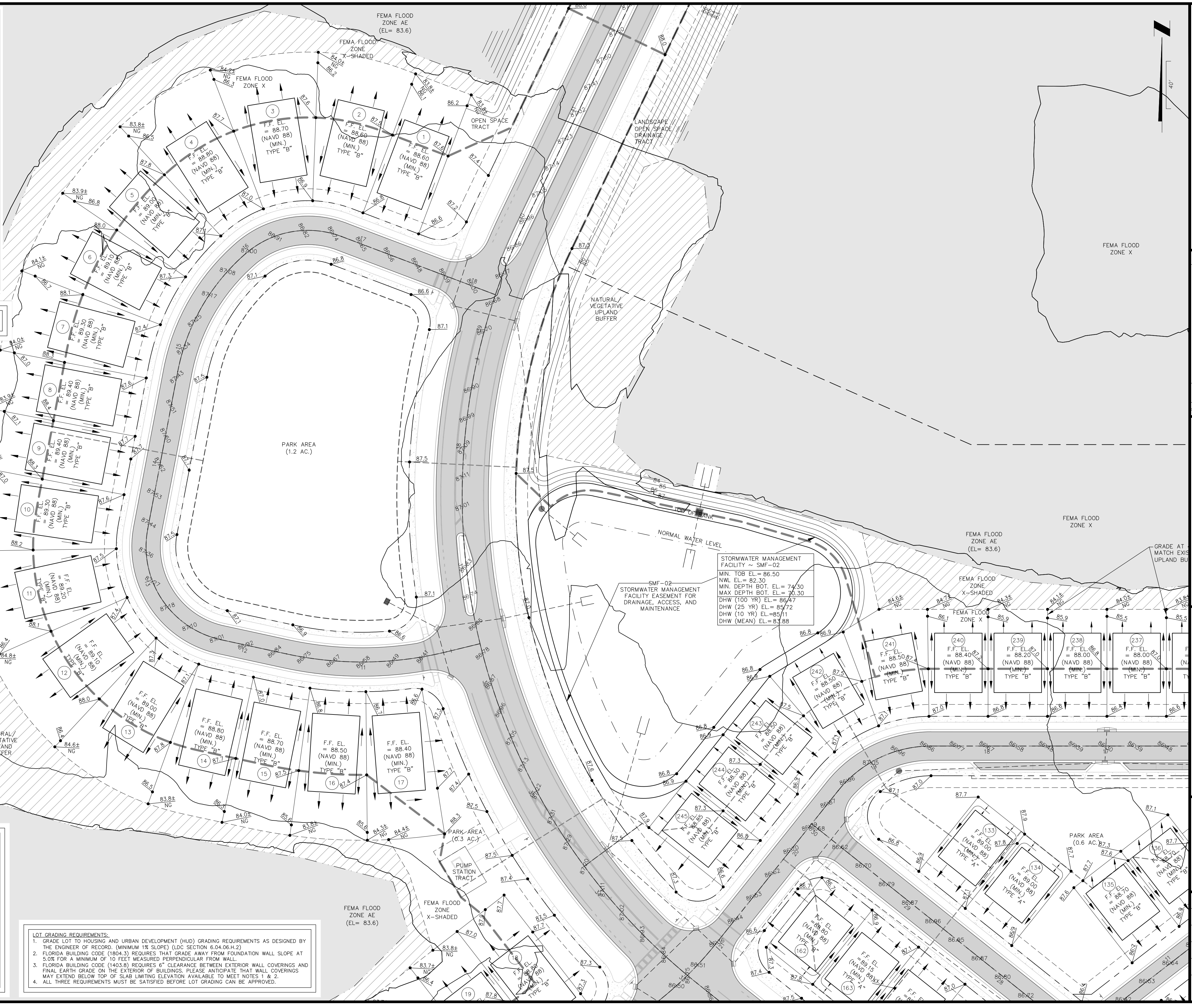
FEMA FLOOD ZONE AE (EL= 83.6)
FEMA FLOOD ZONE X-SHADED
FEMA FLOOD ZONE X
OPEN SPACE TRACT
LANDSCAPE OPEN SPACE DRAINAGE TRACT
NATURAL/ VEGETATIVE UPLAND BUFFER
FEMA FLOOD ZONE X
PARK AREA (1.2 AC.)
SJRWMD JURISDICTIONAL WETLANDS
TOP OF BANK
NORMAL WATER LEVEL
SMF-02 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
PARK AREA (0.3 AC.)
PUMP STATION TRACT
PARK AREA (0.6 AC.)
GRADE AT MATCH EXIS UPLAND BU
F.F. EL. = 88.60 (NAVD 88) (MIN.) TYPE "B"
F.F. EL. = 88.70 (NAVD 88) (MIN.) TYPE "B"
F.F. EL. = 88.80 (NAVD 88) (MIN.) TYPE "B"
F.F. EL. = 89.10 (NAVD 88) (MIN.) TYPE "B"
F.F. EL. = 89.30 (NAVD 88) (MIN.) TYPE "B"
F.F. EL. = 89.40 (NAVD 88) (MIN.) TYPE "B"
F.F. EL. = 88.50 (NAVD 88) (MIN.) TYPE "B"
F.F. EL. = 88.40 (NAVD 88) (MIN.) TYPE "B"
F.F. EL. = 88.20 (NAVD 88) (MIN.) TYPE "B"
F.F. EL. = 88.00 (NAVD 88) (MIN.) TYPE "B"
F.F. EL. = 89.00 (NAVD 88) (MIN.) TYPE "A"
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162
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237
238
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240
241
242
243
244
245
40'

STORMWATER MANAGEMENT FACILITY ~ SMF-02
MIN. TOB EL.= 86.50
NWL EL.= 82.30
MIN. DEPTH BOT. EL.= 74.30
MAX DEPTH BOT. EL.= 70.30
DHW (100 YR) EL.= 86.47
DHW (25 YR) EL.= 85.72
DHW (10 YR) EL.=85.11
DHW (MEAN) EL.= 83.88

NOTES:
1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. REFER TO MASTER SITE PLAN (SHEET NO. 3) FOR BUILDING HEIGHT AND SETBACK INFORMATION.
3. ALL TOP SOILS AND UNSUITABLE MATERIAL UNDER ROADWAY OR HOUSE PADS SHALL BE REMOVED IN ACCORDANCE WITH PROJECT GEOTECHNICAL REPORT AND STRUCTURAL FILL PLACED IN 12" MAXIMUM LIFTS AND COMPACTED TO 98% MAXIMUM DENSITY (AASHTO T-180). DENSITY TESTS TO BE PERFORMED AT A RATE OF ONE TEST PER LIFT PER 6'000 S.F. (MIN. ONE TEST PER LOT) (TYPICAL ALL FILL AREAS). ALL FILL SHALL BE CLEARED AND GRUBBED.
4. FINISHED FLOOR ELEVATIONS GIVEN ON PLANS ARE MINIMUM. EXACT ELEVATION SHALL BE DETERMINED WHEN THE SIZE AND LOCATION OF BUILDING IS SET. FINISHED FLOOR ELEVATIONS SHALL NOT EXCEED THOSE SHOWN ON THE APPROVED PLANS BY MORE THAN 6". (BY OTHERS)
5. "A" & "B" DENOTE STD. LOT TYPE GRADING. EXACT LOCATION OF SWALES SHALL BE DETERMINED WHEN THE SIZE AND LOCATION OF BUILDING IS SET. (BY OTHERS)
6. FLOOD ZONE INFORMATION TAKEN FROM FEMA FLOOD INSURANCE RATE MAPS FOR LAKE COUNTY, FLORIDA MAP NUMBER 12069C0485E DATED JANUARY 30, 2020. ELEVATIONS PROVIDED ON FEMA FLOOD MAP REFERENCE TO THE NAVD88.
7. SPOT ELEVATIONS PROVIDED ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88); THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) IS APPROXIMATELY 0.91' HIGER IN ELEVATION. [IE. ELEVATION 90.91 (NGVD29) ≈ 90.00 (NAVD88)] FINISHED FLOOR ELEVATIONS ARE PROVIDED ON NAVD88 VERTICAL DATUM.

LOT GRADING REQUIREMENTS:
1. GRADE LOT TO HOUSING AND URBAN DEVELOPMENT (HUD) GRADING REQUIREMENTS AS DESIGNED BY THE ENGINEER OF RECORD. (MINIMUM 1% SLOPE) (LDC SECTION 6.04.06.H.2)
2. FLORIDA BUILDING CODE (1804.3) REQUIRES THAT GRADE AWAY FROM FOUNDATION WALL SLOPE AT 5.0% FOR A MINIMUM OF 10 FEET MEASURED PERPENDICULAR FROM WALL.
3. FLORIDA BUILDING CODE (1403.8) REQUIRES 6" CLEARANCE BETWEEN EXTERIOR WALL COVERINGS AND FINAL EARTH GRADE ON THE EXTERIOR OF BUILDINGS. PLEASE ANTICIPATE THAT WALL COVERINGS MAY EXTEND BELOW TOP OF SLAB LIMITING ELEVATION AVAILABLE TO MEET NOTES 1 & 2.
4. ALL THREE REQUIREMENTS MUST BE SATISFIED BEFORE LOT GRADING CAN BE APPROVED.

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
1			
2			
3			
4			
5			
6			

NEIGHBORHOOD GRADING PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	O.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 8F	

Printed: Sep 29 2022 - 9:31am Printed By: Garrett

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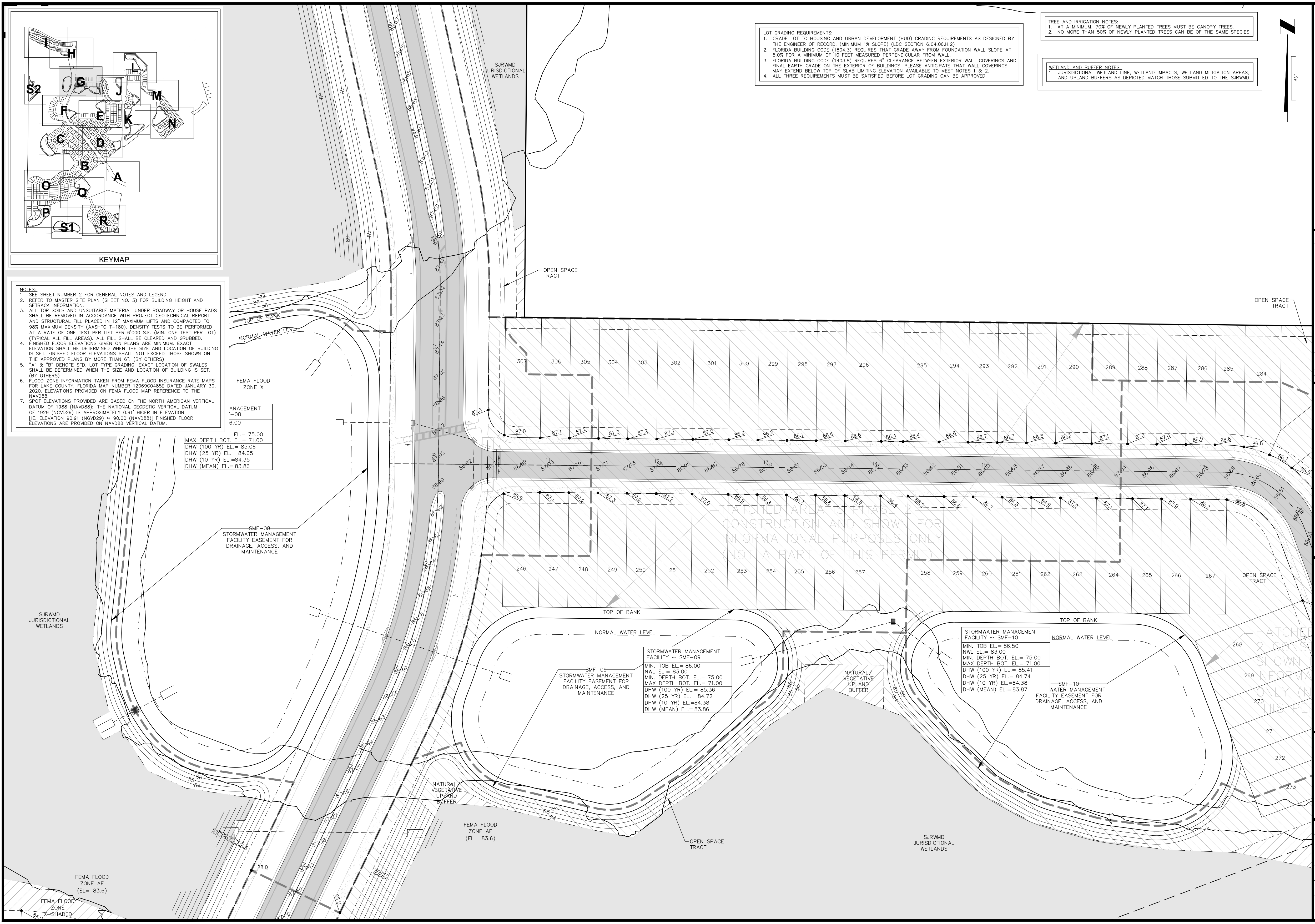
KEYMAP
I
H
L
S2
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K
N
C
D
B
A
O
Q
P
R
S1
SJRWMD JURISDICTIONAL WETLANDS
OPEN SPACE TRACT
TOP OF BANK
NORMAL WATER LEVEL
FEMA FLOOD ZONE X
STORMWATER MANAGEMENT FACILITY ~ SMF-08
MIN. TOB EL.= 86.00
MIN. DEPTH BOT. EL.= 75.00
MAX DEPTH BOT. EL.= 71.00
DHW (100 YR) EL.= 85.06
DHW (25 YR) EL.= 84.65
DHW (10 YR) EL.=84.35
DHW (MEAN) EL.= 83.86
SMF-08 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
SMF-09 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
SMF-10 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
HATCHED AREA IS PHASE 2 CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES ONLY (NOT A PART OF THIS PERMIT)
NATURAL VEGETATIVE UPLAND BUFFER
FEMA FLOOD ZONE AE (EL= 83.6)
FEMA FLOOD ZONE X-SHADED
40'
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306
305
304
303
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300
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273

NOTES:
1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. REFER TO MASTER SITE PLAN (SHEET NO. 3) FOR BUILDING HEIGHT AND SETBACK INFORMATION.
3. ALL TOP SOILS AND UNSUITABLE MATERIAL UNDER ROADWAY OR HOUSE PADS SHALL BE REMOVED IN ACCORDANCE WITH PROJECT GEOTECHNICAL REPORT AND STRUCTURAL FILL PLACED IN 12" MAXIMUM LIFTS AND COMPACTED TO 98% MAXIMUM DENSITY (AASHTO T-180). DENSITY TESTS TO BE PERFORMED AT A RATE OF ONE TEST PER LIFT PER 6'000 S.F. (MIN. ONE TEST PER LOT) (TYPICAL ALL FILL AREAS). ALL FILL SHALL BE CLEARED AND GRUBBED.
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4. ALL THREE REQUIREMENTS MUST BE SATISFIED BEFORE LOT GRADING CAN BE APPROVED.

TREE AND IRRIGATION NOTES:
1. AT A MINIMUM, 70% OF NEWLY PLANTED TREES MUST BE CANOPY TREES.
2. NO MORE THAN 50% OF NEWLY PLANTED TREES CAN BE OF THE SAME SPECIES.

WETLAND AND BUFFER NOTES:
1. JURISDICTIONAL WETLAND LINE, WETLAND IMPACTS, WETLAND MITIGATION AREAS, AND UPLAND BUFFERS AS DEPICTED MATCH THOSE SUBMITTED TO THE SJRWMD.

STORMWATER MANAGEMENT FACILITY ~ SMF-09
MIN. TOB EL.= 86.00
NWL EL.= 83.00
MIN. DEPTH BOT. EL.= 75.00
MAX DEPTH BOT. EL.= 71.00
DHW (100 YR) EL.= 85.36
DHW (25 YR) EL.= 84.72
DHW (10 YR) EL.=84.38
DHW (MEAN) EL.= 83.86

STORMWATER MANAGEMENT FACILITY ~ SMF-10
MIN. TOB EL.= 86.50
NWL EL.= 83.00
MIN. DEPTH BOT. EL.= 75.00
MAX DEPTH BOT. EL.= 71.00
DHW (100 YR) EL.= 85.41
DHW (25 YR) EL.= 84.74
DHW (10 YR) EL.=84.38
DHW (MEAN) EL.= 83.87

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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
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NEIGHBORHOOD GRADING PLAN

HILLSIDE GROVE

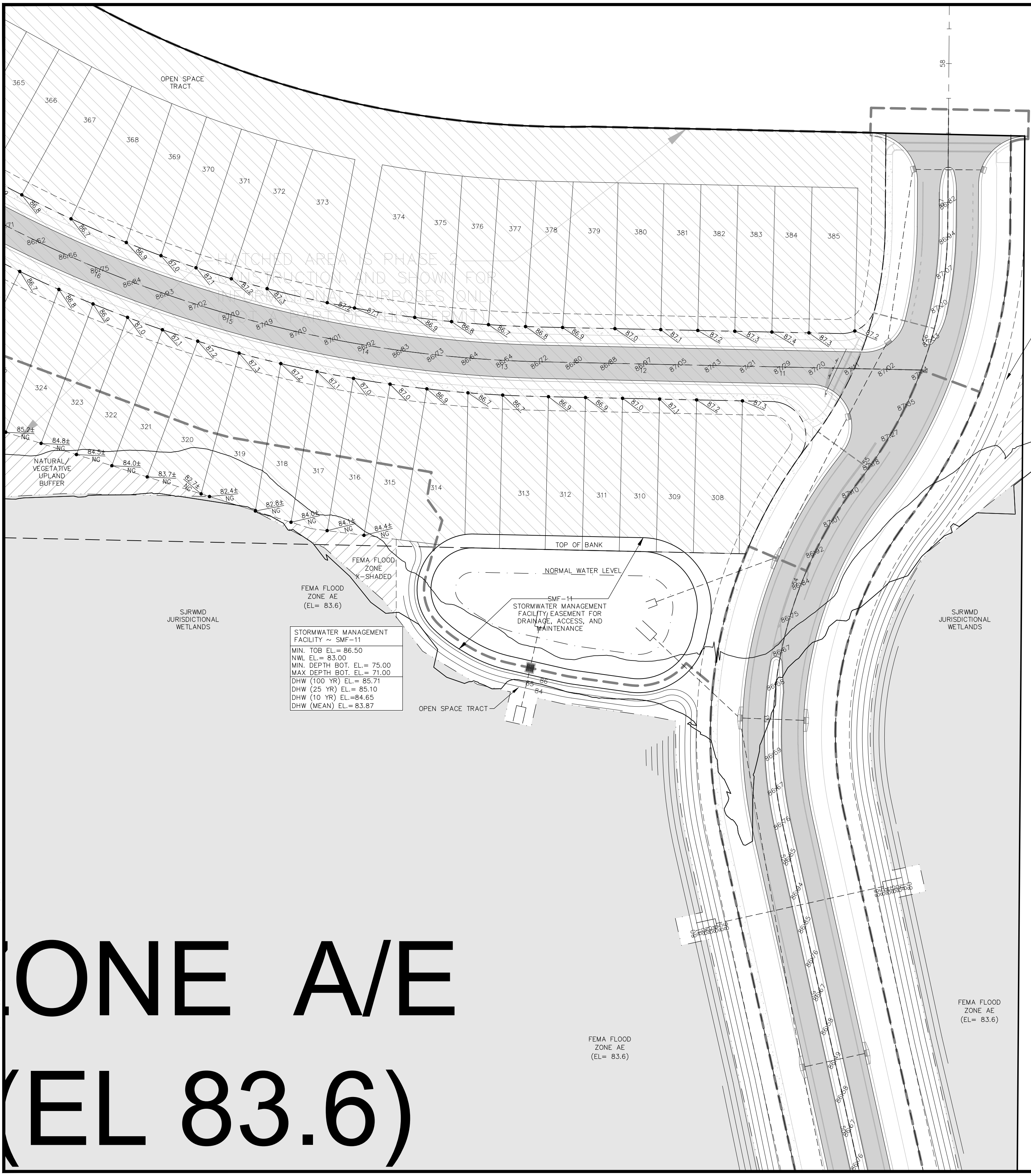
HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 8G	

Printed: Sep 29 2022 - 9:31am Printed By: Garrett


HATCHED AREA IS PHASE 2 CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES ONLY (NOT A PART OF THIS PERMIT)
OPEN SPACE TRACT
365
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380
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NATURAL VEGETATIVE UPLAND BUFFER
TOP OF BANK
NORMAL WATER LEVEL
SMF-11 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE
FEMA FLOOD ZONE X-SHADED
FEMA FLOOD ZONE AE (EL= 83.6)
SJRWMD JURISDICTIONAL WETLANDS
OPEN SPACE TRACT
FEMA FLOOD ZONE AE (EL= 83.6)
FEMA FLOOD ZONE AE (EL= 83.6)
SJRWMD JURISDICTIONAL WETLANDS
OPEN SPACE TRACT
FEMA FLOOD ZONE X-SHADED
ZONE A/E
(EL 83.6)
40'

STORMWATER MANAGEMENT FACILITY ~ SMF-11

MIN. TOB EL.= 86.50
NWL EL.= 83.00
MIN. DEPTH BOT. EL.= 75.00
MAX DEPTH BOT. EL.= 71.00

DHW (100 YR) EL.= 85.71
DHW (25 YR) EL.= 85.10
DHW (10 YR) EL.=84.65
DHW (MEAN) EL.= 83.87

WETLAND AND BUFFER NOTES:

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NOTES:

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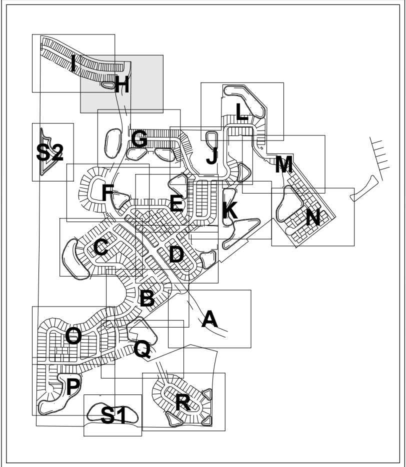
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KEYMAP

LOT GRADING REQUIREMENTS:

1. GRADE LOT TO HOUSING AND URBAN DEVELOPMENT (HUD) GRADING REQUIREMENTS AS DESIGNED BY THE ENGINEER OF RECORD. (MINIMUM 1% SLOPE) (LDC SECTION 6.04.06.H.2)
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No.	Date	Revision	By
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4	:		
3	:		
2	:		
1	:		

NEIGHBORHOOD GRADING PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
Q.C.: RCW
Date: AUGUST 2022
Scale: 1" = 40'
Sheet 8H

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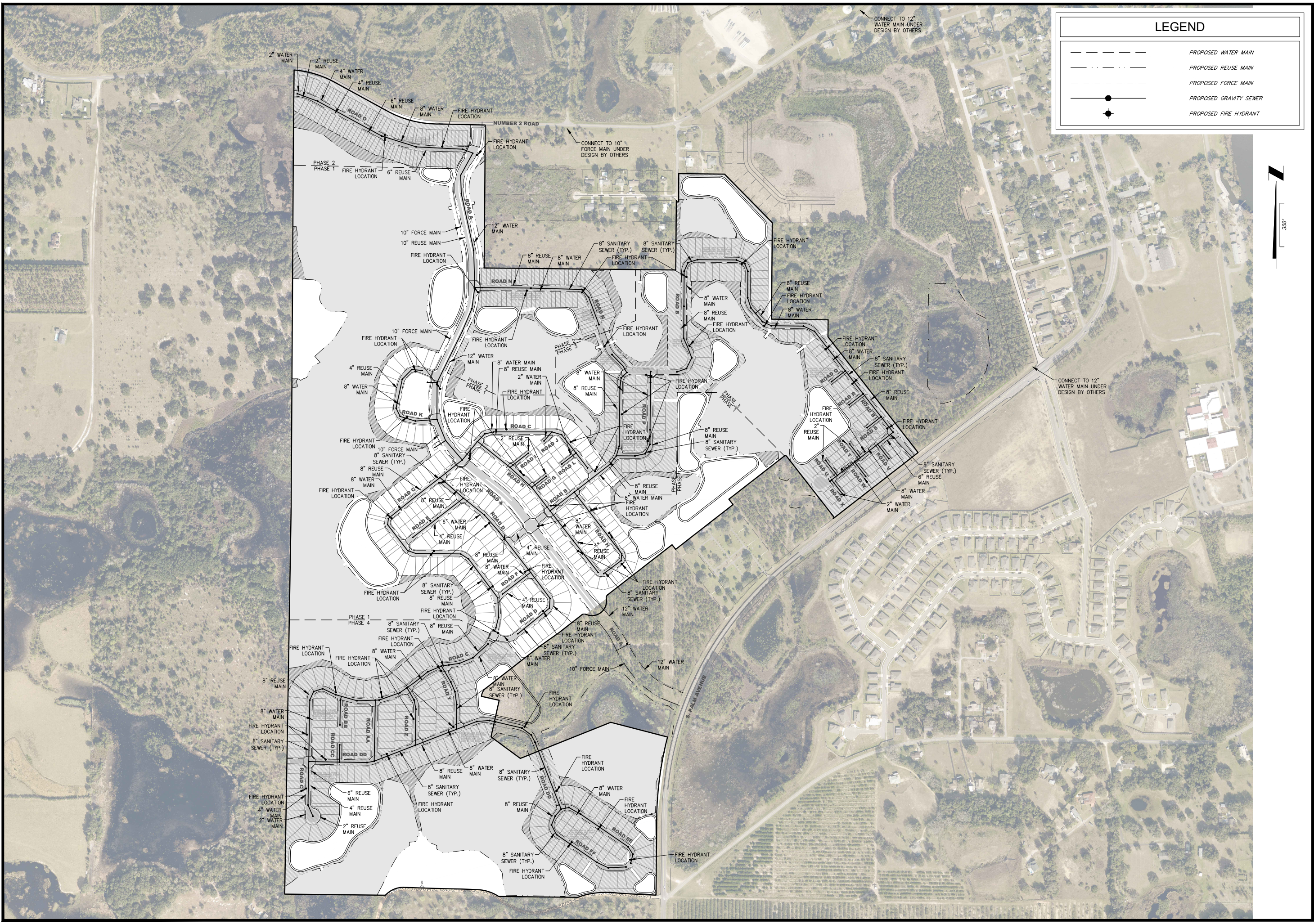
LEGEND
PROPOSED WATER MAIN
PROPOSED REUSE MAIN
PROPOSED FORCE MAIN
PROPOSED GRAVITY SEWER
PROPOSED FIRE HYDRANT
300'
CONNECT TO 12" WATER MAIN UNDER DESIGN BY OTHERS
CONNECT TO 10" FORCE MAIN UNDER DESIGN BY OTHERS
NUMBER 2 ROAD
S. PALM AVENUE
PHASE 2
PHASE 1
PHASE 3
PHASE 4
ROAD A
ROAD B
ROAD C
ROAD D
ROAD E
ROAD F
ROAD G
ROAD H
ROAD I
ROAD J
ROAD K
ROAD L
ROAD N
ROAD O
ROAD P
ROAD Q
ROAD R
ROAD S
ROAD T
ROAD U
ROAD V
ROAD W
ROAD X
ROAD Y
ROAD Z
ROAD AA
ROAD BB
ROAD CC
ROAD DD
ROAD EE
ROAD FF
2" WATER MAIN
2" REUSE MAIN
4" WATER MAIN
4" REUSE MAIN
6" REUSE MAIN
6" WATER MAIN
8" WATER MAIN
8" REUSE MAIN
12" WATER MAIN
10" FORCE MAIN
10" REUSE MAIN
8" SANITARY SEWER (TYP.)
FIRE HYDRANT LOCATION

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

MASTER UTILITY PLAN

No.	Date	Revision	By
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Florida Registry 3650 L.A. Number: LC26000311

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	O.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 80'	
Sheet 9	

Printed: Sep 29, 2022 - 9:35am Printed By: Garrett

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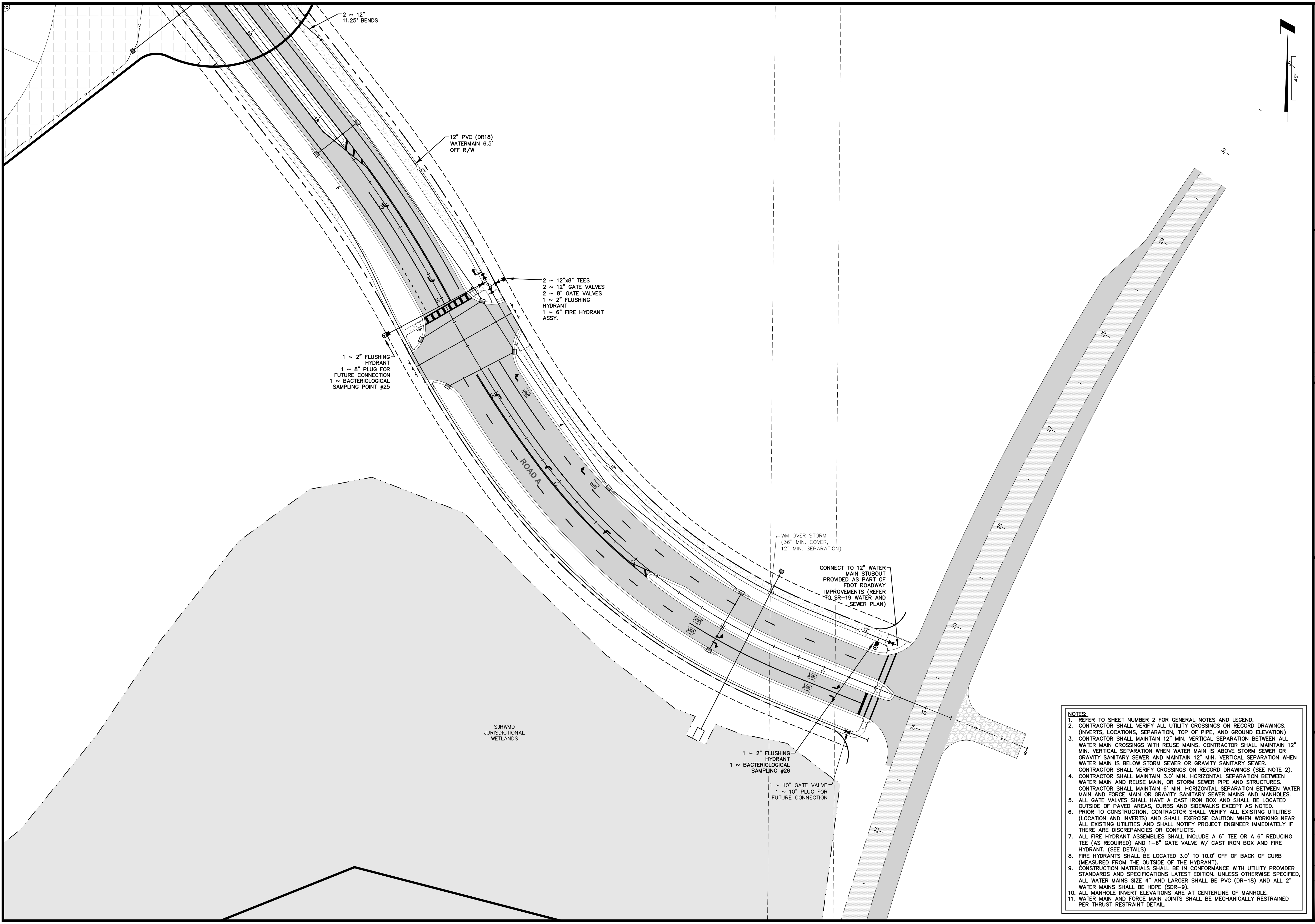
2 ~ 12"
11.25° BENDS
12" PVC (DR18)
WATERMAIN 6.5'
OFF R/W
2 ~ 12"x8" TEES
2 ~ 12" GATE VALVES
2 ~ 8" GATE VALVES
1 ~ 2" FLUSHING HYDRANT
1 ~ 6" FIRE HYDRANT ASSY.
1 ~ 2" FLUSHING HYDRANT
1 ~ 8" PLUG FOR FUTURE CONNECTION
1 ~ BACTERIOLOGICAL SAMPLING POINT #25
ROAD A
ONLY
WM OVER STORM
(36" MIN. COVER,
12" MIN. SEPARATION)
CONNECT TO 12" WATER MAIN STUBOUT PROVIDED AS PART OF FDOT ROADWAY IMPROVEMENTS (REFER TO SR-19 WATER AND SEWER PLAN)
1 ~ 2" FLUSHING HYDRANT
1 ~ BACTERIOLOGICAL SAMPLING #26
1 ~ 10" GATE VALVE
1 ~ 10" PLUG FOR FUTURE CONNECTION
SJRWMD
JURISDICTIONAL
WETLANDS
12"
10
11
12
15
16
17
18
23
24
25
26
27
28
29
30
40'

NOTES:

1. REFER TO SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS ON RECORD DRAWINGS. (INVERTS, LOCATIONS, SEPARATION, TOP OF PIPE, AND GROUND ELEVATION)
3. CONTRACTOR SHALL MAINTAIN 12" MIN. VERTICAL SEPARATION BETWEEN ALL WATER MAIN CROSSINGS WITH REUSE MAINS. CONTRACTOR SHALL MAINTAIN 12" MIN. VERTICAL SEPARATION WHEN WATER MAIN IS ABOVE STORM SEWER OR GRAVITY SANITARY SEWER AND MAINTAIN 12" MIN. VERTICAL SEPARATION WHEN WATER MAIN IS BELOW STORM SEWER OR GRAVITY SANITARY SEWER. CONTRACTOR SHALL VERIFY CROSSINGS ON RECORD DRAWINGS (SEE NOTE 2).
4. CONTRACTOR SHALL MAINTAIN 3.0' MIN. HORIZONTAL SEPARATION BETWEEN WATER MAIN AND REUSE MAIN, OR STORM SEWER PIPE AND STRUCTURES. CONTRACTOR SHALL MAINTAIN 6' MIN. HORIZONTAL SEPARATION BETWEEN WATER MAIN AND FORCE MAIN OR GRAVITY SANITARY SEWER MAINS AND MANHOLES.
5. ALL GATE VALVES SHALL HAVE A CAST IRON BOX AND SHALL BE LOCATED OUTSIDE OF PAVED AREAS, CURBS AND SIDEWALKS EXCEPT AS NOTED.
6. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES (LOCATION AND INVERTS) AND SHALL EXERCISE CAUTION WHEN WORKING NEAR ALL EXISTING UTILITIES AND SHALL NOTIFY PROJECT ENGINEER IMMEDIATELY IF THERE ARE DISCREPANCIES OR CONFLICTS.
7. ALL FIRE HYDRANT ASSEMBLIES SHALL INCLUDE A 6" TEE OR A 6" REDUCING TEE (AS REQUIRED) AND 1-6" GATE VALVE W/ CAST IRON BOX AND FIRE HYDRANT. (SEE DETAILS)
8. FIRE HYDRANTS SHALL BE LOCATED 3.0' TO 10.0' OFF OF BACK OF CURB (MEASURED FROM THE OUTSIDE OF THE HYDRANT).
9. CONSTRUCTION MATERIALS SHALL BE IN CONFORMANCE WITH UTILITY PROVIDER STANDARDS AND SPECIFICATIONS LATEST EDITION. UNLESS OTHERWISE SPECIFIED, ALL WATER MAINS SIZE 4" AND LARGER SHALL BE PVC (DR-18) AND ALL 2" WATER MAINS SHALL BE HDPE (SDR-9).
10. ALL MANHOLE INVERT ELEVATIONS ARE AT CENTERLINE OF MANHOLE.
11. WATER MAIN AND FORCE MAIN JOINTS SHALL BE MECHANICALLY RESTRAINED PER THRUST RESTRAINT DETAIL.

CW Connelly & Wicker Inc.
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No.	Date	Revision	By
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2			
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WATER AND SEWER PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

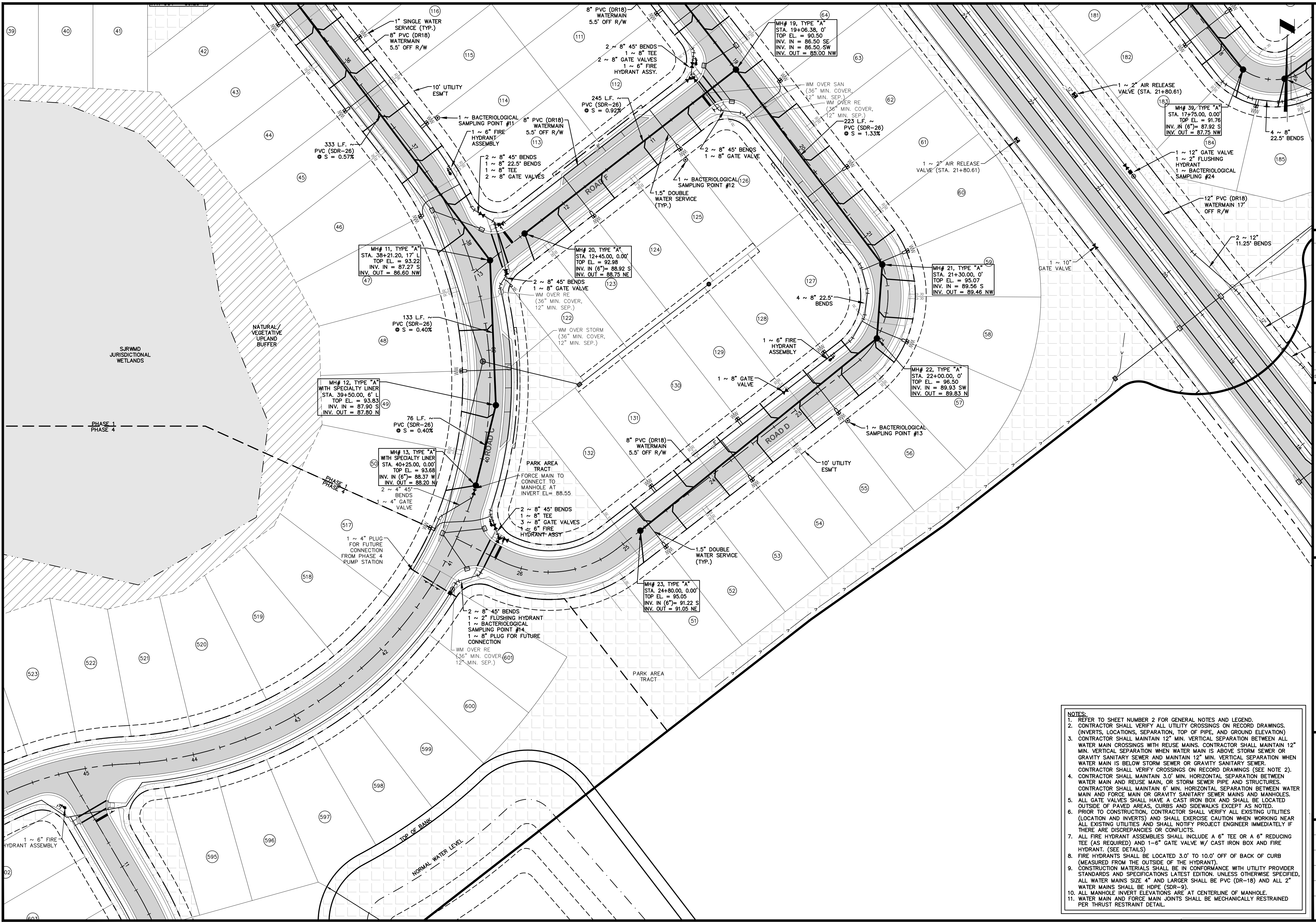
PREPARED FOR

LENNAR HOMES - ORLANDO

PE NAME
P.E. NUMBER: PE NUMBER
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 10A	

Printed: Sep 29, 2022 - 9:35am Printed By: Garrett


1" SINGLE WATER SERVICE (TYP.)
8" PVC (DR18) WATERMAIN 5.5' OFF R/W
8" PVC (DR18) WATERMAIN 5.5' OFF R/W
10' UTILITY ESM'T
1 ~ BACTERIOLOGICAL SAMPLING POINT #11
1 ~ 6" FIRE HYDRANT ASSEMBLY
333 L.F. ~ PVC (SDR-26) S = 0.57%
2 ~ 8" 45° BENDS
1 ~ 8" 22.5° BENDS
1 ~ 8" TEE
2 ~ 8" GATE VALVES
2 ~ 8" 45° BENDS
1 ~ 8" TEE
2 ~ 8" GATE VALVES
1 ~ 6" FIRE HYDRANT ASSY.
245 L.F. ~ PVC (SDR-26) S = 0.92%
MH# 19, TYPE "A" STA. 19+06.38, 0' TOP EL. = 90.50 INV. IN = 86.50 SE INV. IN = 86.50 SW INV. OUT = 85.00 NW
WM OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
WM OVER RE (36" MIN. COVER, 12" MIN. SEP.)
223 L.F. ~ PVC (SDR-26) S = 1.33%
1 ~ 2" AIR RELEASE VALVE (STA. 21+80.61)
MH# 39, TYPE "A" STA. 17+75.00, 0.00' TOP EL. = 91.76 INV. IN (6")= 87.92 S INV. OUT = 87.75 NW
4 ~ 8" 22.5° BENDS
1 ~ 12" GATE VALVE
1 ~ 2" FLUSHING HYDRANT
1 ~ BACTERIOLOGICAL SAMPLING #24
12" PVC (DR18) WATERMAIN 17' OFF R/W
1 ~ 2" AIR RELEASE VALVE (STA. 21+80.61)
2 ~ 12" 11.25° BENDS
1 ~ 10" GATE VALVE
2 ~ 8" 45° BENDS
1 ~ 8" GATE VALVE
1 ~ BACTERIOLOGICAL SAMPLING POINT #12
1.5" DOUBLE WATER SERVICE (TYP.)
ROAD F
MH# 11, TYPE "A" STA. 38+21.20, 17' L TOP EL. = 93.22 INV. IN = 87.27 S INV. OUT = 86.60 NW
MH# 20, TYPE "A" STA. 12+45.00, 0.00' TOP EL. = 92.98 INV. IN (6")= 88.92 S INV. OUT = 88.75 NE
2 ~ 8" 45° BENDS
1 ~ 8" GATE VALVE
WM OVER RE (36" MIN. COVER, 12" MIN. SEP.)
MH# 21, TYPE "A" STA. 21+30.00, 0' TOP EL. = 95.07 INV. IN = 89.56 S INV. OUT = 89.46 NW
4 ~ 8" 22.5° BENDS
133 L.F. ~ PVC (SDR-26) S = 0.40%
WM OVER STORM (36" MIN. COVER, 12" MIN. SEP.)
1 ~ 6" FIRE HYDRANT ASSEMBLY
NATURAL/ VEGETATIVE UPLAND BUFFER
SJRWMD JURISDICTIONAL WETLANDS
MH# 12, TYPE "A" WITH SPECIALTY LINER STA. 39+50.00, 6' L TOP EL. = 93.83 INV. IN = 87.90 S INV. OUT = 87.80 N
MH# 22, TYPE "A" STA. 22+00.00, 0' TOP EL. = 96.50 INV. IN = 89.93 SW INV. OUT = 89.83 N
1 ~ 8" GATE VALVE
PHASE 1
PHASE 4
76 L.F. ~ PVC (SDR-26) S = 0.40%
1 ~ BACTERIOLOGICAL SAMPLING POINT #13
MH# 13, TYPE "A" WITH SPECIALTY LINER STA. 40+25.00, 0.00' TOP EL. = 93.68 INV. IN (6")= 88.37 W INV. OUT = 88.20 N
ROAD C
PARK AREA TRACT
FORCE MAIN TO CONNECT TO MANHOLE AT INVERT EL= 88.55
8" PVC (DR18) WATERMAIN 5.5' OFF R/W
ROAD D
10' UTILITY ESM'T
2 ~ 4" 45° BENDS
1 ~ 4" GATE VALVE
2 ~ 8" 45° BENDS
1 ~ 8" TEE
3 ~ 8" GATE VALVES
1 ~ 6" FIRE HYDRANT ASSY
1 ~ 4" PLUG FOR FUTURE CONNECTION FROM PHASE 4 PUMP STATION
1.5" DOUBLE WATER SERVICE (TYP.)
MH# 23, TYPE "A" STA. 24+80.00, 0.00' TOP EL. = 95.05 INV. IN (6")= 91.22 S INV. OUT = 91.05 NE
2 ~ 8" 45° BENDS
1 ~ 2" FLUSHING HYDRANT
1 ~ BACTERIOLOGICAL SAMPLING POINT #14
1 ~ 8" PLUG FOR FUTURE CONNECTION
WM OVER RE (36" MIN. COVER, 12" MIN. SEP.)
PARK AREA TRACT
1 ~ 6" FIRE HYDRANT ASSEMBLY
TOP OF BANK
NORMAL WATER LEVEL
39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64
111 112 113 114 115 116 122 123 124 125 126 127 128 129 130 131 132
181 182 183 184 185
517 518 519 520 521 522 523 595 596 597 598 599 600 601 602 603

NOTES:

1. REFER TO SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS ON RECORD DRAWINGS. (INVERTS, LOCATIONS, SEPARATION, TOP OF PIPE, AND GROUND ELEVATION)
3. CONTRACTOR SHALL MAINTAIN 12" MIN. VERTICAL SEPARATION BETWEEN ALL WATER MAIN CROSSINGS WITH REUSE MAINS. CONTRACTOR SHALL MAINTAIN 12" MIN. VERTICAL SEPARATION WHEN WATER MAIN IS ABOVE STORM SEWER OR GRAVITY SANITARY SEWER AND MAINTAIN 12" MIN. VERTICAL SEPARATION WHEN WATER MAIN IS BELOW STORM SEWER OR GRAVITY SANITARY SEWER. CONTRACTOR SHALL VERIFY CROSSINGS ON RECORD DRAWINGS (SEE NOTE 2).
4. CONTRACTOR SHALL MAINTAIN 3.0' MIN. HORIZONTAL SEPARATION BETWEEN WATER MAIN AND REUSE MAIN, OR STORM SEWER PIPE AND STRUCTURES. CONTRACTOR SHALL MAINTAIN 6' MIN. HORIZONTAL SEPARATION BETWEEN WATER MAIN AND FORCE MAIN OR GRAVITY SANITARY SEWER MAINS AND MANHOLES.
5. ALL GATE VALVES SHALL HAVE A CAST IRON BOX AND SHALL BE LOCATED OUTSIDE OF PAVED AREAS, CURBS AND SIDEWALKS EXCEPT AS NOTED.
6. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES (LOCATION AND INVERTS) AND SHALL EXERCISE CAUTION WHEN WORKING NEAR ALL EXISTING UTILITIES AND SHALL NOTIFY PROJECT ENGINEER IMMEDIATELY IF THERE ARE DISCREPANCIES OR CONFLICTS.
7. ALL FIRE HYDRANT ASSEMBLIES SHALL INCLUDE A 6" TEE OR A 6" REDUCING TEE (AS REQUIRED) AND 1-6" GATE VALVE W/ CAST IRON BOX AND FIRE HYDRANT. (SEE DETAILS)
8. FIRE HYDRANTS SHALL BE LOCATED 3.0' TO 10.0' OFF OF BACK OF CURB (MEASURED FROM THE OUTSIDE OF THE HYDRANT).
9. CONSTRUCTION MATERIALS SHALL BE IN CONFORMANCE WITH UTILITY PROVIDER STANDARDS AND SPECIFICATIONS LATEST EDITION. UNLESS OTHERWISE SPECIFIED, ALL WATER MAINS SIZE 4" AND LARGER SHALL BE PVC (DR-18) AND ALL 2" WATER MAINS SHALL BE HDPE (SDR-9).
10. ALL MANHOLE INVERT ELEVATIONS ARE AT CENTERLINE OF MANHOLE.
11. WATER MAIN AND FORCE MAIN JOINTS SHALL BE MECHANICALLY RESTRAINED PER THRUST RESTRAINT DETAIL.

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry 3650 L.A. Number: LC26000311

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WATER AND SEWER PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

PE NAME
P.E. NUMBER: PE NUMBER
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 10B	

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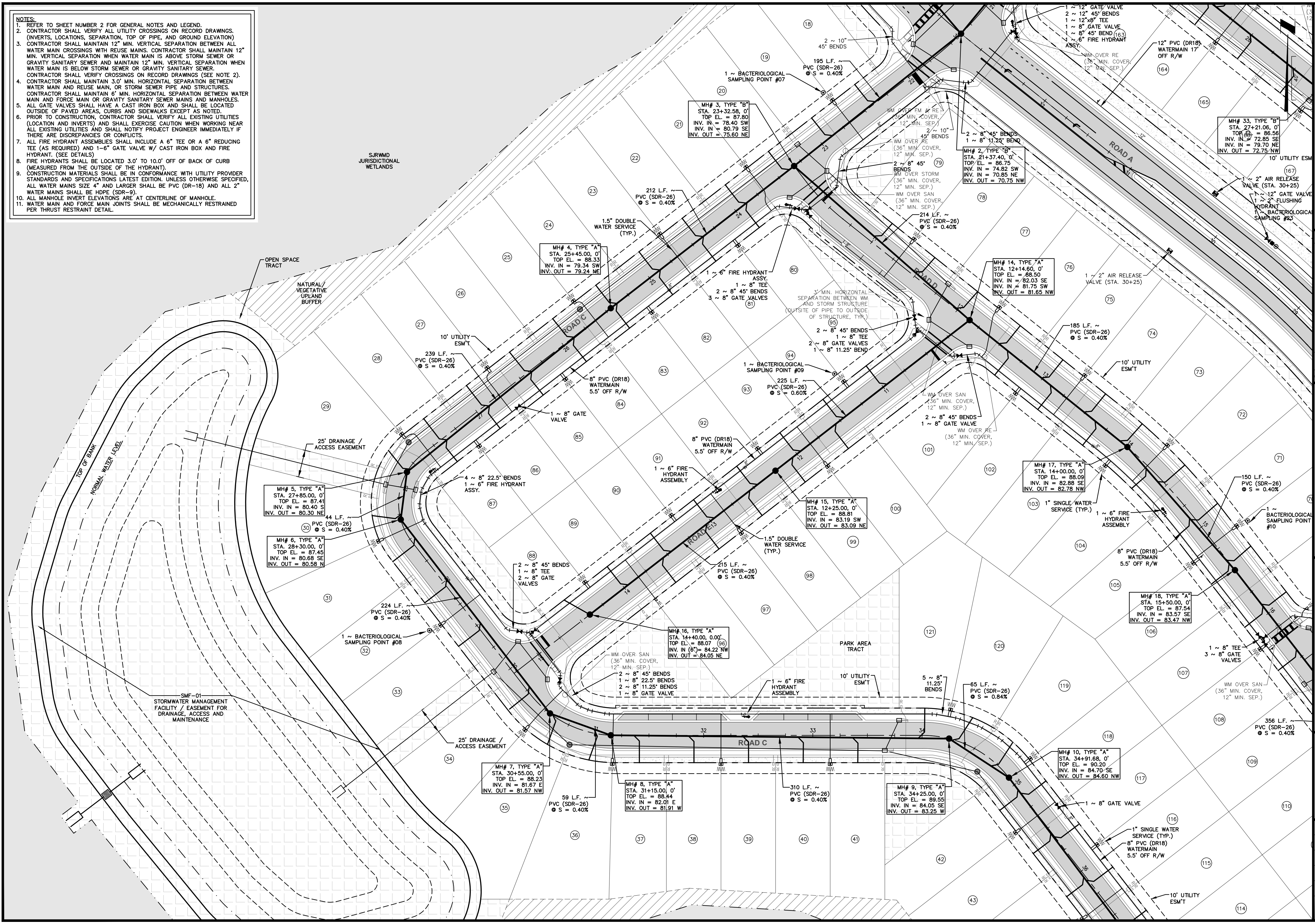
NOTES:

1. REFER TO SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS ON RECORD DRAWINGS. (INVERTS, LOCATIONS, SEPARATION, TOP OF PIPE, AND GROUND ELEVATION)
3. CONTRACTOR SHALL MAINTAIN 12" MIN. VERTICAL SEPARATION BETWEEN ALL WATER MAIN CROSSINGS WITH REUSE MAINS. CONTRACTOR SHALL MAINTAIN 12" MIN. VERTICAL SEPARATION WHEN WATER MAIN IS ABOVE STORM SEWER OR GRAVITY SANITARY SEWER AND MAINTAIN 12" MIN. VERTICAL SEPARATION WHEN WATER MAIN IS BELOW STORM SEWER OR GRAVITY SANITARY SEWER. CONTRACTOR SHALL VERIFY CROSSINGS ON RECORD DRAWINGS (SEE NOTE 2).
4. CONTRACTOR SHALL MAINTAIN 3.0' MIN. HORIZONTAL SEPARATION BETWEEN WATER MAIN AND REUSE MAIN, OR STORM SEWER PIPE AND STRUCTURES. CONTRACTOR SHALL MAINTAIN 6' MIN. HORIZONTAL SEPARATION BETWEEN WATER MAIN AND FORCE MAIN OR GRAVITY SANITARY SEWER MAINS AND MANHOLES.
5. ALL GATE VALVES SHALL HAVE A CAST IRON BOX AND SHALL BE LOCATED OUTSIDE OF PAVED AREAS, CURBS AND SIDEWALKS EXCEPT AS NOTED.
6. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES (LOCATION AND INVERTS) AND SHALL EXERCISE CAUTION WHEN WORKING NEAR ALL EXISTING UTILITIES AND SHALL NOTIFY PROJECT ENGINEER IMMEDIATELY IF THERE ARE DISCREPANCIES OR CONFLICTS.
7. ALL FIRE HYDRANT ASSEMBLIES SHALL INCLUDE A 6" TEE OR A 6" REDUCING TEE (AS REQUIRED) AND 1–6" GATE VALVE W/ CAST IRON BOX AND FIRE HYDRANT. (SEE DETAILS)
8. FIRE HYDRANTS SHALL BE LOCATED 3.0' TO 10.0' OFF OF BACK OF CURB (MEASURED FROM THE OUTSIDE OF THE HYDRANT).
9. CONSTRUCTION MATERIALS SHALL BE IN CONFORMANCE WITH UTILITY PROVIDER STANDARDS AND SPECIFICATIONS LATEST EDITION. UNLESS OTHERWISE SPECIFIED, ALL WATER MAINS SIZE 4" AND LARGER SHALL BE PVC (DR–18) AND ALL 2" WATER MAINS SHALL BE HDPE (SDR–9).
10. ALL MANHOLE INVERT ELEVATIONS ARE AT CENTERLINE OF MANHOLE.
11. WATER MAIN AND FORCE MAIN JOINTS SHALL BE MECHANICALLY RESTRAINED PER THRUST RESTRAINT DETAIL.


SJRWMD JURISDICTIONAL WETLANDS
OPEN SPACE TRACT
NATURAL/ VEGETATIVE UPLAND BUFFER
TOP OF BANK
NORMAL WATER LEVEL
SMF–01 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
25' DRAINAGE / ACCESS EASEMENT
25' DRAINAGE / ACCESS EASEMENT
ROAD A
ROAD C
ROAD C
ROAD D
ROAD E
PARK AREA TRACT
10' UTILITY ESM'T
MH# 2, TYPE "B" STA. 21+37.40, 0' TOP EL. = 86.75 INV. IN = 74.82 SW INV. IN = 70.85 NE INV. OUT = 70.75 NW
MH# 3, TYPE "B" STA. 23+32.58, 0' TOP EL. = 87.80 INV. IN = 78.40 SW INV. IN = 80.79 SE INV. OUT = 75.60 NE
MH# 4, TYPE "A" STA. 25+45.00, 0' TOP EL. = 88.33 INV. IN = 79.34 SW INV. OUT = 79.24 NE
MH# 5, TYPE "A" STA. 27+85.00, 0' TOP EL. = 87.41 INV. IN = 80.40 S INV. OUT = 80.30 NE
MH# 6, TYPE "A" STA. 28+30.00, 0' TOP EL. = 87.45 INV. IN = 80.68 SE INV. OUT = 80.58 N
MH# 7, TYPE "A" STA. 30+55.00, 0' TOP EL. = 88.23 INV. IN = 81.67 E INV. OUT = 81.57 NW
MH# 8, TYPE "A" STA. 31+15.00, 0' TOP EL. = 88.44 INV. IN = 82.01 E INV. OUT = 81.91 W
MH# 9, TYPE "A" STA. 34+25.00, 0' TOP EL. = 89.55 INV. IN = 84.05 SE INV. OUT = 83.25 W
MH# 10, TYPE "A" STA. 34+91.68, 0' TOP EL. = 90.20 INV. IN = 84.70 SE INV. OUT = 84.60 NW
MH# 14, TYPE "A" STA. 12+14.60, 0' TOP EL. = 88.50 INV. IN = 82.03 SE INV. IN = 81.75 SW INV. OUT = 81.65 NW
MH# 15, TYPE "A" STA. 12+25.00, 0' TOP EL. = 88.81 INV. IN = 83.19 SW INV. OUT = 83.09 NE
MH# 16, TYPE "A" STA. 14+40.00, 0.00' TOP EL. = 88.07 INV. IN (6")= 84.22 NW INV. OUT = 84.05 NE
MH# 17, TYPE "A" STA. 14+00.00, 0' TOP EL. = 88.09 INV. IN = 82.88 SE INV. OUT = 82.78 NW
MH# 18, TYPE "A" STA. 15+50.00, 0' TOP EL. = 87.54 INV. IN = 83.57 SE INV. OUT = 83.47 NW
MH# 33, TYPE "B" STA. 27+21.06, 0' TOP EL. = 86.56 INV. IN = 72.85 SE INV. IN = 79.70 NE INV. OUT = 72.75 NW
195 L.F. ~ PVC (SDR–26) @ S = 0.40%
212 L.F. ~ PVC (SDR–26) @ S = 0.40%
214 L.F. ~ PVC (SDR–26) @ S = 0.40%
239 L.F. ~ PVC (SDR–26) @ S = 0.40%
44 L.F. ~ PVC (SDR–26) @ S = 0.40%
224 L.F. ~ PVC (SDR–26) @ S = 0.40%
59 L.F. ~ PVC (SDR–26) @ S = 0.40%
310 L.F. ~ PVC (SDR–26) @ S = 0.40%
65 L.F. ~ PVC (SDR–26) @ S = 0.84%
225 L.F. ~ PVC (SDR–26) @ S = 0.60%
215 L.F. ~ PVC (SDR–26) @ S = 0.40%
185 L.F. ~ PVC (SDR–26) @ S = 0.40%
150 L.F. ~ PVC (SDR–26) @ S = 0.40%
356 L.F. ~ PVC (SDR–26) @ S = 0.40%
1 ~ 12" GATE VALVE 2 ~ 12" 45° BENDS 1 ~ 12"x8" TEE 1 ~ 8" GATE VALVE 1 ~ 8" 45° BEND 1 ~ 6" FIRE HYDRANT ASSY.
12" PVC (DR18) WATERMAIN 17' OFF R/W
2 ~ 10" 45° BENDS
1 ~ BACTERIOLOGICAL SAMPLING POINT #07
1 ~ BACTERIOLOGICAL SAMPLING POINT #08
1 ~ BACTERIOLOGICAL SAMPLING POINT #09
1 ~ BACTERIOLOGICAL SAMPLING POINT #10
1 ~ 12" GATE VALVE 1 ~ 2" FLUSHING HYDRANT 1 ~ BACTERIOLOGICAL SAMPLING #23
1 ~ 2" AIR RELEASE VALVE (STA. 30+25)
WM OVER FM & RE (36" MIN. COVER, 12" MIN. SEP.)
WM OVER RE (36" MIN. COVER, 12" MIN. SEP.)
WM OVER STORM (36" MIN. COVER, 12" MIN. SEP.)
WM OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
2 ~ 8" 45° BENDS 1 ~ 8" 11.25° BEND
2 ~ 8" 45° BENDS
1.5" DOUBLE WATER SERVICE (TYP.)
1 ~ 6" FIRE HYDRANT ASSY. 1 ~ 8" TEE 2 ~ 8" 45° BENDS 3 ~ 8" GATE VALVES
3' MIN. HORIZONTAL SEPARATION BETWEEN WM AND STORM STRUCTURE (OUTSITE OF PIPE TO OUTSIDE OF STRUCTURE, TYP.)
2 ~ 8" 45° BENDS 1 ~ 8" TEE 2 ~ 8" GATE VALVES 1 ~ 8" 11.25° BEND
8" PVC (DR18) WATERMAIN 5.5' OFF R/W
1 ~ 8" GATE VALVE
2 ~ 8" 45° BENDS 1 ~ 8" GATE VALVE
4 ~ 8" 22.5° BENDS 1 ~ 6" FIRE HYDRANT ASSY.
1 ~ 6" FIRE HYDRANT ASSEMBLY
2 ~ 8" 45° BENDS 1 ~ 8" TEE 2 ~ 8" GATE VALVES
2 ~ 8" 45° BENDS 1 ~ 8" 22.5° BENDS 2 ~ 8" 11.25° BENDS 1 ~ 8" GATE VALVE
5 ~ 8" 11.25° BENDS
1" SINGLE WATER SERVICE (TYP.)
1 ~ 8" TEE 3 ~ 8" GATE VALVES
1 ~ 8" GATE VALVE

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WATER AND SEWER PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

PE NAME
P.E. NUMBER: PE NUMBER
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
Q.C.: RCW
Date: AUGUST 2022
Scale: 1" = 40'
Sheet 10C

Printed By: Garrett

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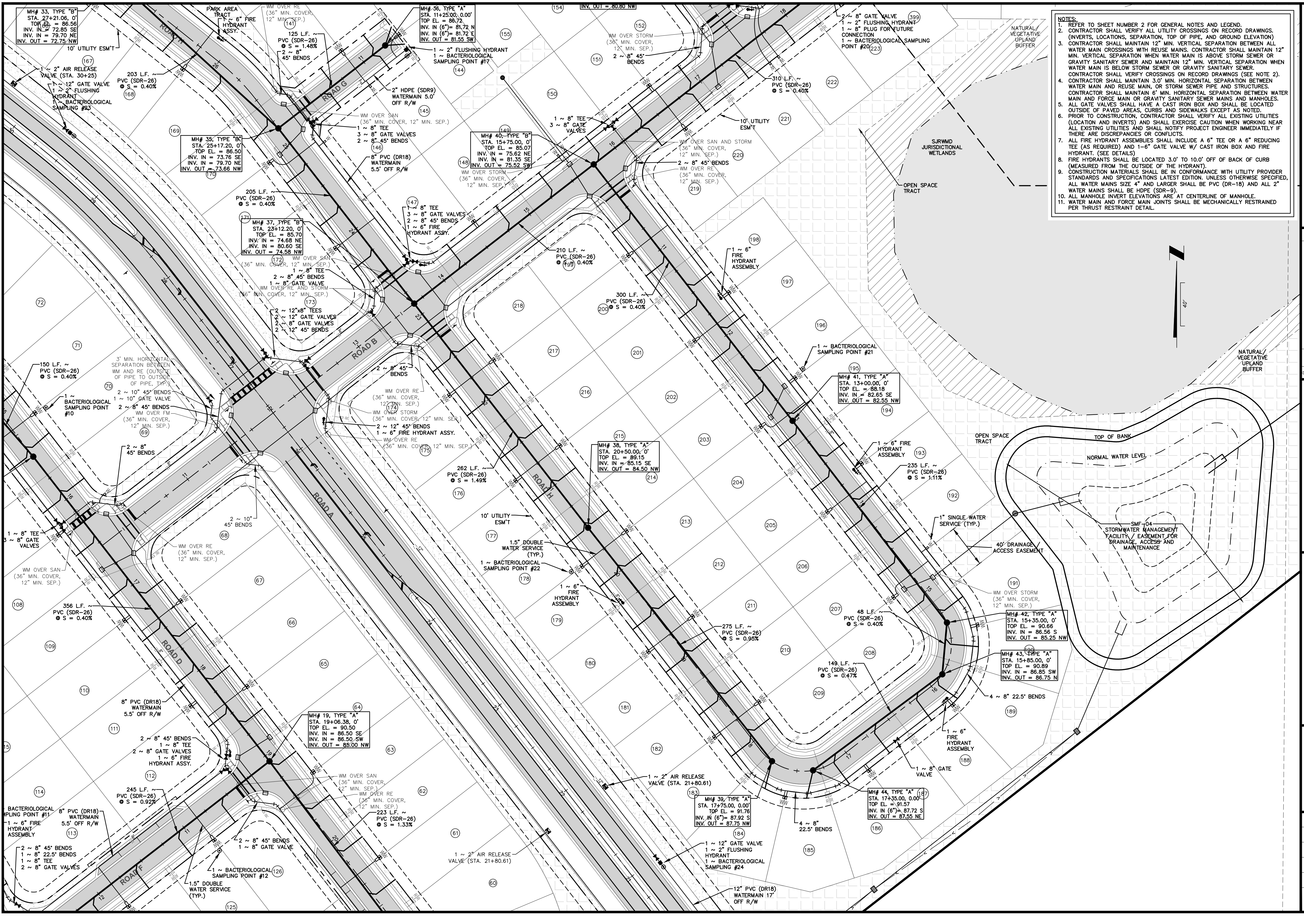
MH# 33, TYPE "B"
STA. 27+21.06, 0'
TOP EL. = 86.56
INV. IN = 72.85 SE
INV. IN = 79.70 NE
INV. OUT = 72.75 NW
PARK AREA TRACT
1 ~ 6" FIRE HYDRANT ASSY.
10' UTILITY ESM'T
1 ~ 2" AIR RELEASE VALVE (STA. 30+25)
1 ~ 12" GATE VALVE
1 ~ 2" FLUSHING HYDRANT
1 ~ BACTERIOLOGICAL SAMPLING POINT #23
203 L.F. ~ PVC (SDR-26) S = 0.40%
125 L.F. ~ PVC (SDR-26) S = 1.48%
2 ~ 8" 45° BENDS
MH# 36, TYPE "A"
STA. 11+25.00, 0.00'
TOP EL. = 86.72
INV. IN (6")= 81.72 N
INV. IN (6")= 81.72 E
INV. OUT = 81.55 SW
1 ~ 2" FLUSHING HYDRANT
1 ~ BACTERIOLOGICAL SAMPLING POINT #17
2" HDPE (SDR9) WATERMAIN 5.0' OFF R/W
WM OVER RE (36" MIN. COVER, 12" MIN. SEP.)
WM OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
1 ~ 8" TEE
3 ~ 8" GATE VALVES
2 ~ 8" 45° BENDS
MH# 35, TYPE "B"
STA. 25+17.20, 0'
TOP EL. = 86.50
INV. IN = 73.76 SE
INV. IN = 79.70 NE
INV. OUT = 73.66 NW
8" PVC (DR18) WATERMAIN 5.5' OFF R/W
205 L.F. ~ PVC (SDR-26) S = 0.40%
MH# 37, TYPE "B"
STA. 23+12.20, 0'
TOP EL. = 85.70
INV. IN = 74.68 NE
INV. IN = 80.60 SE
INV. OUT = 74.58 NW
1 ~ 8" TEE
3 ~ 8" GATE VALVES
2 ~ 8" 45° BENDS
1 ~ 6" FIRE HYDRANT ASSY.
1 ~ 8" TEE
2 ~ 8" 45° BENDS
1 ~ 8" GATE VALVE
WM OVER RE AND STORM (36" MIN. COVER, 12" MIN. SEP.)
2 ~ 12"x8" TEES
2 ~ 12" GATE VALVES
2 ~ 8" GATE VALVES
2 ~ 12" 45° BENDS
WM OVER STORM (36" MIN. COVER, 12" MIN. SEP.)
2 ~ 8" 45° BENDS
310 L.F. ~ PVC (SDR-26) S = 0.40%
2 ~ 8" GATE VALVE
1 ~ 2" FLUSHING HYDRANT
1 ~ 8" PLUG FOR FUTURE CONNECTION
1 ~ BACTERIOLOGICAL SAMPLING POINT #20
MH# 40, TYPE "B"
STA. 15+75.00, 0'
TOP EL. = 85.07
INV. IN = 75.62 NE
INV. IN = 81.35 SE
INV. OUT = 75.52 SW
1 ~ 8" TEE
3 ~ 8" GATE VALVES
10' UTILITY ESM'T
WM OVER SAN AND STORM (36" MIN. COVER, 12" MIN. SEP.)
2 ~ 8" 45° BENDS
NATURAL/ VEGETATIVE UPLAND BUFFER
SJRWMD JURISDICTIONAL WETLANDS
OPEN SPACE TRACT
210 L.F. ~ PVC (SDR-26) S = 0.40%
300 L.F. ~ PVC (SDR-26) S = 0.40%
1 ~ 6" FIRE HYDRANT ASSEMBLY
1 ~ BACTERIOLOGICAL SAMPLING POINT #21
MH# 41, TYPE "A"
STA. 13+00.00, 0'
TOP EL. = 88.18
INV. IN = 82.65 SE
INV. OUT = 82.55 NW
1 ~ 6" FIRE HYDRANT ASSEMBLY
235 L.F. ~ PVC (SDR-26) S = 1.11%
1" SINGLE WATER SERVICE (TYP.)
40' DRAINAGE / ACCESS EASEMENT
OPEN SPACE TRACT
TOP OF BANK
NORMAL WATER LEVEL
SMF-04 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
150 L.F. ~ PVC (SDR-26) S = 0.40%
3' MIN. HORIZONTAL SEPARATION BETWEEN WM AND RE (OUTSIDE OF PIPE TO OUTSIDE OF PIPE, TYP.)
1 ~ BACTERIOLOGICAL SAMPLING POINT #10
2 ~ 10" 45° BENDS
1 ~ 10" GATE VALVE
2 ~ 8" 45° BENDS
WM OVER FM (36" MIN. COVER, 12" MIN. SEP.)
2 ~ 8" 45° BENDS
2 ~ 12" 45° BENDS
1 ~ 6" FIRE HYDRANT ASSY.
262 L.F. ~ PVC (SDR-26) S = 1.49%
MH# 38, TYPE "A"
STA. 20+50.00, 0'
TOP EL. = 89.15
INV. IN = 85.15 SE
INV. OUT = 84.50 NW
10' UTILITY ESM'T
1.5" DOUBLE WATER SERVICE (TYP.)
1 ~ BACTERIOLOGICAL SAMPLING POINT #22
1 ~ 6" FIRE HYDRANT ASSEMBLY
2 ~ 10" 45° BENDS
1 ~ 8" TEE
3 ~ 8" GATE VALVES
WM OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
356 L.F. ~ PVC (SDR-26) S = 0.40%
8" PVC (DR18) WATERMAIN 5.5' OFF R/W
275 L.F. ~ PVC (SDR-26) S = 0.95%
48 L.F. ~ PVC (SDR-26) S = 0.40%
WM OVER STORM (36" MIN. COVER, 12" MIN. SEP.)
MH# 42, TYPE "A"
STA. 15+35.00, 0'
TOP EL. = 90.66
INV. IN = 86.56 S
INV. OUT = 85.25 NW
MH# 43, TYPE "A"
STA. 15+85.00, 0'
TOP EL. = 90.89
INV. IN = 86.85 SW
INV. OUT = 86.75 N
4 ~ 8" 22.5° BENDS
149 L.F. ~ PVC (SDR-26) S = 0.47%
1 ~ 6" FIRE HYDRANT ASSEMBLY
1 ~ 8" GATE VALVE
MH# 19, TYPE "A"
STA. 19+06.38, 0'
TOP EL. = 90.50
INV. IN = 86.50 SE
INV. IN = 86.50 SW
INV. OUT = 85.00 NW
2 ~ 8" 45° BENDS
1 ~ 8" TEE
2 ~ 8" GATE VALVES
1 ~ 6" FIRE HYDRANT ASSY.
WM OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
WM OVER RE (36" MIN. COVER, 12" MIN. SEP.)
245 L.F. ~ PVC (SDR-26) S = 0.92%
223 L.F. ~ PVC (SDR-26) S = 1.33%
1 ~ 2" AIR RELEASE VALVE (STA. 21+80.61)
MH# 39, TYPE "A"
STA. 17+75.00, 0.00'
TOP EL. = 91.76
INV. IN (6")= 87.92 S
INV. OUT = 87.75 NW
MH# 44, TYPE "A"
STA. 17+35.00, 0.00'
TOP EL. = 91.57
INV. IN (6")= 87.72 S
INV. OUT = 87.55 NE
4 ~ 8" 22.5° BENDS
1 ~ 12" GATE VALVE
1 ~ 2" FLUSHING HYDRANT
1 ~ BACTERIOLOGICAL SAMPLING #24
12" PVC (DR18) WATERMAIN 17' OFF R/W
1 ~ BACTERIOLOGICAL SAMPLING POINT #11
1 ~ 6" FIRE HYDRANT ASSEMBLY
8" PVC (DR18) WATERMAIN 5.5' OFF R/W
2 ~ 8" 45° BENDS
1 ~ 8" 22.5° BENDS
1 ~ 8" TEE
2 ~ 8" GATE VALVES
2 ~ 8" 45° BENDS
1 ~ 8" GATE VALVE
1 ~ BACTERIOLOGICAL SAMPLING POINT #12
1.5" DOUBLE WATER SERVICE (TYP.)
1 ~ 2" AIR RELEASE VALVE (STA. 21+80.61)
ROAD A
ROAD B
ROAD D
ROAD F
ROAD G
ROAD H
N
40'

NOTES:
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3. CONTRACTOR SHALL MAINTAIN 12" MIN. VERTICAL SEPARATION BETWEEN ALL WATER MAIN CROSSINGS WITH REUSE MAINS. CONTRACTOR SHALL MAINTAIN 12" MIN. VERTICAL SEPARATION WHEN WATER MAIN IS ABOVE STORM SEWER OR GRAVITY SANITARY SEWER AND MAINTAIN 12" MIN. VERTICAL SEPARATION WHEN WATER MAIN IS BELOW STORM SEWER OR GRAVITY SANITARY SEWER. CONTRACTOR SHALL VERIFY CROSSINGS ON RECORD DRAWINGS (SEE NOTE 2).
4. CONTRACTOR SHALL MAINTAIN 3.0' MIN. HORIZONTAL SEPARATION BETWEEN WATER MAIN AND REUSE MAIN, OR STORM SEWER PIPE AND STRUCTURES. CONTRACTOR SHALL MAINTAIN 6' MIN. HORIZONTAL SEPARATION BETWEEN WATER MAIN AND FORCE MAIN OR GRAVITY SANITARY SEWER MAINS AND MANHOLES.
5. ALL GATE VALVES SHALL HAVE A CAST IRON BOX AND SHALL BE LOCATED OUTSIDE OF PAVED AREAS, CURBS AND SIDEWALKS EXCEPT AS NOTED.
6. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES (LOCATION AND INVERTS) AND SHALL EXERCISE CAUTION WHEN WORKING NEAR ALL EXISTING UTILITIES AND SHALL NOTIFY PROJECT ENGINEER IMMEDIATELY IF THERE ARE DISCREPANCIES OR CONFLICTS.
7. ALL FIRE HYDRANT ASSEMBLIES SHALL INCLUDE A 6" TEE OR A 6" REDUCING TEE (AS REQUIRED) AND 1-6" GATE VALVE W/ CAST IRON BOX AND FIRE HYDRANT. (SEE DETAILS)
8. FIRE HYDRANTS SHALL BE LOCATED 3.0' TO 10.0' OFF OF BACK OF CURB (MEASURED FROM THE OUTSIDE OF THE HYDRANT).
9. CONSTRUCTION MATERIALS SHALL BE IN CONFORMANCE WITH UTILITY PROVIDER STANDARDS AND SPECIFICATIONS LATEST EDITION. UNLESS OTHERWISE SPECIFIED, ALL WATER MAINS SIZE 4" AND LARGER SHALL BE PVC (DR-18) AND ALL 2" WATER MAINS SHALL BE HDPE (SDR-9).
10. ALL MANHOLE INVERT ELEVATIONS ARE AT CENTERLINE OF MANHOLE.
11. WATER MAIN AND FORCE MAIN JOINTS SHALL BE MECHANICALLY RESTRAINED PER THRUST RESTRAINT DETAIL.

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry 3650 L.A. Number: LC26000311

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WATER AND SEWER
PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

PE NAME
P.E. NUMBER: PE NUMBER
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 10D	

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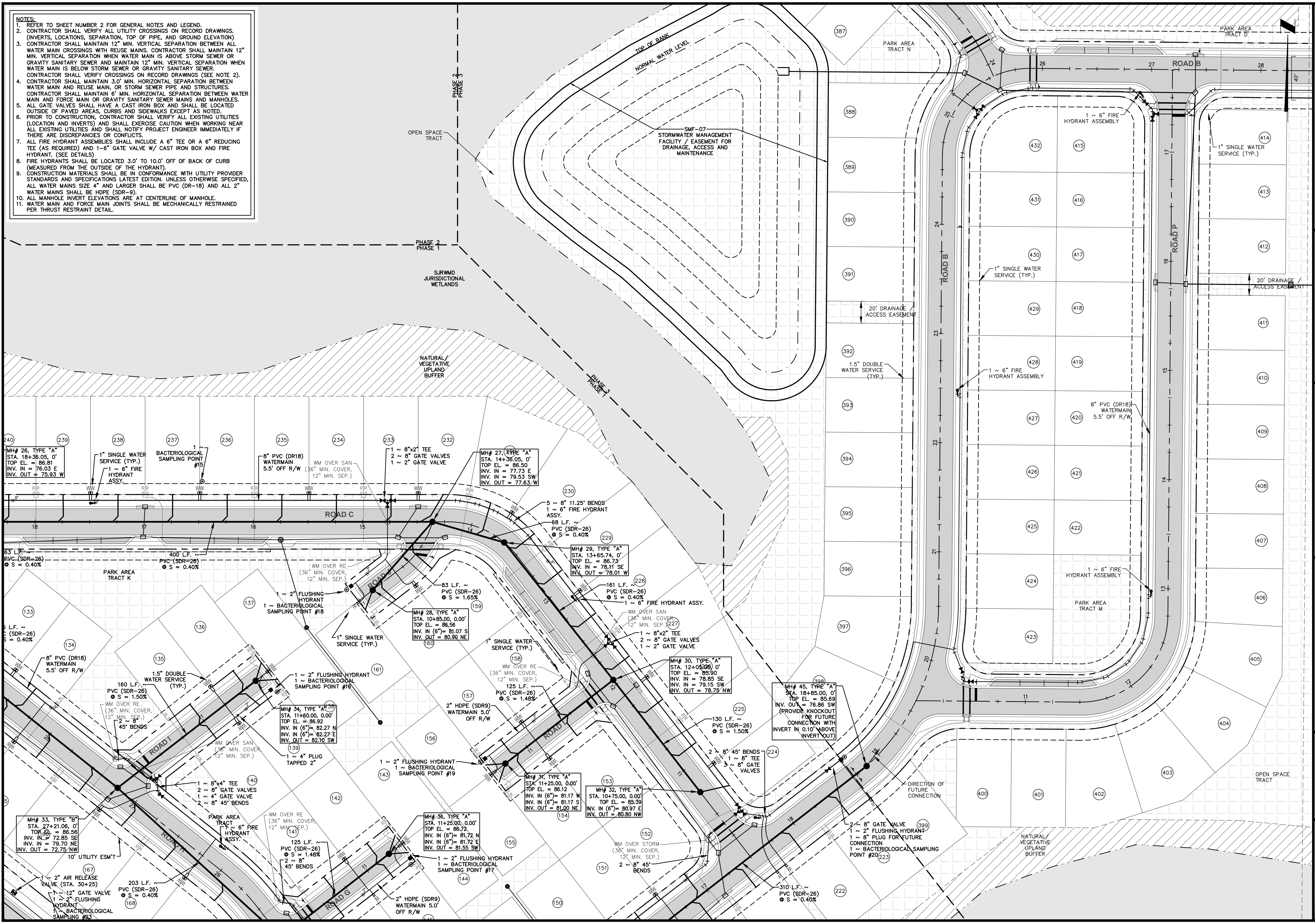
PHASE 2
PHASE 3
PHASE 2
PHASE 1
PHASE 3
PHASE 1
OPEN SPACE TRACT
SJRWMD JURISDICTIONAL WETLANDS
NATURAL VEGETATIVE UPLAND BUFFER
TOP OF BANK
NORMAL WATER LEVEL
SMF-07 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
PARK AREA TRACT N
PARK AREA TRACT D
ROAD B
ROAD P
ROAD C
ROAD D
ROAD I
ROAD J
ROAD H
ROAD G
40'
1 ~ 6" FIRE HYDRANT ASSEMBLY
1" SINGLE WATER SERVICE (TYP.)
20' DRAINAGE ACCESS EASEMENT
1.5" DOUBLE WATER SERVICE (TYP.)
8" PVC (DR18) WATERMAIN 5.5' OFF R/W
PARK AREA TRACT M
PARK AREA TRACT K
PARK AREA TRACT
MH# 26, TYPE "A" STA. 18+38.05, 0' TOP EL. = 86.81 INV. IN = 76.03 E INV. OUT = 75.93 W
1" SINGLE WATER SERVICE (TYP.)
1 ~ 6" FIRE HYDRANT ASSY.
1 ~ BACTERIOLOGICAL SAMPLING POINT #15
1 ~ 8"x2" TEE 2 ~ 8" GATE VALVES 1 ~ 2" GATE VALVE
WM OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
MH# 27, TYPE "A" STA. 14+38.05, 0' TOP EL. = 86.50 INV. IN = 77.73 E INV. IN = 79.53 SW INV. OUT = 77.63 W
5 ~ 8" 11.25' BENDS 1 ~ 6" FIRE HYDRANT ASSY.
68 L.F. ~ PVC (SDR-26) @ S = 0.40%
400 L.F. ~ PVC (SDR-26) @ S = 0.40%
63 L.F. ~ PVC (SDR-26) @ S = 0.40%
MH# 29, TYPE "A" STA. 13+65.74, 0' TOP EL. = 86.73 INV. IN = 78.11 SE INV. OUT = 78.01 W
WM OVER RE (36" MIN. COVER, 12" MIN. SEP.)
83 L.F. ~ PVC (SDR-26) @ S = 1.65%
161 L.F. ~ PVC (SDR-26) @ S = 0.40%
1 ~ 6" FIRE HYDRANT ASSY.
1 ~ 2" FLUSHING HYDRANT 1 ~ BACTERIOLOGICAL SAMPLING POINT #18
MH# 28, TYPE "A" STA. 10+85.00, 0.00' TOP EL. = 86.56 INV. IN = 81.07 S INV. OUT = 80.90 NE
1" SINGLE WATER SERVICE (TYP.)
1 ~ 8"x2" TEE 2 ~ 8" GATE VALVES 1 ~ 2" GATE VALVE
MH# 30, TYPE "A" STA. 12+05.00, 0' TOP EL. = 85.90 INV. IN = 78.85 SE INV. IN = 79.15 SW INV. OUT = 78.75 NW
MH# 45, TYPE "A" STA. 18+85.00, 0' TOP EL. = 85.69 INV. OUT = 76.86 SW (PROVIDE KNOCKOUT FOR FUTURE CONNECTION WITH INVERT IN 0.10' ABOVE INVERT OUT)
8" PVC (DR18) WATERMAIN 5.5' OFF R/W
1.5" DOUBLE WATER SERVICE (TYP.)
160 L.F. ~ PVC (SDR-26) @ S = 1.50%
2 ~ 8" 45' BENDS
1 ~ 2" FLUSHING HYDRANT 1 ~ BACTERIOLOGICAL SAMPLING POINT #16
MH# 34, TYPE "A" STA. 11+60.00, 0.00' TOP EL. = 86.92 INV. IN (6")= 82.27 N INV. IN (6")= 82.27 E INV. OUT = 82.10 SW
1 ~ 4" PLUG TAPPED 2"
125 L.F. ~ PVC (SDR-26) @ S = 1.48%
2" HDPE (SDR9) WATERMAIN 5.0' OFF R/W
130 L.F. ~ PVC (SDR-26) @ S = 1.50%
2 ~ 8" 45' BENDS 1 ~ 8" TEE 3 ~ 8" GATE VALVES
DIRECTION OF FUTURE CONNECTION
1 ~ 2" FLUSHING HYDRANT 1 ~ BACTERIOLOGICAL SAMPLING POINT #19
1 ~ 8"x4" TEE 2 ~ 8" GATE VALVES 1 ~ 4" GATE VALVE 2 ~ 8" 45' BENDS
MH# 31, TYPE "A" STA. 11+25.00, 0.00' TOP EL. = 86.12 INV. IN (6")= 81.17 W INV. IN (6")= 81.17 S INV. OUT = 81.00 NE
MH# 32, TYPE "A" STA. 10+75.00, 0.00' TOP EL. = 85.39 INV. IN (6")= 80.97 E INV. OUT = 80.80 NW
MH# 33, TYPE "B" STA. 27+21.06, 0' TOP EL. = 86.56 INV. IN = 72.85 SE INV. IN = 79.70 NE INV. OUT = 72.75 NW
1 ~ 6" FIRE HYDRANT ASSY.
10' UTILITY ESM'T
MH# 36, TYPE "A" STA. 11+25.00, 0.00' TOP EL. = 86.72 INV. IN (6")= 81.72 N INV. IN (6")= 81.72 E INV. OUT = 81.55 SW
125 L.F. ~ PVC (SDR-26) @ S = 1.48% 2 ~ 8" 45' BENDS
1 ~ 2" FLUSHING HYDRANT 1 ~ BACTERIOLOGICAL SAMPLING POINT #17
WM OVER STORM (36" MIN. COVER, 12" MIN. SEP.)
2 ~ 8" 45' BENDS
2 ~ 8" GATE VALVE 1 ~ 2" FLUSHING HYDRANT 1 ~ 8" PLUG FOR FUTURE CONNECTION 1 ~ BACTERIOLOGICAL SAMPLING POINT #20
1 ~ 2" AIR RELEASE VALVE (STA. 30+25) 1 ~ 12" GATE VALVE 1 ~ 2" FLUSHING HYDRANT 1 ~ BACTERIOLOGICAL SAMPLING #23
203 L.F. ~ PVC (SDR-26) @ S = 0.40%
2" HDPE (SDR9) WATERMAIN 5.0' OFF R/W
310 L.F. ~ PVC (SDR-26) @ S = 0.40%
OPEN SPACE TRACT
NATURAL VEGETATIVE UPLAND BUFFER
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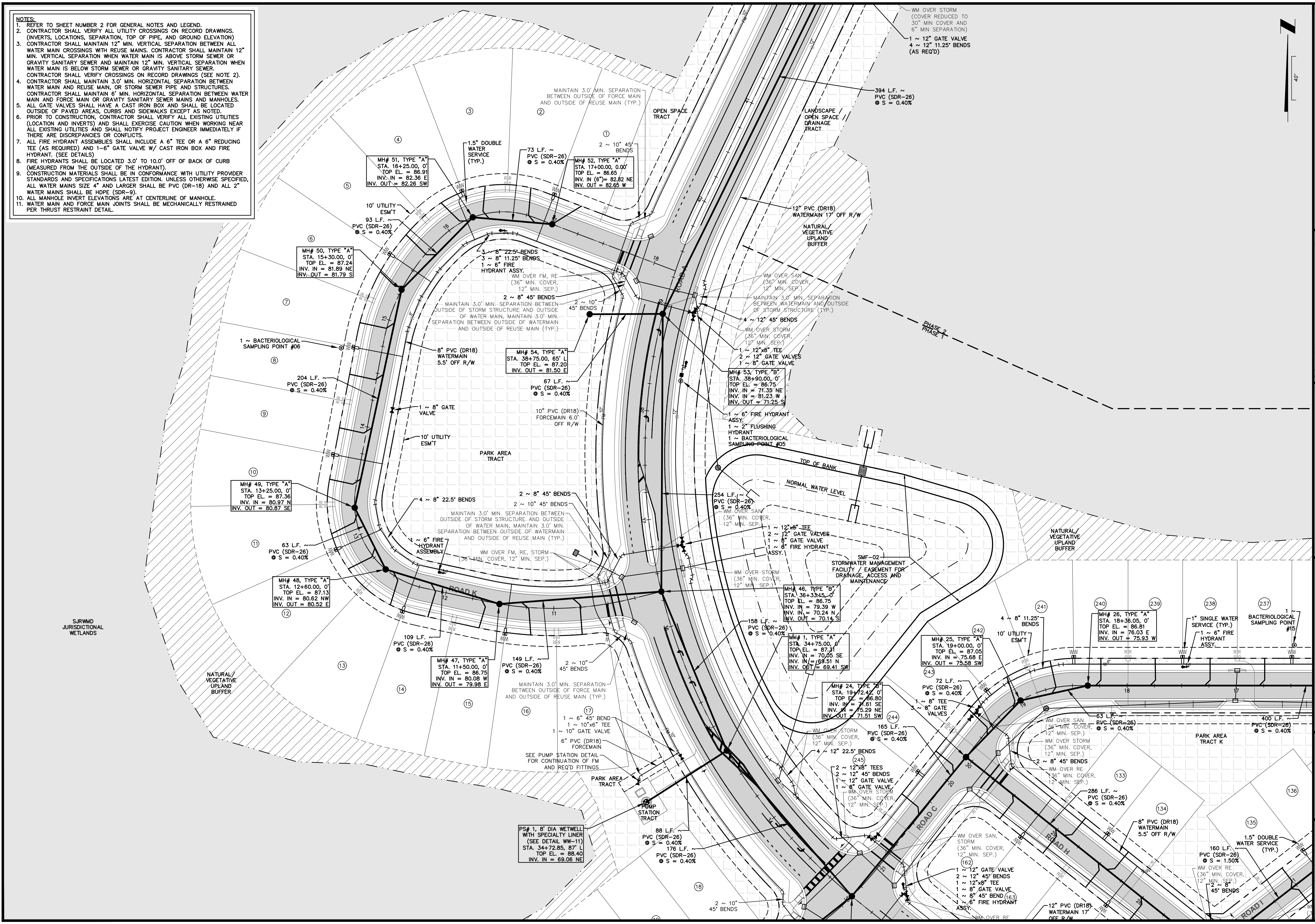
N
40'
WM OVER STORM (COVER REDUCED TO 30" MIN COVER AND 6" MIN SEPARATION)
1 ~ 12" GATE VALVE
4 ~ 12" 11.25° BENDS (AS REQ'D)
394 L.F. ~ PVC (SDR-26) @ S = 0.40%
MAINTAIN 3.0' MIN. SEPARATION BETWEEN OUTSIDE OF FORCE MAIN AND OUTSIDE OF REUSE MAIN (TYP.)
OPEN SPACE TRACT
LANDSCAPE OPEN SPACE DRAINAGE TRACT
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1.5" DOUBLE WATER SERVICE (TYP.)
73 L.F. ~ PVC (SDR-26) @ S = 0.40%
2 ~ 10" 45° BENDS
MH# 51, TYPE "A" STA. 16+25.00, 0' TOP EL. = 86.91 INV. IN = 82.36 E INV. OUT = 82.26 SW
MH# 52, TYPE "A" STA. 17+00.00, 0.00' TOP EL. = 86.65 INV. IN (6")= 82.82 NE INV. OUT = 82.65 W
12" PVC (DR18) WATERMAIN 17' OFF R/W
NATURAL/ VEGETATIVE UPLAND BUFFER
10' UTILITY ESM'T
93 L.F. ~ PVC (SDR-26) @ S = 0.40%
MH# 50, TYPE "A" STA. 15+30.00, 0' TOP EL. = 87.24 INV. IN = 81.89 NE INV. OUT = 81.79 S
3 ~ 8" 22.5° BENDS
3 ~ 8" 11.25° BENDS
1 ~ 6" FIRE HYDRANT ASSY.
WM OVER FM, RE (36" MIN. COVER, 12" MIN. SEP.)
2 ~ 8" 45° BENDS
MAINTAIN 3.0' MIN. SEPARATION BETWEEN OUTSIDE OF STORM STRUCTURE AND OUTSIDE OF WATER MAIN, MAINTAIN 3.0' MIN. SEPARATION BETWEEN OUTSIDE OF WATERMAIN AND OUTSIDE OF REUSE MAIN (TYP.)
2 ~ 10" 45° BENDS
ROAD A
WM OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
MAINTAIN 3.0' MIN. SEPARATION BETWEEN WATERMAIN AND OUTSIDE OF STORM STRUCTURE (TYP.)
4 ~ 12" 45° BENDS
WM OVER STORM (36" MIN. COVER, 12" MIN. SEP.)
1 ~ 12"x8" TEE
2 ~ 12" GATE VALVES
1 ~ 8" GATE VALVE
PHASE 2
PHASE 1
1 ~ BACTERIOLOGICAL SAMPLING POINT #06
8" PVC (DR18) WATERMAIN 5.5' OFF R/W
MH# 54, TYPE "A" STA. 38+75.00, 65' L TOP EL. = 87.20 INV. OUT = 81.50 E
MH# 53, TYPE "B" STA. 38+90.00, 0' TOP EL. = 86.75 INV. IN = 71.35 NE INV. IN = 81.23 W INV. OUT = 71.25 S
204 L.F. ~ PVC (SDR-26) @ S = 0.40%
67 L.F. ~ PVC (SDR-26) @ S = 0.40%
1 ~ 8" GATE VALVE
10" PVC (DR18) FORCEMAIN 6.0' OFF R/W
1 ~ 6" FIRE HYDRANT ASSY.
1 ~ 2" FLUSHING HYDRANT
1 ~ BACTERIOLOGICAL SAMPLING POINT #05
10' UTILITY ESM'T
PARK AREA TRACT
TOP OF BANK
NORMAL WATER LEVEL
MH# 49, TYPE "A" STA. 13+25.00, 0' TOP EL. = 87.36 INV. IN = 80.97 N INV. OUT = 80.87 SE
4 ~ 8" 22.5° BENDS
2 ~ 8" 45° BENDS
2 ~ 10" 45° BENDS
MAINTAIN 3.0' MIN. SEPARATION BETWEEN OUTSIDE OF STORM STRUCTURE AND OUTSIDE OF WATER MAIN, MAINTAIN 3.0' MIN. SEPARATION BETWEEN OUTSIDE OF WATERMAIN AND OUTSIDE OF REUSE MAIN (TYP.)
254 L.F. ~ PVC (SDR-26) @ S = 0.40%
WM OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
1 ~ 12"x8" TEE
2 ~ 12" GATE VALVES
1 ~ 8" GATE VALVE
1 ~ 6" FIRE HYDRANT ASSY.
NATURAL/ VEGETATIVE UPLAND BUFFER
63 L.F. ~ PVC (SDR-26) @ S = 0.40%
1 ~ 6" FIRE HYDRANT ASSEMBLY
WM OVER FM, RE, STORM (36" MIN. COVER, 12" MIN. SEP.)
SMF-02 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
WM OVER STORM (36" MIN. COVER, 12" MIN. SEP.)
MH# 48, TYPE "A" STA. 12+60.00, 0' TOP EL. = 87.13 INV. IN = 80.62 NW INV. OUT = 80.52 E
ROAD K
MH# 46, TYPE "B" STA. 36+33.15, 0' TOP EL. = 86.75 INV. IN = 79.39 W INV. IN = 70.24 N INV. OUT = 70.14 S
SJRWMD JURISDICTIONAL WETLANDS
109 L.F. ~ PVC (SDR-26) @ S = 0.40%
158 L.F. ~ PVC (SDR-26) @ S = 0.40%
MH# 1, TYPE "A" STA. 34+75.00, 0' TOP EL. = 87.31 INV. IN = 70.05 SE INV. IN = 69.51 N INV. OUT = 69.41 SW
241
240
239
238
237
4 ~ 8" 11.25° BENDS
MH# 26, TYPE "A" STA. 18+36.05, 0' TOP EL. = 86.81 INV. IN = 76.03 E INV. OUT = 75.93 W
1" SINGLE WATER SERVICE (TYP.)
1 ~ 6" FIRE HYDRANT ASSY.
1 ~ BACTERIOLOGICAL SAMPLING POINT #15
242
10' UTILITY ESM'T
MH# 25, TYPE "A" STA. 19+00.00, 0' TOP EL. = 87.05 INV. IN = 75.68 E INV. OUT = 75.58 SW
243
NATURAL/ VEGETATIVE UPLAND BUFFER
MH# 47, TYPE "A" STA. 11+50.00, 0' TOP EL. = 86.75 INV. IN = 80.08 W INV. OUT = 79.98 E
149 L.F. ~ PVC (SDR-26) @ S = 0.40%
2 ~ 10" 45° BENDS
MAINTAIN 3.0' MIN. SEPARATION BETWEEN OUTSIDE OF FORCE MAIN AND OUTSIDE OF REUSE MAIN (TYP.)
MH# 24, TYPE "B" STA. 19+72.42, 0' TOP EL. = 86.80 INV. IN = 71.61 SE INV. IN = 75.29 NE INV. OUT = 71.51 SW
72 L.F. ~ PVC (SDR-26) @ S = 0.40%
1 ~ 8" TEE
3 ~ 8" GATE VALVES
18
17
1 ~ 6" 45° BEND
1 ~ 10"x6" TEE
1 ~ 10" GATE VALVE
6" PVC (DR18) FORCEMAIN
SEE PUMP STATION DETAIL FOR CONTINUATION OF FM AND REQ'D FITTINGS
PARK AREA TRACT
PUMP STATION TRACT
WM OVER STORM (36" MIN. COVER, 12" MIN. SEP.)
244
165 L.F. ~ PVC (SDR-26) @ S = 0.40%
4 ~ 12" 22.5° BENDS
245
2 ~ 12"x8" TEES
2 ~ 12" 45° BENDS
1 ~ 12" GATE VALVE
1 ~ 8" GATE VALVE
WM OVER STORM (36" MIN. COVER, 12" MIN. SEP.)
WM OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
63 L.F. ~ PVC (SDR-26) @ S = 0.40%
WM OVER STORM (36" MIN. COVER, 12" MIN. SEP.)
2 ~ 8" 45° BENDS
WM OVER RE (36" MIN. COVER, 12" MIN. SEP.)
400 L.F. ~ PVC (SDR-26) @ S = 0.40%
PARK AREA TRACT K
133
136
134
135
286 L.F. ~ PVC (SDR-26) @ S = 0.40%
8" PVC (DR18) WATERMAIN 5.5' OFF R/W
PS# 1, 8' DIA WETWELL WITH SPECIALTY LINER (SEE DETAIL WW-11) STA. 34+72.85, 87' L TOP EL. = 88.40 INV. IN = 69.06 NE
88 L.F. ~ PVC (SDR-26) @ S = 0.40%
176 L.F. ~ PVC (SDR-26) @ S = 0.40%
ROAD C
ROAD H
ROAD I
WM OVER SAN, STORM (36" MIN. COVER, 12" MIN. SEP.)
162
1 ~ 12" GATE VALVE
2 ~ 12" 45° BENDS
1 ~ 12"x8" TEE
1 ~ 8" GATE VALVE
1 ~ 8" 45° BEND
1 ~ 6" FIRE HYDRANT ASSY.
163
WM OVER RE
12" PVC (DR18) WATERMAIN 17' OFF R/W
1.5" DOUBLE WATER SERVICE (TYP.)
160 L.F. ~ PVC (SDR-26) @ S = 1.50%
WM OVER RE (36" MIN. COVER, 12" MIN. SEP.)
2 ~ 8" 45° BENDS
2 ~ 10" 45° BENDS

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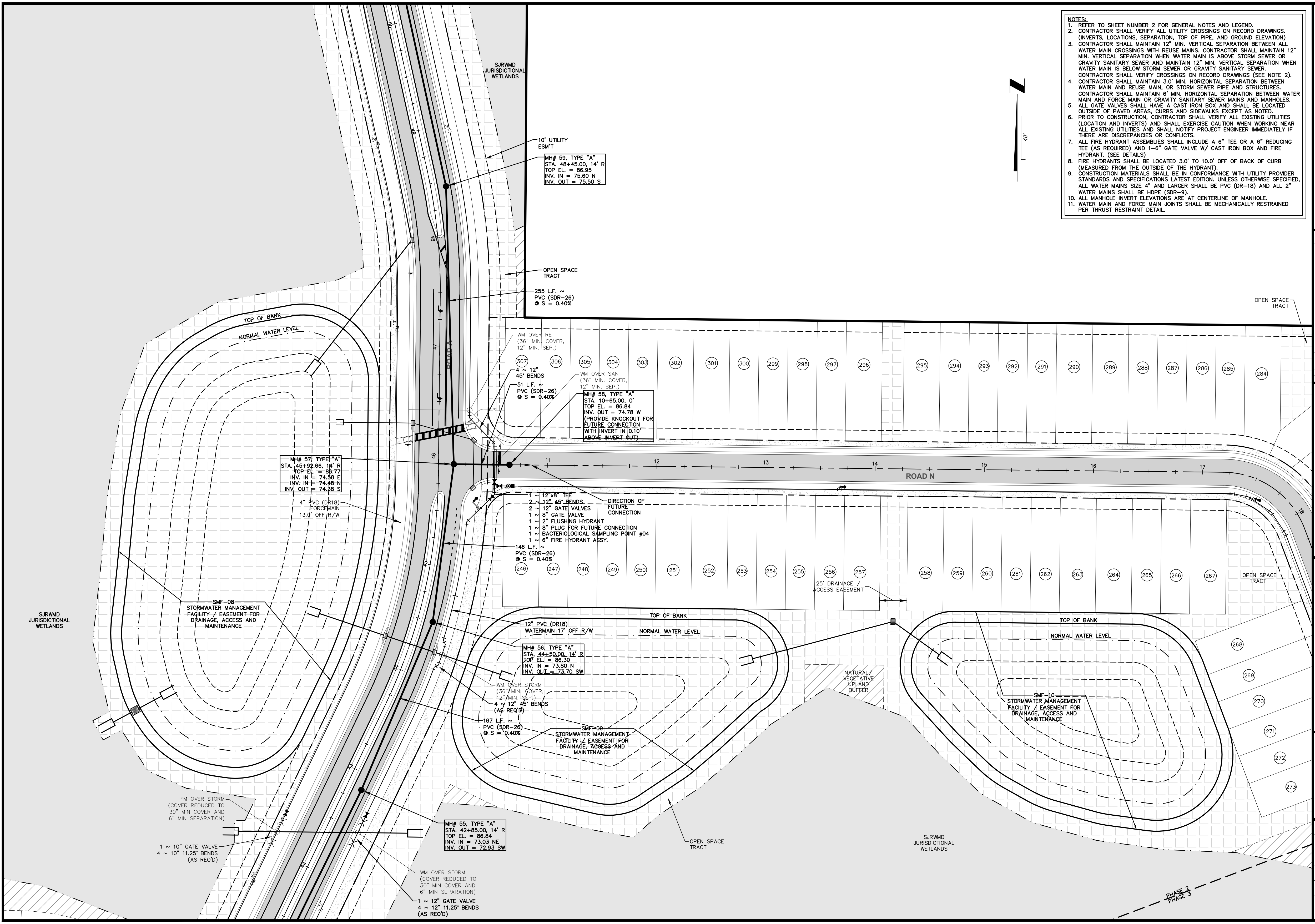

SJRWMD JURISDICTIONAL WETLANDS
10' UTILITY ESM'T
MH# 59, TYPE "A"
STA. 48+45.00, 14' R
TOP EL. = 86.95
INV. IN = 75.60 N
INV. OUT = 75.50 S
OPEN SPACE TRACT
255 L.F. ~ PVC (SDR-26) @ S = 0.40%
ROAD A
FM 10"
12"
TOP OF BANK
NORMAL WATER LEVEL
WM OVER RE (36" MIN. COVER, 12" MIN. SEP.)
4 ~ 12" 45° BENDS
51 L.F. ~ PVC (SDR-26) @ S = 0.40%
WM OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
MH# 58, TYPE "A"
STA. 10+65.00, 0'
TOP EL. = 86.84
INV. OUT = 74.78 W
(PROVIDE KNOCKOUT FOR FUTURE CONNECTION WITH INVERT IN 0.10' ABOVE INVERT OUT)
MH# 57, TYPE "A"
STA. 45+92.66, 14' R
TOP EL. = 86.77
INV. IN = 74.58 E
INV. IN = 74.48 N
INV. OUT = 74.38 S
4" PVC (DR18) FORCEMAIN 13.0' OFF R/W
ROAD N
1 ~ 12"x8" TEE
2 ~ 12" 45° BENDS
2 ~ 12" GATE VALVES
1 ~ 8" GATE VALVE
1 ~ 2" FLUSHING HYDRANT
1 ~ 8" PLUG FOR FUTURE CONNECTION
1 ~ BACTERIOLOGICAL SAMPLING POINT #04
1 ~ 6" FIRE HYDRANT ASSY.
DIRECTION OF FUTURE CONNECTION
146 L.F. ~ PVC (SDR-26) @ S = 0.40%
307 306 305 304 303 302 301 300 299 298 297 296 295 294 293 292 291 290 289 288 287 286 285 284
246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267
268 269 270 271 272 273
11 12 13 14 15 16 17 18
49 48 47 46 45 44 43 42
OPEN SPACE TRACT
25' DRAINAGE / ACCESS EASEMENT
SMF-08 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
12" PVC (DR18) WATERMAIN 17' OFF R/W
MH# 56, TYPE "A"
STA. 44+50.00, 14' R
TOP EL. = 86.30
INV. IN = 73.80 N
INV. OUT = 73.70 SW
WM OVER STORM (36" MIN. COVER, 12" MIN. SEP.)
4 ~ 12" 45° BENDS (AS REQ'D)
167 L.F. ~ PVC (SDR-26) @ S = 0.40%
SMF-09 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
NATURAL VEGETATIVE UPLAND BUFFER
SMF-10 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
FM OVER STORM (COVER REDUCED TO 30" MIN COVER AND 6" MIN SEPARATION)
1 ~ 10" GATE VALVE
4 ~ 10" 11.25° BENDS (AS REQ'D)
MH# 55, TYPE "A"
STA. 42+85.00, 14' R
TOP EL. = 86.84
INV. IN = 73.03 NE
INV. OUT = 72.93 SW
WM OVER STORM (COVER REDUCED TO 30" MIN COVER AND 6" MIN SEPARATION)
1 ~ 12" GATE VALVE
4 ~ 12" 11.25° BENDS (AS REQ'D)
OPEN SPACE TRACT
SJRWMD JURISDICTIONAL WETLANDS
PHASE 2
PHASE 3
N
40'

NOTES:

1. REFER TO SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS ON RECORD DRAWINGS. (INVERTS, LOCATIONS, SEPARATION, TOP OF PIPE, AND GROUND ELEVATION)
3. CONTRACTOR SHALL MAINTAIN 12" MIN. VERTICAL SEPARATION BETWEEN ALL WATER MAIN CROSSINGS WITH REUSE MAINS. CONTRACTOR SHALL MAINTAIN 12" MIN. VERTICAL SEPARATION WHEN WATER MAIN IS ABOVE STORM SEWER OR GRAVITY SANITARY SEWER AND MAINTAIN 12" MIN. VERTICAL SEPARATION WHEN WATER MAIN IS BELOW STORM SEWER OR GRAVITY SANITARY SEWER. CONTRACTOR SHALL VERIFY CROSSINGS ON RECORD DRAWINGS (SEE NOTE 2).
4. CONTRACTOR SHALL MAINTAIN 3.0' MIN. HORIZONTAL SEPARATION BETWEEN WATER MAIN AND REUSE MAIN, OR STORM SEWER PIPE AND STRUCTURES. CONTRACTOR SHALL MAINTAIN 6' MIN. HORIZONTAL SEPARATION BETWEEN WATER MAIN AND FORCE MAIN OR GRAVITY SANITARY SEWER MAINS AND MANHOLES.
5. ALL GATE VALVES SHALL HAVE A CAST IRON BOX AND SHALL BE LOCATED OUTSIDE OF PAVED AREAS, CURBS AND SIDEWALKS EXCEPT AS NOTED.
6. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES (LOCATION AND INVERTS) AND SHALL EXERCISE CAUTION WHEN WORKING NEAR ALL EXISTING UTILITIES AND SHALL NOTIFY PROJECT ENGINEER IMMEDIATELY IF THERE ARE DISCREPANCIES OR CONFLICTS.
7. ALL FIRE HYDRANT ASSEMBLIES SHALL INCLUDE A 6" TEE OR A 6" REDUCING TEE (AS REQUIRED) AND 1-6" GATE VALVE W/ CAST IRON BOX AND FIRE HYDRANT. (SEE DETAILS)
8. FIRE HYDRANTS SHALL BE LOCATED 3.0' TO 10.0' OFF OF BACK OF CURB (MEASURED FROM THE OUTSIDE OF THE HYDRANT).
9. CONSTRUCTION MATERIALS SHALL BE IN CONFORMANCE WITH UTILITY PROVIDER STANDARDS AND SPECIFICATIONS LATEST EDITION. UNLESS OTHERWISE SPECIFIED, ALL WATER MAINS SIZE 4" AND LARGER SHALL BE PVC (DR-18) AND ALL 2" WATER MAINS SHALL BE HDPE (SDR-9).
10. ALL MANHOLE INVERT ELEVATIONS ARE AT CENTERLINE OF MANHOLE.
11. WATER MAIN AND FORCE MAIN JOINTS SHALL BE MECHANICALLY RESTRAINED PER THRUST RESTRAINT DETAIL.

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
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WATER AND SEWER
PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

PE NAME
P.E. NUMBER: PE NUMBER
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 10G	

Printed By: Garrett

Printed: Sep 29 2022 - 9:35am

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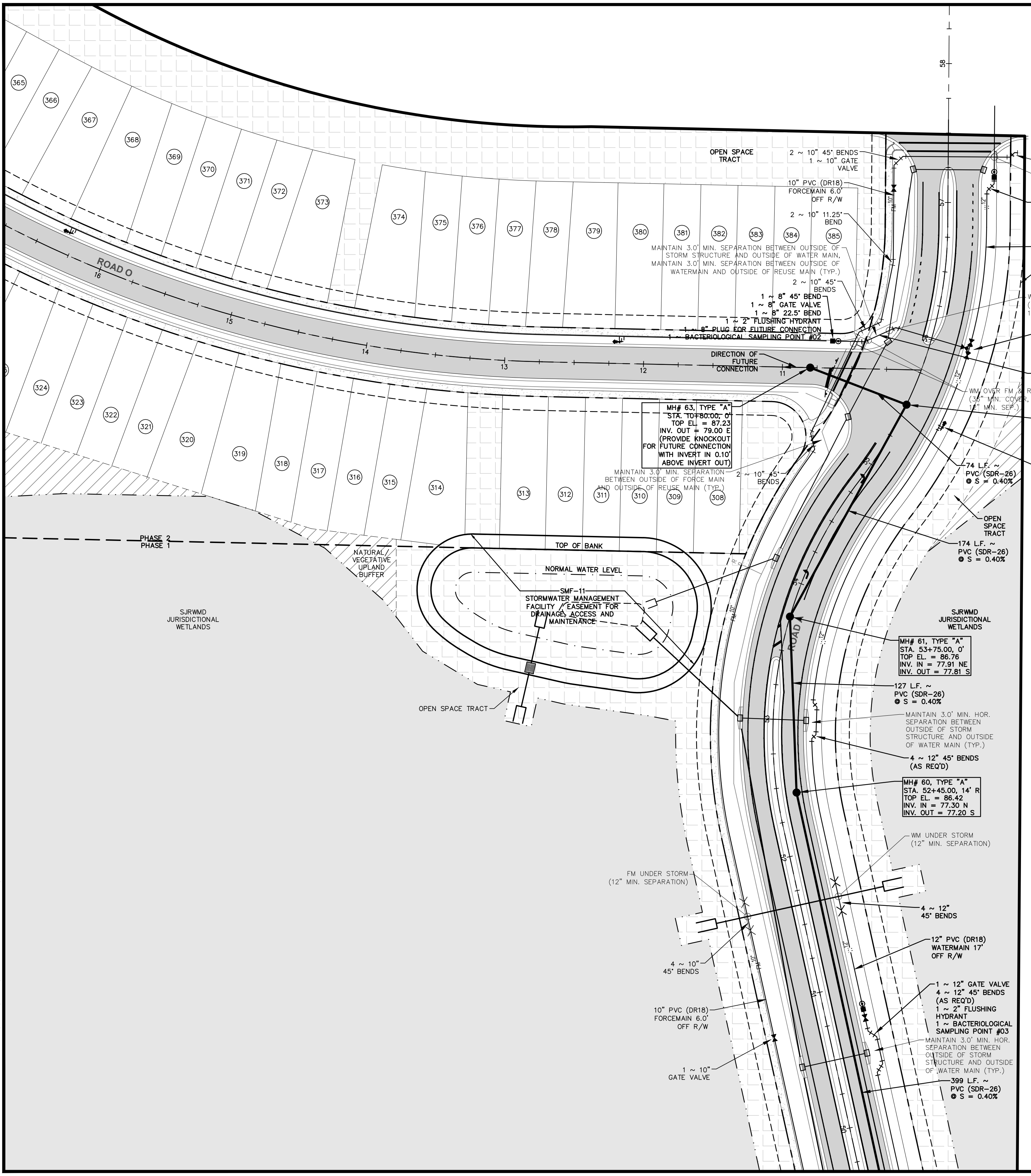
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ROAD O
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ROAD A
OPEN SPACE TRACT
2 ~ 10" 45° BENDS
1 ~ 10" GATE VALVE
10" PVC (DR18) FORCEMAIN 6.0' OFF R/W
2 ~ 10" 11.25° BEND
MAINTAIN 3.0' MIN. SEPARATION BETWEEN OUTSIDE OF STORM STRUCTURE AND OUTSIDE OF WATER MAIN, MAINTAIN 3.0' MIN. SEPARATION BETWEEN OUTSIDE OF WATERMAIN AND OUTSIDE OF REUSE MAIN (TYP.)
2 ~ 10" 45° BENDS
1 ~ 8" 45° BEND
1 ~ 8" GATE VALVE
1 ~ 8" 22.5° BEND
1 ~ 2" FLUSHING HYDRANT
1 ~ 8" PLUG FOR FUTURE CONNECTION
1 ~ BACTERIOLOGICAL SAMPLING POINT #02
DIRECTION OF FUTURE CONNECTION
MH# 63, TYPE "A"
STA. 10+80.00, 0'
TOP EL. = 87.23
INV. OUT = 79.00 E
(PROVIDE KNOCKOUT FOR FUTURE CONNECTION WITH INVERT IN 0.10' ABOVE INVERT OUT)
MAINTAIN 3.0' MIN. SEPARATION BETWEEN OUTSIDE OF FORCE MAIN AND OUTSIDE OF REUSE MAIN (TYP.)
2 ~ 10" 45° BENDS
2 ~ 10" 45° BENDS
WM OVER FM (36" MIN. COVER, 12" MIN. SEP.)
1 ~ 2" FLUSHING HYDRANT
1 ~ BACTERIOLOGICAL SAMPLING POINT #01
2 ~ 12" 45° BENDS (AS REQ'D)
12" PVC (DR18) WATERMAIN 17' OFF R/W
10' UTILITY ESM'T
WM OVER STORM (36" MIN. COVER, 12" MIN. SEP.)
1 ~ 10" TEE
2 ~ 10" GATE VALVES
1 ~ 8" GATE VALVE
1 ~ 8" 45° BEND
1 ~ 8" 22.5° BEND
WM OVER FM & RE (36" MIN. COVER, 12" MIN. SEP.)
MH# 62, TYPE "A"
STA. 55+50.00, 0'
TOP EL. = 87.36
INV. IN = 78.70 W
INV. OUT = 78.60 SW
1 ~ 6" FIRE HYDRANT ASSEMBLY
74 L.F. ~ PVC (SDR-26) @ S = 0.40%
OPEN SPACE TRACT
174 L.F. ~ PVC (SDR-26) @ S = 0.40%
PHASE 2
PHASE 1
NATURAL/VEGETATIVE UPLAND BUFFER
TOP OF BANK
NORMAL WATER LEVEL
SMF-11
STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
SJRWMD JURISDICTIONAL WETLANDS
OPEN SPACE TRACT
SJRWMD JURISDICTIONAL WETLANDS
MH# 61, TYPE "A"
STA. 53+75.00, 0'
TOP EL. = 86.76
INV. IN = 77.91 NE
INV. OUT = 77.81 S
127 L.F. ~ PVC (SDR-26) @ S = 0.40%
MAINTAIN 3.0' MIN. HOR. SEPARATION BETWEEN OUTSIDE OF STORM STRUCTURE AND OUTSIDE OF WATER MAIN (TYP.)
4 ~ 12" 45° BENDS (AS REQ'D)
MH# 60, TYPE "A"
STA. 52+45.00, 14' R
TOP EL. = 86.42
INV. IN = 77.30 N
INV. OUT = 77.20 S
WM UNDER STORM (12" MIN. SEPARATION)
FM UNDER STORM (12" MIN. SEPARATION)
4 ~ 12" 45° BENDS
12" PVC (DR18) WATERMAIN 17' OFF R/W
4 ~ 10" 45° BENDS
10" PVC (DR18) FORCEMAIN 6.0' OFF R/W
1 ~ 12" GATE VALVE
4 ~ 12" 45° BENDS (AS REQ'D)
1 ~ 2" FLUSHING HYDRANT
1 ~ BACTERIOLOGICAL SAMPLING POINT #03
MAINTAIN 3.0' MIN. HOR. SEPARATION BETWEEN OUTSIDE OF STORM STRUCTURE AND OUTSIDE OF WATER MAIN (TYP.)
1 ~ 10" GATE VALVE
399 L.F. ~ PVC (SDR-26) @ S = 0.40%
FM 10"
12"
N
40'

NOTES:

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10. ALL MANHOLE INVERT ELEVATIONS ARE AT CENTERLINE OF MANHOLE.
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WATER AND SEWER PLAN

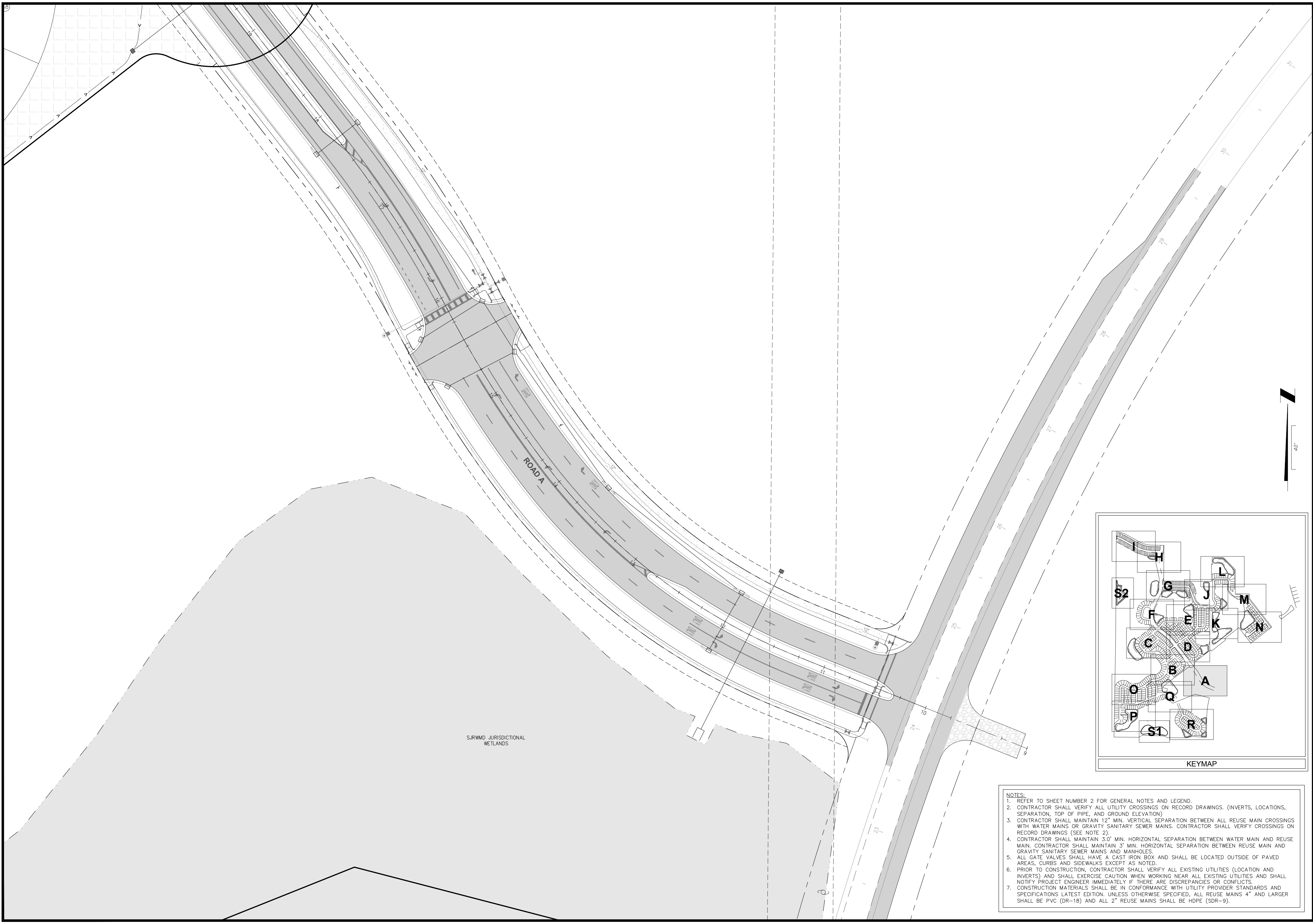
HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

PE NAME
P.E. NUMBER: PE NUMBER
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
Q.C.: RCW
Date: AUGUST 2022
Scale: 1" = 40'
Sheet 10H



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RECLAIMED WATER DISTRIBUTION SYSTEM PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	O.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 11A	

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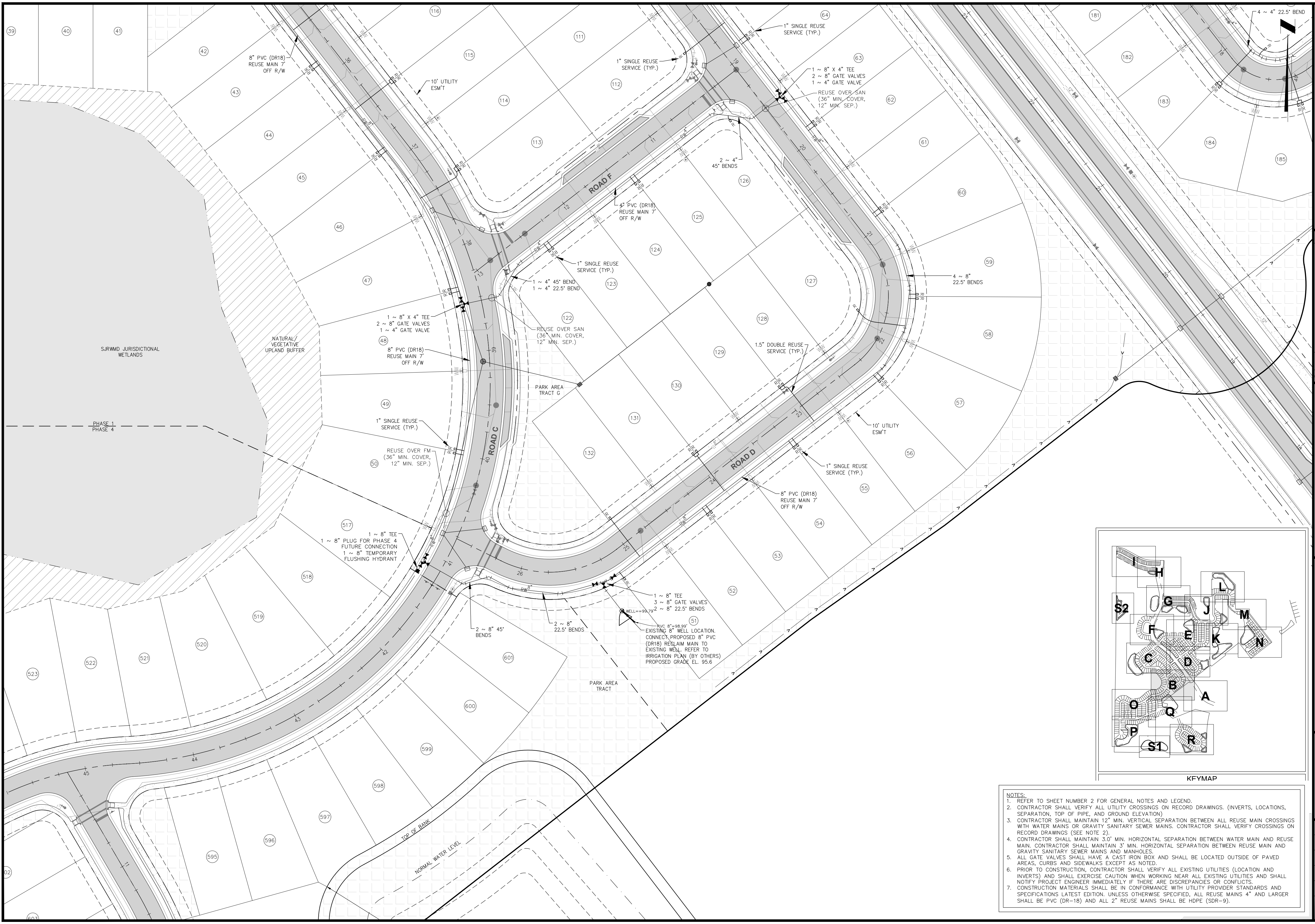
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8" PVC (DR18)
REUSE MAIN 7'
OFF R/W
10' UTILITY
ESM'T
1" SINGLE REUSE
SERVICE (TYP.)
1" SINGLE REUSE
SERVICE (TYP.)
1 ~ 8" X 4" TEE
2 ~ 8" GATE VALVES
1 ~ 4" GATE VALVE
REUSE OVER SAN
(36" MIN. COVER,
12" MIN. SEP.)
4 ~ 4" 22.5° BEND
ROAD F
4" PVC (DR18)
REUSE MAIN 7'
OFF R/W
2 ~ 4"
45° BENDS
1" SINGLE REUSE
SERVICE (TYP.)
1 ~ 4" 45° BEND
1 ~ 4" 22.5° BEND
4 ~ 8"
22.5° BENDS
1 ~ 8" X 4" TEE
2 ~ 8" GATE VALVES
1 ~ 4" GATE VALVE
REUSE OVER SAN
(36" MIN. COVER,
12" MIN. SEP.)
SJRWMD JURISDICTIONAL
WETLANDS
NATURAL/
VEGETATIVE
UPLAND BUFFER
8" PVC (DR18)
REUSE MAIN 7'
OFF R/W
PARK AREA
TRACT G
1.5" DOUBLE REUSE
SERVICE (TYP.)
PHASE 1
PHASE 4
1" SINGLE REUSE
SERVICE (TYP.)
10' UTILITY
ESM'T
REUSE OVER FM
(36" MIN. COVER,
12" MIN. SEP.)
ROAD C
ROAD D
1" SINGLE REUSE
SERVICE (TYP.)
8" PVC (DR18)
REUSE MAIN 7'
OFF R/W
1 ~ 8" TEE
1 ~ 8" PLUG FOR PHASE 4
FUTURE CONNECTION
1 ~ 8" TEMPORARY
FLUSHING HYDRANT
1 ~ 8" TEE
3 ~ 8" GATE VALVES
2 ~ 8" 22.5° BENDS
WELL==99.79'
PVC 8"=98.99'
EXISTING 8" WELL LOCATION.
CONNECT PROPOSED 8" PVC
(DR18) RECLAIM MAIN TO
EXISTING WELL. REFER TO
IRRIGATION PLAN (BY OTHERS)
PROPOSED GRADE EL. 95.6
2 ~ 8" 45°
BENDS
2 ~ 8"
22.5° BENDS
PARK AREA
TRACT
TOP OF BANK
NORMAL WATER LEVEL
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KEYMAP

NOTES:

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RECLAIMED WATER DISTRIBUTION SYSTEM PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
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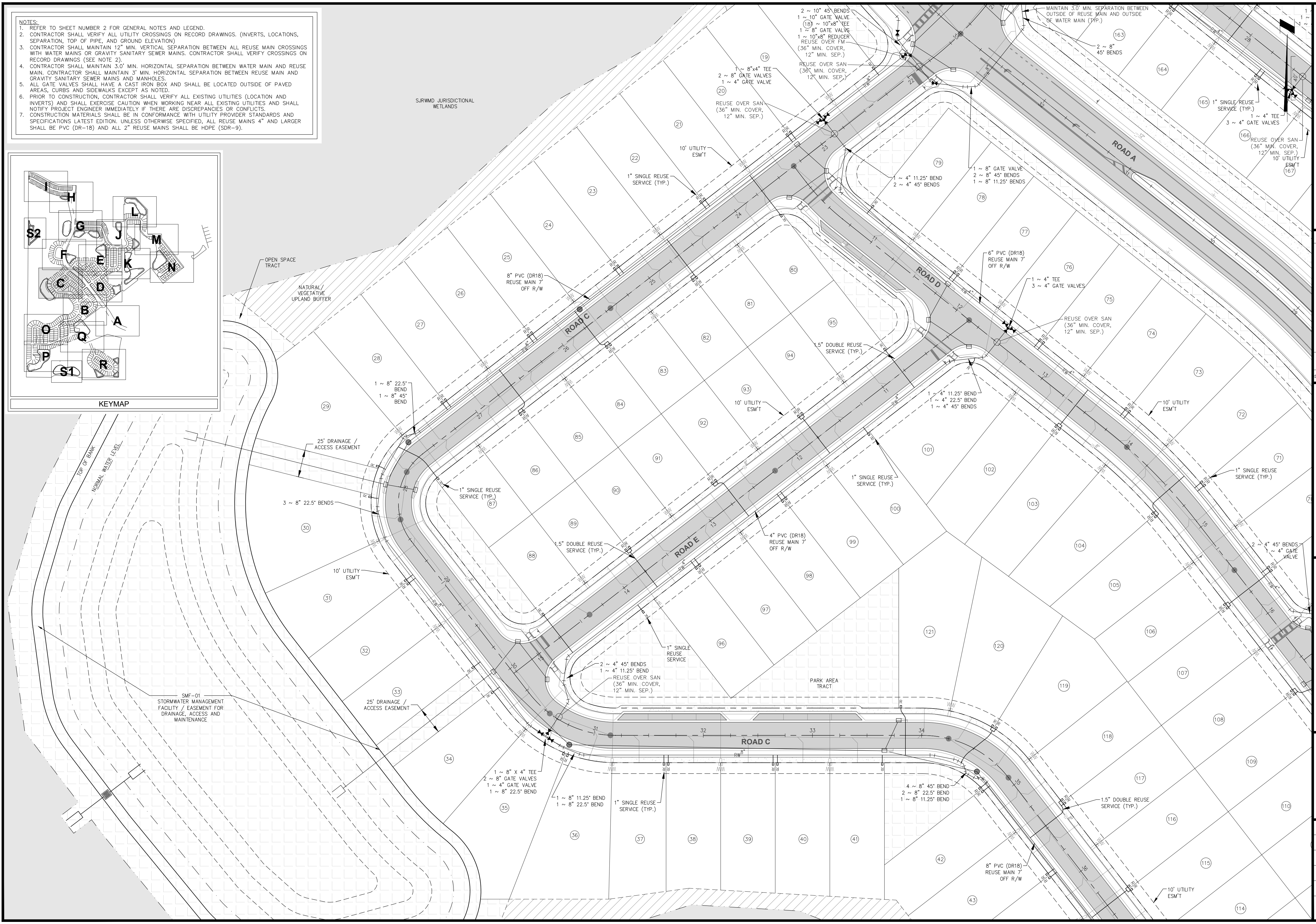
KEYMAP
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SJRWMD JURISDICTIONAL WETLANDS
OPEN SPACE TRACT
NATURAL/ VEGETATIVE UPLAND BUFFER
TOP OF BANK
NORMAL WATER LEVEL
SMF-01 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
25' DRAINAGE / ACCESS EASEMENT
10' UTILITY ESM'T
ROAD A
ROAD C
ROAD D
ROAD E
PARK AREA TRACT
2 ~ 10" 45° BENDS
1 ~ 10" GATE VALVE
1 ~ 10"x8" TEE
1 ~ 8" GATE VALVS
1 ~ 10"x8" REDUCER
REUSE OVER FM (36" MIN. COVER, 12" MIN. SEP.)
REUSE OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
1 ~ 8"x4" TEE
2 ~ 8" GATE VALVES
1 ~ 4" GATE VALVE
MAINTAIN 3.0' MIN. SEPARATION BETWEEN OUTSIDE OF REUSE MAIN AND OUTSIDE OF WATER MAIN (TYP.)
2 ~ 8" 45° BENDS
1" SINGLE REUSE SERVICE (TYP.)
1 ~ 4" TEE
3 ~ 4" GATE VALVES
1 ~ 4" 11.25° BEND
2 ~ 4" 45° BENDS
1 ~ 8" GATE VALVE
2 ~ 8" 45° BENDS
1 ~ 8" 11.25° BENDS
6" PVC (DR18) REUSE MAIN 7' OFF R/W
8" PVC (DR18) REUSE MAIN 7' OFF R/W
1.5" DOUBLE REUSE SERVICE (TYP.)
1 ~ 4" 11.25° BEND
1 ~ 4" 22.5° BEND
1 ~ 4" 45° BENDS
1 ~ 8" 22.5° BEND
1 ~ 8" 45° BEND
3 ~ 8" 22.5° BENDS
4" PVC (DR18) REUSE MAIN 7' OFF R/W
2 ~ 4" 45° BENDS
1 ~ 4" GATE VALVE
1" SINGLE REUSE SERVICE
2 ~ 4" 45° BENDS
1 ~ 4" 11.25° BEND
1 ~ 8" X 4" TEE
2 ~ 8" GATE VALVES
1 ~ 4" GATE VALVE
1 ~ 8" 22.5° BEND
1 ~ 8" 11.25° BEND
1 ~ 8" 22.5° BEND
4 ~ 8" 45° BEND
2 ~ 8" 22.5° BEND
1 ~ 8" 11.25° BEND
40'
RW 8"
RW 4"
R
WW

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

RECLAIMED WATER
DISTRIBUTION SYSTEM
PLAN

No.	Date	Revision	By
7	:		
6	:		
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Florida Registry 3650 L.A. Number: LC26000311

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 11C	

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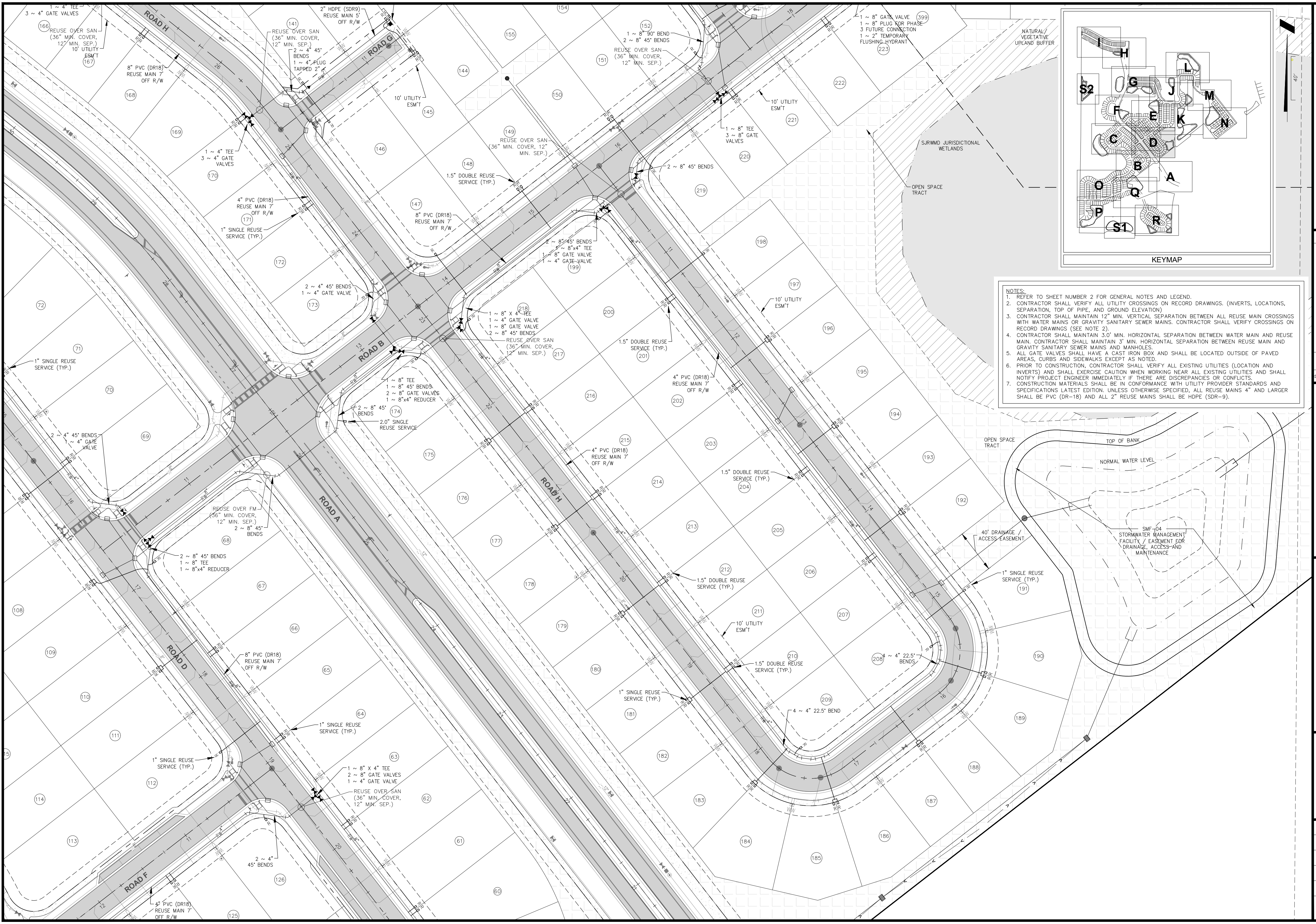
ROAD A
ROAD B
ROAD D
ROAD F
ROAD G
ROAD H
1 ~ 4" TEE
3 ~ 4" GATE VALVES
REUSE OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
10' UTILITY ESM'T
8" PVC (DR18) REUSE MAIN 7' OFF R/W
2" HDPE (SDR9) REUSE MAIN 5' OFF R/W
2 ~ 4" 45° BENDS
1 ~ 4" PLUG TAPPED 2"
1 ~ 8" 90° BEND
2 ~ 8" 45° BENDS
1 ~ 8" GATE VALVE
1 ~ 8" PLUG FOR PHASE 3 FUTURE CONNECTION
1 ~ 2" TEMPORARY FLUSHING HYDRANT
NATURAL VEGETATIVE UPLAND BUFFER
SJRWMD JURISDICTIONAL WETLANDS
OPEN SPACE TRACT
1 ~ 8" TEE
3 ~ 8" GATE VALVES
1.5" DOUBLE REUSE SERVICE (TYP.)
4" PVC (DR18) REUSE MAIN 7' OFF R/W
1" SINGLE REUSE SERVICE (TYP.)
1 ~ 4" GATE VALVE
1 ~ 8"x4" TEE
1 ~ 8" X 4" TEE
2 ~ 8" GATE VALVES
1 ~ 8"x4" REDUCER
2.0" SINGLE REUSE SERVICE
REUSE OVER FM (36" MIN. COVER, 12" MIN. SEP.)
4 ~ 4" 22.5° BENDS
4 ~ 4" 22.5° BEND
40' DRAINAGE / ACCESS EASEMENT
TOP OF BANK
NORMAL WATER LEVEL
SMF-04 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
40'
KEYMAP
A
B
C
D
E
F
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H
I
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K
L
M
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P
Q
R
S1
S2

NOTES:

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RECLAIMED WATER DISTRIBUTION SYSTEM PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 11D	

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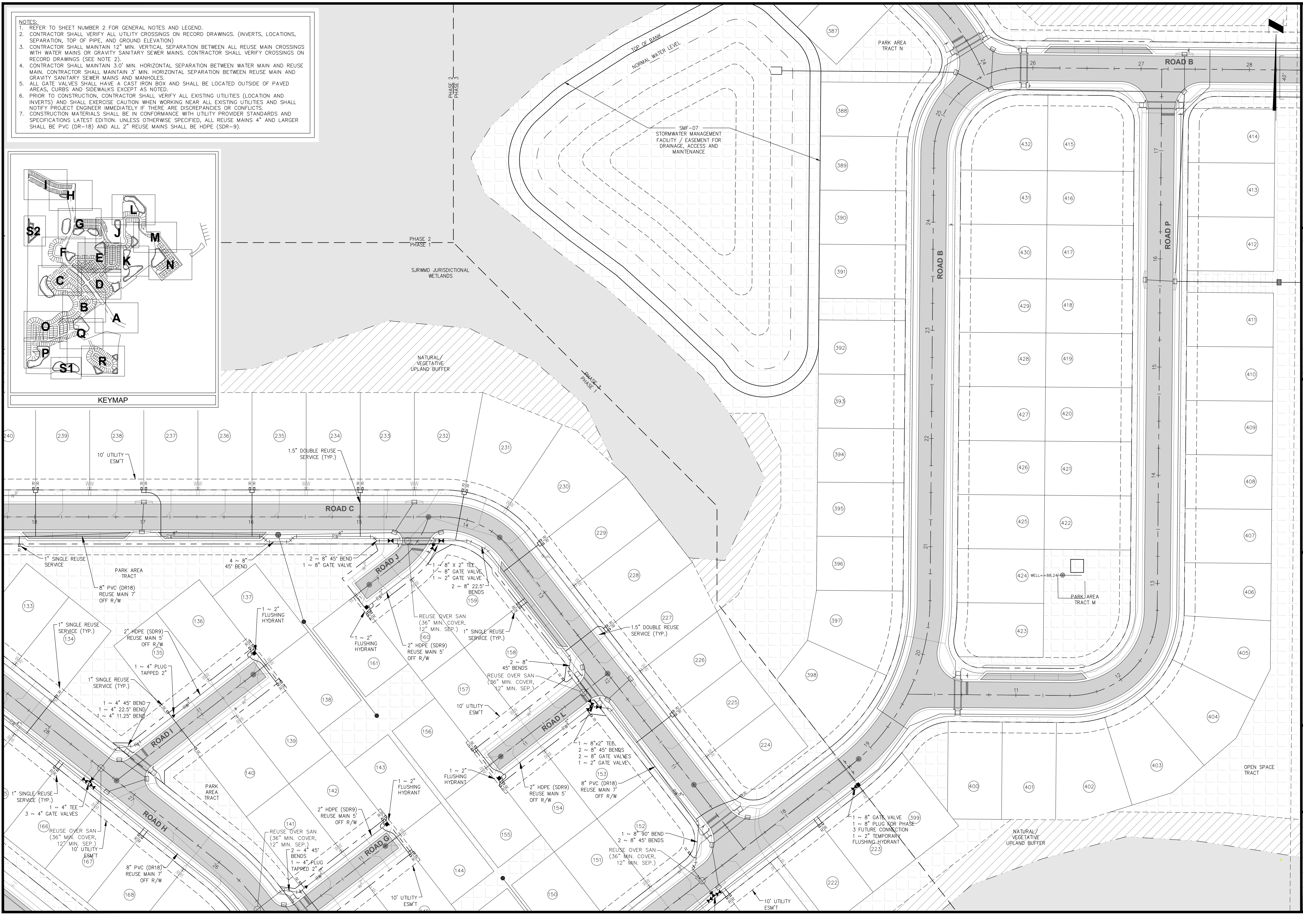
KEYMAP
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S1
R
TOP OF BANK
NORMAL WATER LEVEL
SMF-07
STORMWATER MANAGEMENT
FACILITY / EASEMENT FOR
DRAINAGE, ACCESS AND
MAINTENANCE
PHASE 2
PHASE 3
PHASE 2
PHASE 1
SJRWMD JURISDICTIONAL
WETLANDS
NATURAL/
VEGETATIVE
UPLAND BUFFER
PHASE 3
PHASE 1
PARK AREA
TRACT N
ROAD B
ROAD P
ROAD C
ROAD J
ROAD L
ROAD I
ROAD H
ROAD G
PARK AREA
TRACT M
WELL=88.24'
OPEN SPACE
TRACT
40'
10' UTILITY
ESM'T
1.5" DOUBLE REUSE
SERVICE (TYP.)
1" SINGLE REUSE
SERVICE
PARK AREA
TRACT
8" PVC (DR18)
REUSE MAIN 7'
OFF R/W
4 ~ 8"
45° BEND
2 ~ 8" 45° BEND
1 ~ 8" GATE VALVE
1 ~ 8" X 2" TEE
1 ~ 8" GATE VALVE
1 ~ 2" GATE VALVE
2 ~ 8" 22.5°
BENDS
REUSE OVER SAN
(36" MIN. COVER,
12" MIN. SEP.)
1 ~ 2"
FLUSHING
HYDRANT
2" HDPE (SDR9)
REUSE MAIN 5'
OFF R/W
1" SINGLE REUSE
SERVICE (TYP.)
2 ~ 8"
45° BENDS
1.5" DOUBLE REUSE
SERVICE (TYP.)
1 ~ 4" PLUG
TAPPED 2"
1 ~ 4" 45° BEND
1 ~ 4" 22.5° BEND
1 ~ 4" 11.25° BEND
1 ~ 8"x2" TEE
2 ~ 8" 45° BENDS
2 ~ 8" GATE VALVES
1 ~ 2" GATE VALVE
1 ~ 4" TEE
3 ~ 4" GATE VALVES
2 ~ 4" 45°
BENDS
1 ~ 4" PLUG
TAPPED 2"
1 ~ 8" 90° BEND
2 ~ 8" 45° BENDS
1 ~ 8" GATE VALVE
1 ~ 8" PLUG FOR PHASE
3 FUTURE CONNECTION
1 ~ 2" TEMPORARY
FLUSHING HYDRANT
NATURAL/
VEGETATIVE
UPLAND BUFFER
RW 8"
W 8"
RW 2"
W 2"
RW 4"
R
WW

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RECLAIMED WATER DISTRIBUTION SYSTEM PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 11E	

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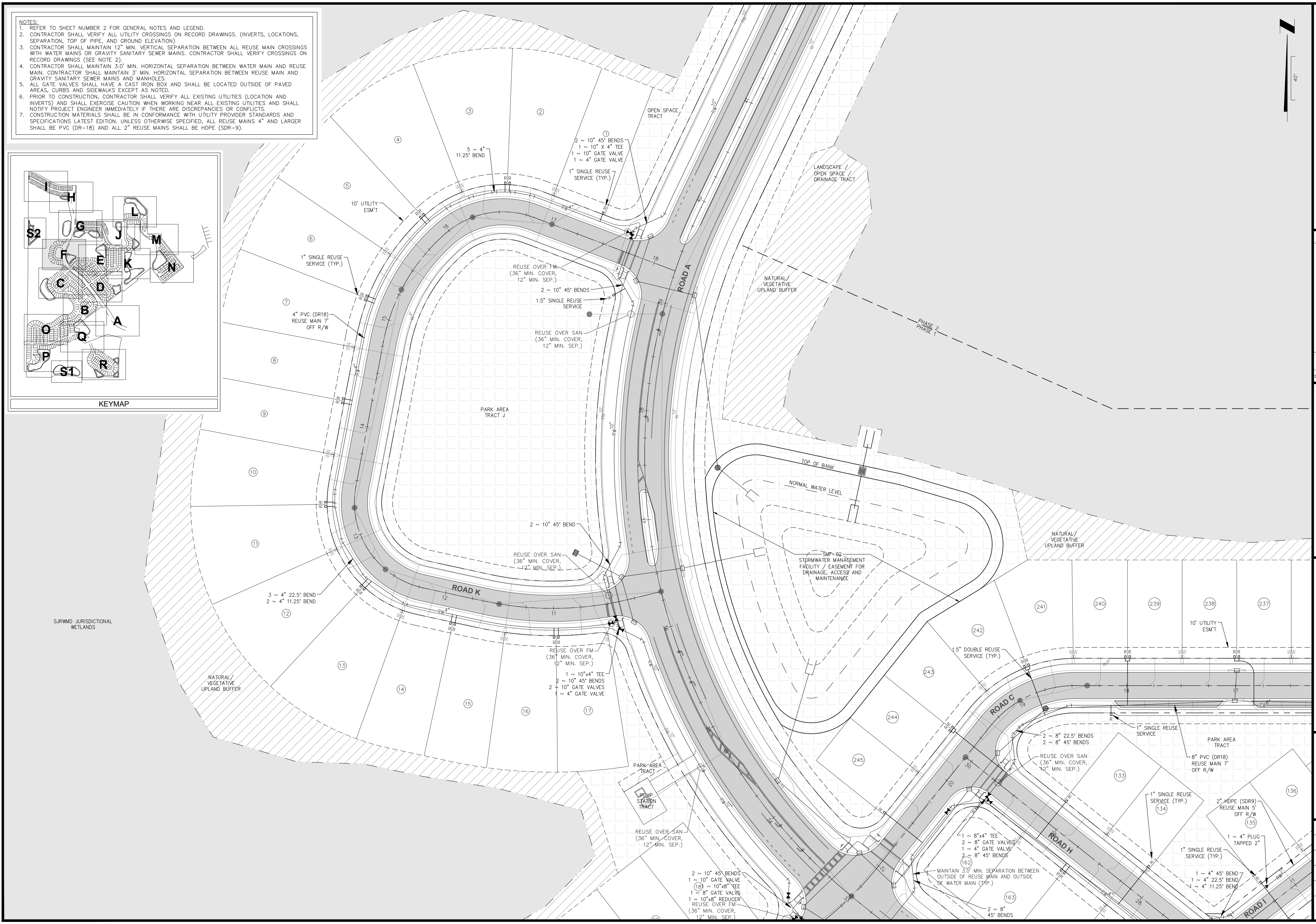
KEYMAP
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OPEN SPACE TRACT
5 ~ 4" 11.25° BEND
2 ~ 10" 45° BENDS
1 ~ 10" X 4" TEE
1 ~ 10" GATE VALVE
1 ~ 4" GATE VALVE
1" SINGLE REUSE SERVICE (TYP.)
10' UTILITY ESM'T
1" SINGLE REUSE SERVICE (TYP.)
4" PVC (DR18) REUSE MAIN 7' OFF R/W
LANDSCAPE / OPEN SPACE / DRAINAGE TRACT
NATURAL/ VEGETATIVE UPLAND BUFFER
PHASE 2
PHASE 1
REUSE OVER FM (36" MIN. COVER, 12" MIN. SEP.)
2 ~ 10" 45° BENDS
1.5" SINGLE REUSE SERVICE
REUSE OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
ROAD A
RW 10"
RW 4"
PARK AREA TRACT J
TOP OF BANK
NORMAL WATER LEVEL
SMF-02 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
2 ~ 10" 45° BEND
REUSE OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
ROAD K
3 ~ 4" 22.5° BEND
2 ~ 4" 11.25° BEND
REUSE OVER FM (36" MIN. COVER, 12" MIN. SEP.)
1 ~ 10"x4" TEE
2 ~ 10" 45° BENDS
2 ~ 10" GATE VALVES
1 ~ 4" GATE VALVE
SJRWMD JURISDICTIONAL WETLANDS
NATURAL/ VEGETATIVE UPLAND BUFFER
NATURAL/ VEGETATIVE UPLAND BUFFER
FM 10"
PARK AREA TRACT
PUMP STATION TRACT
REUSE OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
2 ~ 10" 45° BENDS
1 ~ 10" GATE VALVE
(181) 1 ~ 10"x8" TEE
1 ~ 8" GATE VALVS
1 ~ 10"x8" REDUCER
REUSE OVER FM (36" MIN. COVER, 12" MIN. SEP.)
(241)
(240)
(239)
(238)
(237)
(242)
(243)
(244)
(245)
10' UTILITY ESM'T
1.5" DOUBLE REUSE SERVICE (TYP.)
ROAD C
2 ~ 8" 22.5° BENDS
2 ~ 8" 45° BENDS
1" SINGLE REUSE SERVICE
PARK AREA TRACT
8" PVC (DR18) REUSE MAIN 7' OFF R/W
REUSE OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
(133)
(134)
(135)
(136)
1" SINGLE REUSE SERVICE (TYP.)
2" HDPE (SDR9) REUSE MAIN 5' OFF R/W
1 ~ 4" PLUG TAPPED 2"
1" SINGLE REUSE SERVICE (TYP.)
1 ~ 4" 45° BEND
1 ~ 4" 22.5° BEND
1 ~ 4" 11.25° BEND
ROAD H
ROAD I
1 ~ 8"x4" TEE
2 ~ 8" GATE VALVES
1 ~ 4" GATE VALVE
2 ~ 8" 45° BENDS
(162)
(163)
MAINTAIN 3.0' MIN. SEPARATION BETWEEN OUTSIDE OF REUSE MAIN AND OUTSIDE OF WATER MAIN (TYP.)
2 ~ 8" 45° BENDS

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RECLAIMED WATER DISTRIBUTION SYSTEM PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
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Date: AUGUST 2022
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Sheet 11F

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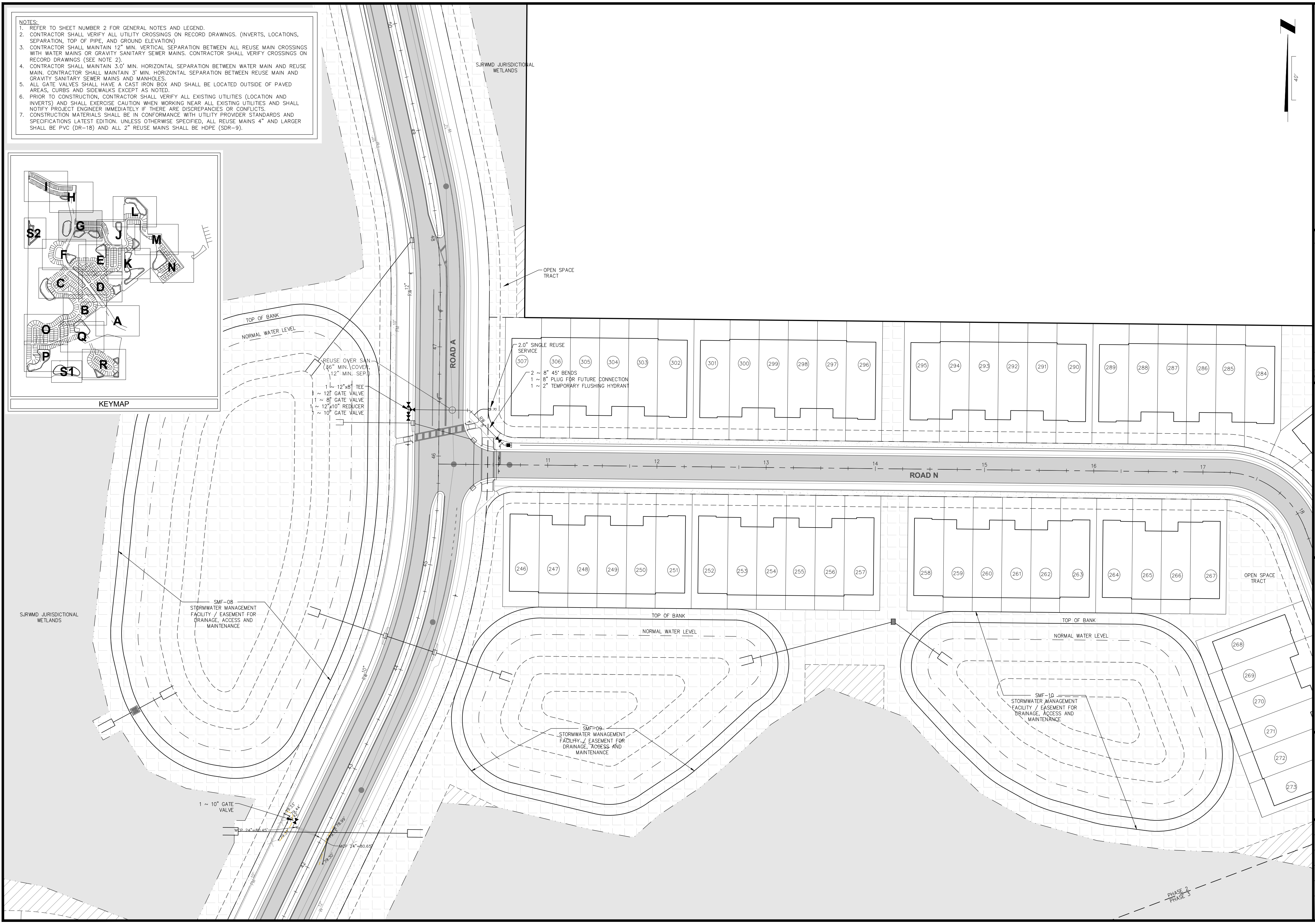
KEYMAP
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SJRWMD JURISDICTIONAL WETLANDS
OPEN SPACE TRACT
40'
TOP OF BANK
NORMAL WATER LEVEL
REUSE OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
1 ~ 12"x8" TEE
1 ~ 12" GATE VALVE
1 ~ 8" GATE VALVE
1 ~ 12"x10" REDUCER
1 ~ 10" GATE VALVE
2.0" SINGLE REUSE SERVICE
2 ~ 8" 45° BENDS
1 ~ 8" PLUG FOR FUTURE CONNECTION
1 ~ 2" TEMPORARY FLUSHING HYDRANT
ROAD A
ROAD N
RW 12"
FM 10"
RW 8"
W 12"
307
306
305
304
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302
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SMF-08 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
SMF-09 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
SMF-10 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
1 ~ 10" GATE VALVE
MCP 24"=80.45'
MCP 24"=80.65'
79.33'
79.44'
79.42'
79.37'
79.13'
78.99'
79.30'
PHASE 2
PHASE 3
11
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RECLAIMED WATER DISTRIBUTION SYSTEM PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	O.C.: RCW
Date: AUGUST 2022	
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Sheet 11G	

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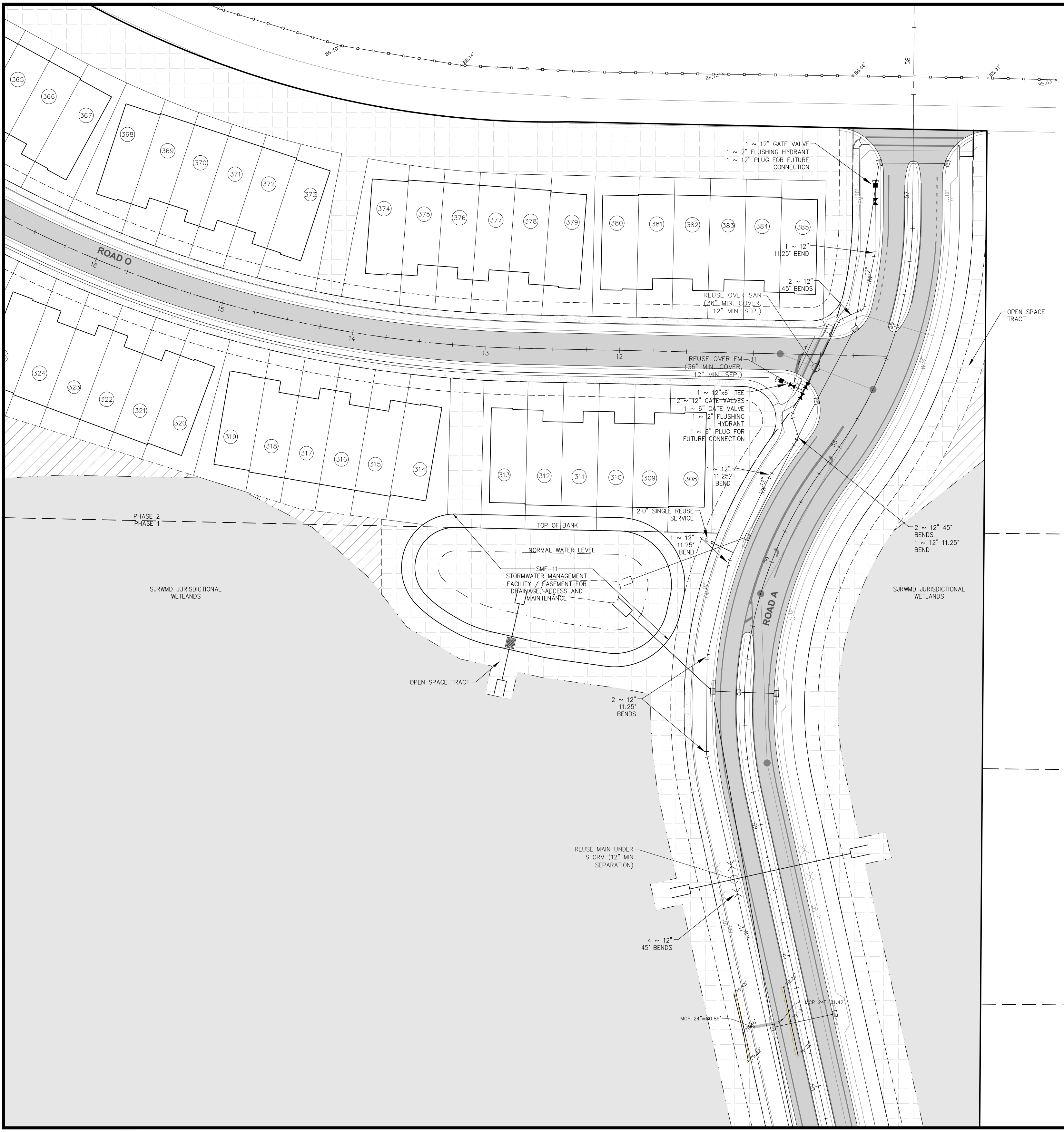
86.30'
86.14'
86.74'
86.66'
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383
384
385
324
323
322
321
320
319
318
317
316
315
314
313
312
311
310
309
308
ROAD O
16
15
14
13
12
11
ROAD A
1 ~ 12" GATE VALVE
1 ~ 2" FLUSHING HYDRANT
1 ~ 12" PLUG FOR FUTURE CONNECTION
1 ~ 12" 11.25° BEND
2 ~ 12" 45° BENDS
REUSE OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
REUSE OVER FM (36" MIN. COVER, 12" MIN. SEP.)
1 ~ 12"x6" TEE
2 ~ 12" GATE VALVES
1 ~ 6" GATE VALVE
1 ~ 2" FLUSHING HYDRANT
1 ~ 6" PLUG FOR FUTURE CONNECTION
1 ~ 12" 11.25° BEND
2.0" SINGLE REUSE SERVICE
1 ~ 12" 11.25° BEND
OPEN SPACE TRACT
2 ~ 12" 45° BENDS
1 ~ 12" 11.25° BEND
PHASE 2
PHASE 1
TOP OF BANK
NORMAL WATER LEVEL
SMF-11
STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
SJRWMD JURISDICTIONAL WETLANDS
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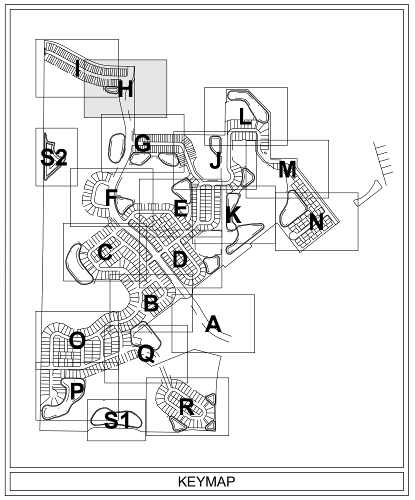
OPEN SPACE TRACT
2 ~ 12" 11.25° BENDS
REUSE MAIN UNDER STORM (12" MIN SEPARATION)
4 ~ 12" 45° BENDS
FM 10"
RW 12"
W 12"
MCP 24"=80.89'
MCP 24"=81.42'
79.45'
79.46'
79.32'
79.26'
79.13'
79.20'

40'


I
H
G
J
L
M
S2
F
E
K
N
C
D
B
A
O
Q
P
R
S1

KEYMAP

NOTES:

1. REFER TO SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS ON RECORD DRAWINGS. (INVERTS, LOCATIONS, SEPARATION, TOP OF PIPE, AND GROUND ELEVATION)
3. CONTRACTOR SHALL MAINTAIN 12" MIN. VERTICAL SEPARATION BETWEEN ALL REUSE MAIN CROSSINGS WITH WATER MAINS OR GRAVITY SANITARY SEWER MAINS. CONTRACTOR SHALL VERIFY CROSSINGS ON RECORD DRAWINGS (SEE NOTE 2).
4. CONTRACTOR SHALL MAINTAIN 3.0' MIN. HORIZONTAL SEPARATION BETWEEN WATER MAIN AND REUSE MAIN. CONTRACTOR SHALL MAINTAIN 3' MIN. HORIZONTAL SEPARATION BETWEEN REUSE MAIN AND GRAVITY SANITARY SEWER MAINS AND MANHOLES.
5. ALL GATE VALVES SHALL HAVE A CAST IRON BOX AND SHALL BE LOCATED OUTSIDE OF PAVED AREAS, CURBS AND SIDEWALKS EXCEPT AS NOTED.
6. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES (LOCATION AND INVERTS) AND SHALL EXERCISE CAUTION WHEN WORKING NEAR ALL EXISTING UTILITIES AND SHALL NOTIFY PROJECT ENGINEER IMMEDIATELY IF THERE ARE DISCREPANCIES OR CONFLICTS.
7. CONSTRUCTION MATERIALS SHALL BE IN CONFORMANCE WITH UTILITY PROVIDER STANDARDS AND SPECIFICATIONS LATEST EDITION. UNLESS OTHERWISE SPECIFIED, ALL REUSE MAINS 4" AND LARGER SHALL BE PVC (DR-18) AND ALL 2" REUSE MAINS SHALL BE HDPE (SDR-9).

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
7	:		
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5	:		
4	:		
3	:		
2	:		
1	:		

RECLAIMED WATER DISTRIBUTION SYSTEM PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

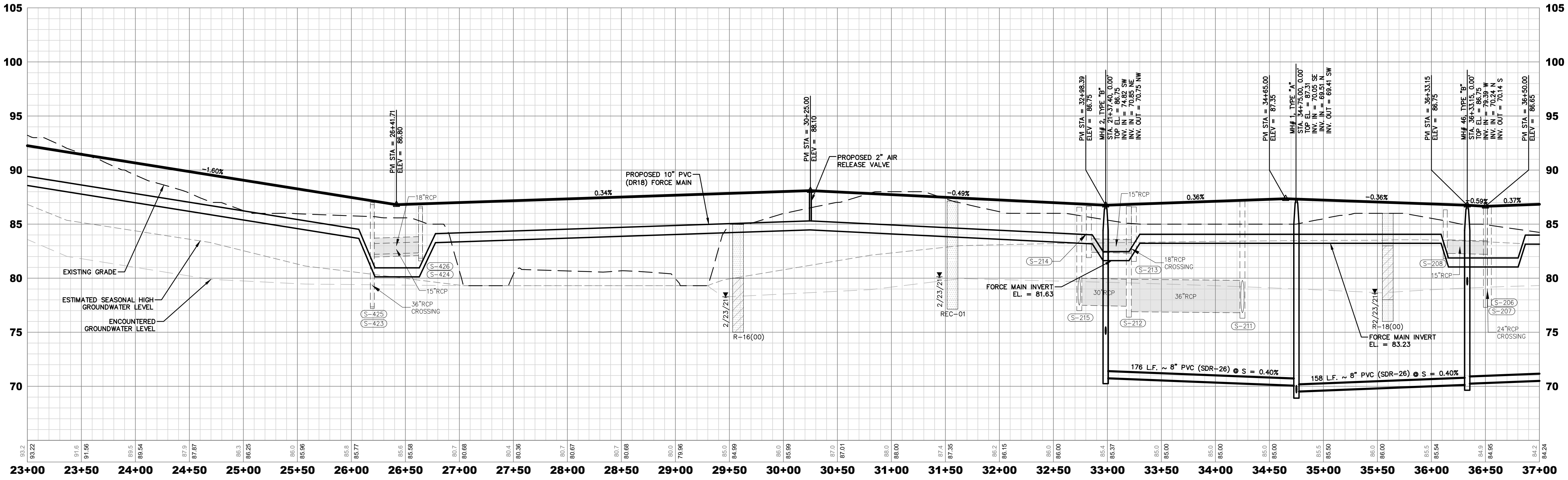
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 11H	

Printed By: Garrett

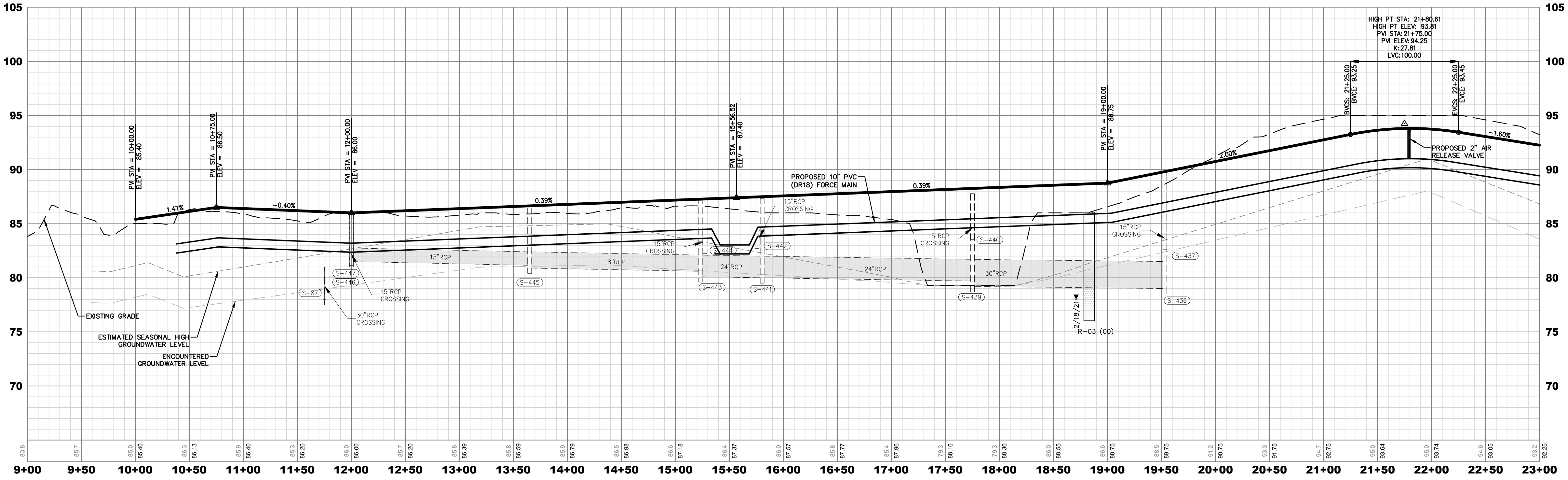
Printed: Sep 28, 2022 - 4:21pm


105
100
95
90
85
80
75
70
PVI STA = 26+41.71 ELEV = 86.80
PVI STA = 30+25.00 ELEV = 88.10
PROPOSED 2" AIR RELEASE VALVE
PROPOSED 10" PVC (DR18) FORCE MAIN
PVI STA = 32+98.39 ELEV = 86.75
MH# 2, TYPE "B" STA. 21+37.40, 0.00' TOP EL. = 86.75 INV. IN = 74.82 SW INV. IN = 70.85 NE INV. OUT = 70.75 NW
PVI STA = 34+65.00 ELEV = 87.35
MH# 1, TYPE "A" STA. 34+75.00, 0.00' TOP EL. = 87.31 INV. IN = 70.05 SE INV. IN = 69.51 N INV. OUT = 69.41 SW
PVI STA = 36+33.15 ELEV = 86.75
MH# 46, TYPE "B" STA. 36+33.15, 0.00' TOP EL. = 86.75 INV. IN = 79.39 W INV. IN = 70.24 N INV. OUT = 70.14 S
PVI STA = 36+50.00 ELEV = 86.65
-1.60%
0.34%
-0.49%
0.36%
-0.36%
-0.59%
0.37%
18"RCP
15"RCP
36"RCP CROSSING
18"RCP CROSSING
24"RCP CROSSING
30"RCP
36"RCP
EXISTING GRADE
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
ENCOUNTERED GROUNDWATER LEVEL
FORCE MAIN INVERT EL. = 81.63
FORCE MAIN INVERT EL. = 83.23
176 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
158 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
S-425
S-423
S-426
S-424
S-214
S-215
S-213
S-212
S-211
S-208
S-206
S-207
2/23/21
R-16(00)
REC-01
R-18(00)
23+00
23+50
24+00
24+50
25+00
25+50
26+00
26+50
27+00
27+50
28+00
28+50
29+00
29+50
30+00
30+50
31+00
31+50
32+00
32+50
33+00
33+50
34+00
34+50
35+00
35+50
36+00
36+50
37+00

ROAD A

(23+00.00–37+00.00)

SCALE: 1"=50' VERT., 1"=5' HORZ.


105
100
95
90
85
80
75
70
PVI STA = 10+00.00 ELEV = 85.40
PVI STA = 10+75.00 ELEV = 86.50
PVI STA = 12+00.00 ELEV = 86.00
PVI STA = 15+56.52 ELEV = 87.40
PVI STA = 19+00.00 ELEV = 88.75
HIGH PT STA: 21+80.61
HIGH PT ELEV: 93.81
PVI STA: 21+75.00
PVI ELEV: 94.25
K: 27.81
LVC: 100.00
BVCS: 21+25.00 BVCE: 93.25
EVCS: 22+25.00 EVCE: 93.45
PROPOSED 2" AIR RELEASE VALVE
PROPOSED 10" PVC (DR18) FORCE MAIN
1.47%
-0.40%
0.39%
0.39%
2.00%
-1.60%
15"RCP
18"RCP
24"RCP
30"RCP
15"RCP CROSSING
30"RCP CROSSING
EXISTING GRADE
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
ENCOUNTERED GROUNDWATER LEVEL
S-87
S-447
S-446
S-445
S-444
S-443
S-442
S-441
S-440
S-439
S-437
S-436
2/18/21
R-03 (00)
9+00
9+50
10+00
10+50
11+00
11+50
12+00
12+50
13+00
13+50
14+00
14+50
15+00
15+50
16+00
16+50
17+00
17+50
18+00
18+50
19+00
19+50
20+00
20+50
21+00
21+50
22+00
22+50
23+00

ROAD A

(9+00.00–23+00.00)

SCALE: 1"=50' VERT., 1"=5' HORZ.

J:\21\21-04-0008 Preserve at Howey\Design\Dwgs\Plots\21-04-0008 Pro.dwg

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3	:		
2	:		
1	:		

ROADWAY & SEWER PROFILES

HILLSIDE GROVE

HOWEY IN THE HILLS

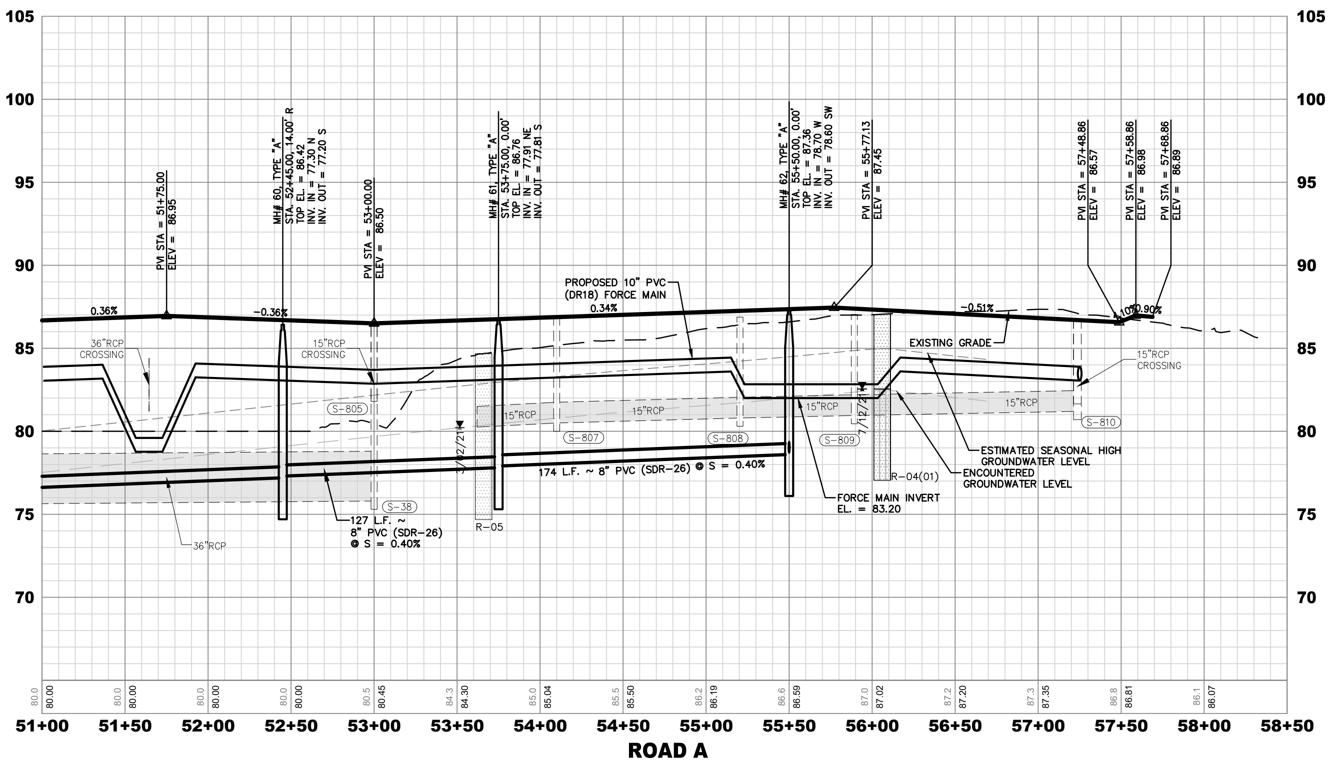
PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 50'	
Sheet 12A	

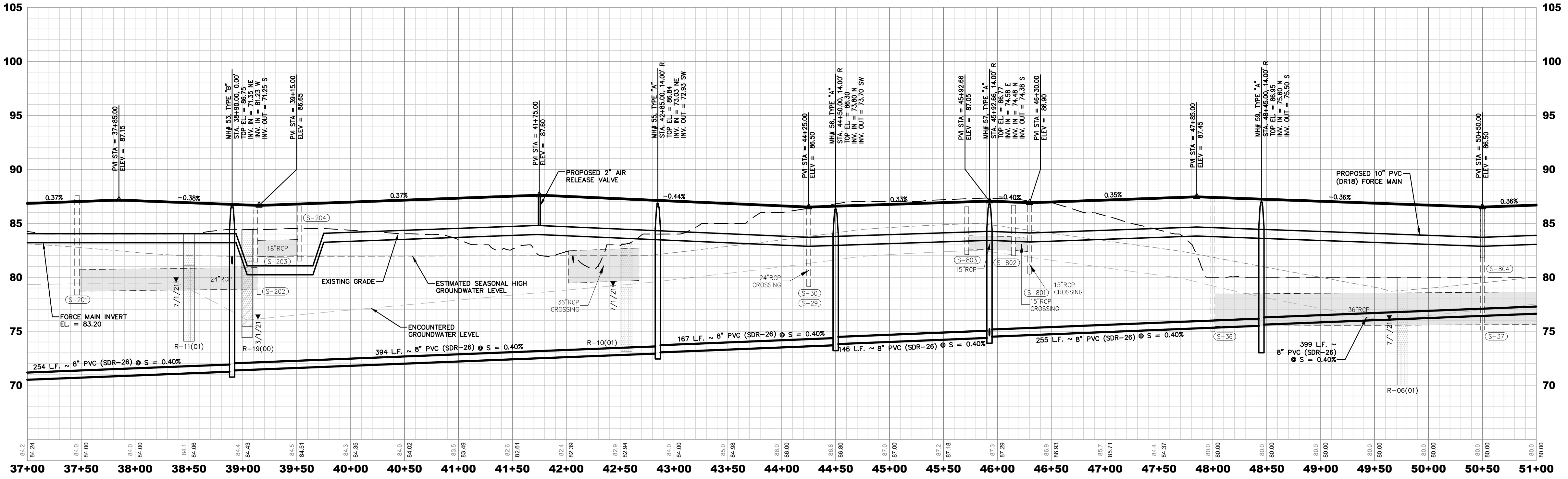
Printed: Sep 28, 2022 - 4:22pm   Printed By: Garrett


105
100
95
90
85
80
75
70
PVI STA = 51+75.00
ELEV = 86.95
MH# 60, TYPE "A"
STA. 52+45.00, 14.00' R
TOP EL. = 86.42
INV. IN = 77.30 N
INV. OUT = 77.20 S
PVI STA = 53+00.00
ELEV = 86.50
MH# 61, TYPE "A"
STA. 53+75.00, 0.00'
TOP EL. = 86.76
INV. IN = 77.91 NE
INV. OUT = 77.81 S
MH# 62, TYPE "A"
STA. 55+50.00, 0.00'
TOP EL. = 87.36
INV. IN = 78.70 W
INV. OUT = 78.60 SW
PVI STA = 55+77.13
ELEV = 87.45
PVI STA = 57+48.86
ELEV = 86.57
PVI STA = 57+58.86
ELEV = 86.98
PVI STA = 57+68.86
ELEV = 86.89
0.36%
-0.36%
0.34%
-0.51%
1.10%
0.90%
PROPOSED 10" PVC
(DR18) FORCE MAIN
36"RCP
CROSSING
15"RCP
CROSSING
EXISTING GRADE
15"RCP
CROSSING
S-805
S-807
S-808
S-809
S-810
S-38
15"RCP
15"RCP
15"RCP
15"RCP
7/12/21
R-05
R-04(01)
174 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
127 L.F. ~
8" PVC (SDR-26)
@ S = 0.40%
36"RCP
FORCE MAIN INVERT
EL. = 83.20
ESTIMATED SEASONAL HIGH
GROUNDWATER LEVEL
ENCOUNTERED
GROUNDWATER LEVEL
51+00
51+50
52+00
52+50
53+00
53+50
54+00
54+50
55+00
55+50
56+00
56+50
57+00
57+50
58+00
58+50

ROAD A

(51+00.00–58+50.00)

SCALE: 1"=50' VERT., 1"=5' HORZ.


105
100
95
90
85
80
75
70
PVI STA = 37+85.00
ELEV = 87.15
MH# 53, TYPE "B"
STA. 38+90.00, 0.00'
TOP EL. = 86.75
INV. IN = 71.35 NE
INV. IN = 81.23 W
INV. OUT = 71.25 S
PVI STA = 39+15.00
ELEV = 86.65
PVI STA = 41+75.00
ELEV = 87.60
PROPOSED 2" AIR
RELEASE VALVE
MH# 55, TYPE "A"
STA. 42+85.00, 14.00' R
TOP EL. = 86.84
INV. IN = 73.03 NE
INV. OUT = 72.93 SW
PVI STA = 44+25.00
ELEV = 86.50
MH# 56, TYPE "A"
STA. 44+50.00, 14.00' R
TOP EL. = 86.30
INV. IN = 73.80 N
INV. OUT = 73.70 SW
PVI STA = 45+92.66
ELEV = 87.05
MH# 57, TYPE "A"
STA. 45+92.66, 14.00' R
TOP EL. = 86.77
INV. IN = 74.58 E
INV. IN = 74.48 N
INV. OUT = 74.38 S
PVI STA = 46+30.00
ELEV = 86.90
PVI STA = 47+85.00
ELEV = 87.45
MH# 59, TYPE "A"
STA. 48+45.00, 14.00' R
TOP EL. = 86.95
INV. IN = 75.60 N
INV. OUT = 75.50 S
PVI STA = 50+50.00
ELEV = 86.50
0.37%
-0.38%
0.37%
-0.44%
0.33%
-0.40%
0.35%
-0.36%
0.36%
PROPOSED 10" PVC
(DR18) FORCE MAIN
S-201
S-202
S-203
S-204
18"RCP
24"RCP
EXISTING GRADE
ESTIMATED SEASONAL HIGH
GROUNDWATER LEVEL
ENCOUNTERED
GROUNDWATER LEVEL
FORCE MAIN INVERT
EL. = 83.20
7/1/21
3/1/21
R-11(01)
R-19(00)
36"RCP
CROSSING
7/1/21
R-10(01)
24"RCP
CROSSING
S-30
S-29
S-803
S-802
S-801
15"RCP
15"RCP
CROSSING
15"RCP
CROSSING
S-36
S-37
S-804
36"RCP
7/1/21
R-06(01)
254 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
394 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
167 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
146 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
255 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
399 L.F. ~
8" PVC (SDR-26)
@ S = 0.40%
37+00
37+50
38+00
38+50
39+00
39+50
40+00
40+50
41+00
41+50
42+00
42+50
43+00
43+50
44+00
44+50
45+00
45+50
46+00
46+50
47+00
47+50
48+00
48+50
49+00
49+50
50+00
50+50
51+00

ROAD A

(37+00.00–51+00.00)

SCALE: 1"=50' VERT., 1"=5' HORZ.

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C.A. Number: 3650 L.A. Number: LC26000311

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7	:		
6	:		
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4	:		
3	:		
2	:		
1	:		

ROADWAY & SEWER
PROFILES

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER 69260
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
Q.C.: RCW
Date: AUGUST 2022
Scale: 1" = 50'
Sheet 12B

Printed By: Garrett

Printed: Sep 28, 2022 - 4:22pm

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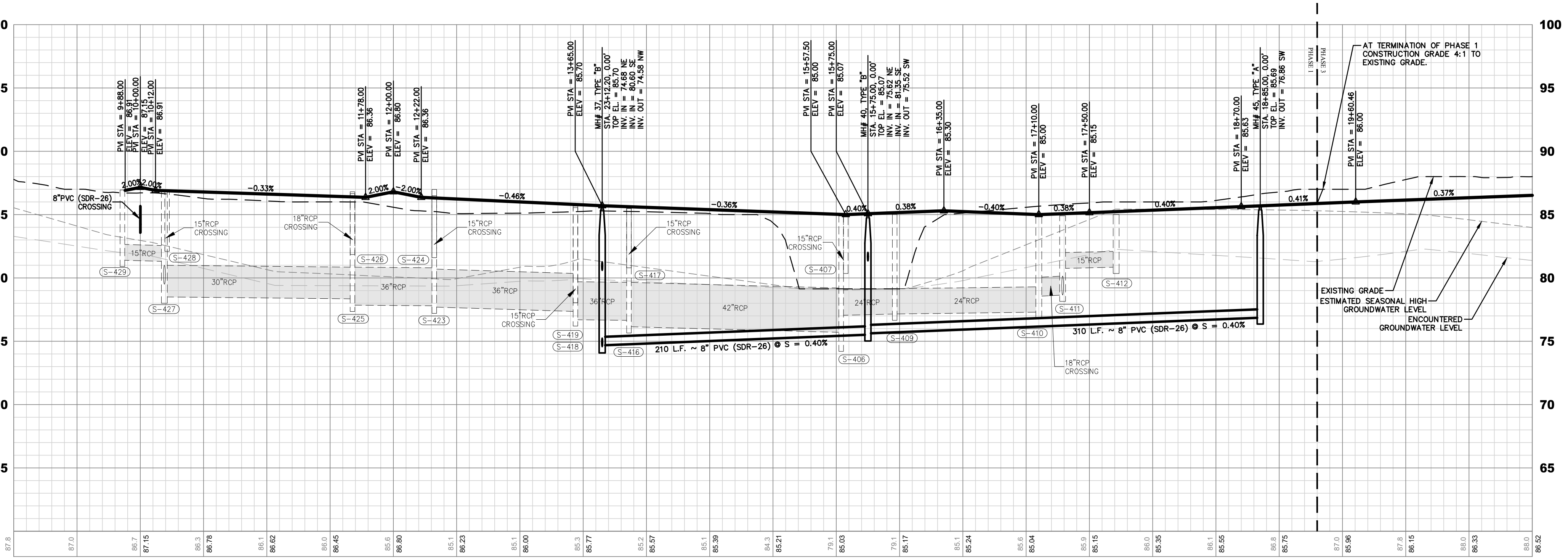
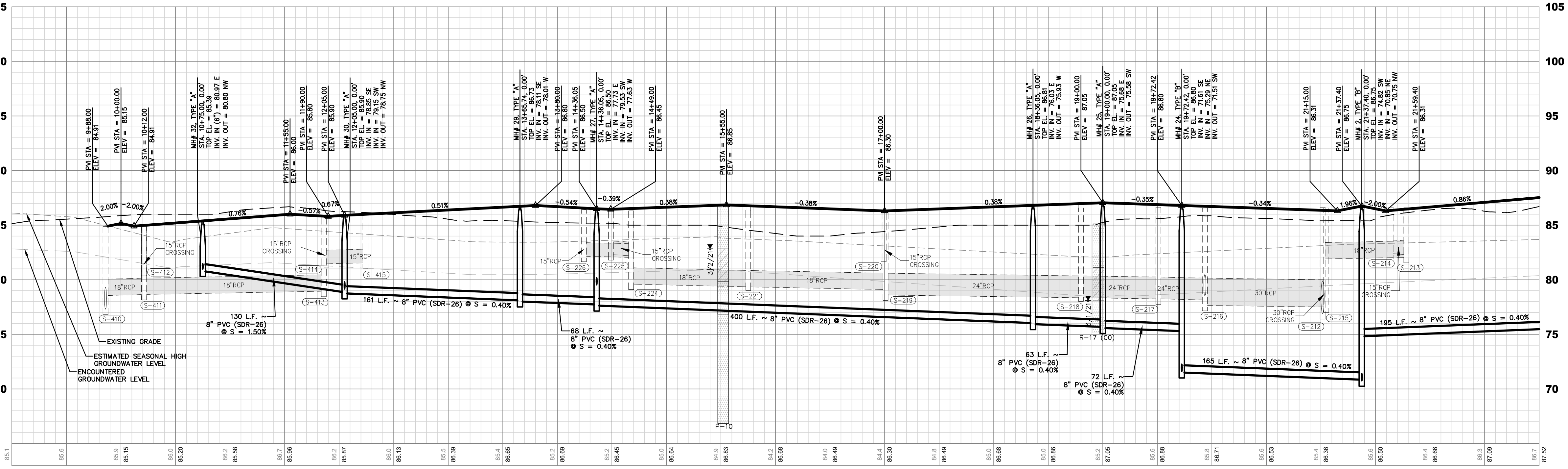

100
95
90
85
80
75
70
65
PVI STA = 9+88.00
ELEV = 86.91
PVI STA = 10+00.00
ELEV = 87.15
PVI STA = 10+12.00
ELEV = 86.91
PVI STA = 11+78.00
ELEV = 86.36
PVI STA = 12+00.00
ELEV = 86.80
PVI STA = 12+22.00
ELEV = 86.36
PVI STA = 13+65.00
ELEV = 85.70
MH# 37, TYPE "B"
STA. 23+12.20, 0.00'
TOP EL. = 85.70
INV. IN = 74.68 NE
INV. IN = 80.60 SE
INV. OUT = 74.58 NW
PVI STA = 15+57.50
ELEV = 85.00
PVI STA = 15+75.00
ELEV = 85.07
MH# 40, TYPE "B"
STA. 15+75.00, 0.00'
TOP EL. = 85.07
INV. IN = 75.62 NE
INV. IN = 81.35 SE
INV. OUT = 75.52 SW
PVI STA = 16+35.00
ELEV = 85.30
PVI STA = 17+10.00
ELEV = 85.00
PVI STA = 17+50.00
ELEV = 85.15
PVI STA = 18+70.00
ELEV = 85.63
MH# 45, TYPE "A"
STA. 18+85.00, 0.00'
TOP EL. = 85.69
INV. OUT = 76.86 SW
PHASE 1
PHASE 3
PVI STA = 19+60.46
ELEV = 86.00
AT TERMINATION OF PHASE 1 CONSTRUCTION GRADE 4:1 TO EXISTING GRADE.
2.00%
2.00%
-0.33%
2.00%
-2.00%
-0.46%
-0.36%
0.40%
0.38%
-0.40%
0.38%
0.40%
0.41%
0.37%
8"PVC (SDR-26) CROSSING
15"RCP CROSSING
15"RCP
30"RCP
18"RCP CROSSING
36"RCP
15"RCP CROSSING
36"RCP
15"RCP CROSSING
36"RCP
15"RCP CROSSING
42"RCP
15"RCP CROSSING
24"RCP
24"RCP
15"RCP
18"RCP CROSSING
S-429
S-428
S-427
S-426
S-425
S-424
S-423
S-419
S-418
S-417
S-416
S-407
S-406
S-409
S-410
S-411
S-412
210 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
310 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
EXISTING GRADE
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
ENCOUNTERED GROUNDWATER LEVEL
87.8
87.0
86.7 87.15
86.3 86.78
86.1 86.62
86.0 86.45
85.6 86.80
85.1 86.23
85.1 86.00
85.3 85.77
85.2 85.57
85.1 85.39
84.3 85.21
79.1 85.03
79.1 85.17
85.1 85.24
85.6 85.04
85.9 85.15
86.0 85.35
86.1 85.55
86.8 85.75
87.0 85.96
87.8 86.15
88.0 86.33
88.0 86.52
9+00
9+50
10+00
10+50
11+00
11+50
12+00
12+50
13+00
13+50
14+00
14+50
15+00
15+50
16+00
16+50
17+00
17+50
18+00
18+50
19+00
19+50
20+00
20+50
21+00

ROAD B
(9+00.00–21+00.00)
SCALE: 1"=50' VERT., 1"=5' HORZ.


105
100
95
90
85
80
75
70
PVI STA = 9+88.00
ELEV = 84.91
PVI STA = 10+00.00
ELEV = 85.15
PVI STA = 10+12.00
ELEV = 84.91
MH# 32, TYPE "A"
STA. 10+75.00, 0.00'
TOP EL. = 85.39
INV. IN (6") = 80.97 E
INV. OUT = 80.80 NW
PVI STA = 11+55.00
ELEV = 86.00
PVI STA = 11+90.00
ELEV = 85.80
PVI STA = 12+05.00
ELEV = 85.90
MH# 30, TYPE "A"
STA. 12+05.00, 0.00'
TOP EL. = 85.90
INV. IN = 78.85 SE
INV. IN = 79.15 SW
INV. OUT = 78.75 NW
MH# 29, TYPE "A"
STA. 13+65.74, 0.00'
TOP EL. = 86.73
INV. IN = 78.11 SE
INV. OUT = 78.01 W
PVI STA = 13+80.00
ELEV = 86.80
PVI STA = 14+36.05
ELEV = 86.50
MH# 27, TYPE "A"
STA. 14+36.05, 0.00'
TOP EL. = 86.50
INV. IN = 77.73 E
INV. IN = 79.53 SW
INV. OUT = 77.63 W
PVI STA = 14+49.00
ELEV = 86.45
PVI STA = 15+55.00
ELEV = 86.85
PVI STA = 17+00.00
ELEV = 86.30
MH# 26, TYPE "A"
STA. 18+36.05, 0.00'
TOP EL. = 86.81
INV. IN = 76.03 E
INV. OUT = 75.93 W
PVI STA = 19+00.00
ELEV = 87.05
MH# 25, TYPE "A"
STA. 19+00.00, 0.00'
TOP EL. = 87.05
INV. IN = 75.68 E
INV. OUT = 75.58 SW
PVI STA = 19+72.42
ELEV = 86.80
MH# 24, TYPE "B"
STA. 19+72.42, 0.00'
TOP EL. = 86.80
INV. IN = 71.61 SE
INV. IN = 75.29 NE
INV. OUT = 71.51 SW
PVI STA = 21+15.00
ELEV = 86.31
PVI STA = 21+37.40
ELEV = 86.75
MH# 2, TYPE "B"
STA. 21+37.40, 0.00'
TOP EL. = 86.75
INV. IN = 74.82 SW
INV. IN = 70.85 NE
INV. OUT = 70.75 NW
PVI STA = 21+59.40
ELEV = 86.31
2.00%
-2.00%
0.76%
-0.57%
0.67%
0.51%
-0.54%
-0.39%
0.38%
-0.38%
0.38%
-0.35%
-0.34%
1.96%
-2.00%
0.86%
15"RCP CROSSING
18"RCP
18"RCP
15"RCP CROSSING
15"RCP
15"RCP
15"RCP CROSSING
18"RCP
18"RCP
15"RCP CROSSING
24"RCP
24"RCP
24"RCP
30"RCP
30"RCP CROSSING
18"RCP
15"RCP CROSSING
3/2/21
3/1/21
P-10
R-17 (00)
S-410
S-411
S-412
S-413
S-414
S-415
S-226
S-225
S-224
S-221
S-220
S-219
S-218
S-217
S-216
S-215
S-212
S-214
S-213
130 L.F. ~ 8" PVC (SDR-26) @ S = 1.50%
161 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
68 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
400 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
63 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
72 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
165 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
195 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
EXISTING GRADE
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
ENCOUNTERED GROUNDWATER LEVEL
85.1
85.6
85.9 85.15
86.0 85.20
86.2 85.58
86.7 85.96
86.2 85.87
86.0 86.13
85.5 86.39
85.4 86.65
85.2 86.69
85.2 86.45
85.0 86.64
84.9 86.83
84.2 86.68
84.0 86.49
84.4 86.30
84.8 86.49
85.0 86.68
85.0 86.86
85.2 87.05
85.6 86.88
85.8 86.71
85.6 86.53
85.4 86.36
85.6 86.50
86.4 86.66
86.3 87.09
86.7 87.52
9+00
9+50
10+00
10+50
11+00
11+50
12+00
12+50
13+00
13+50
14+00
14+50
15+00
15+50
16+00
16+50
17+00
17+50
18+00
18+50
19+00
19+50
20+00
20+50
21+00
21+50
22+00
22+50
23+00

ROAD C
(9+00.00–23+00.00)
SCALE: 1"=50' VERT., 1"=5' HORZ.

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C.A. Numbed: 3650 L.A. Number: LC26000311

No.	Date	Revision	By
7	:		
6	:		
5	:		
4	:		
3	:		
2	:		
1	:		

ROADWAY & SEWER PROFILES

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	O.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 50'	
Sheet 12C	

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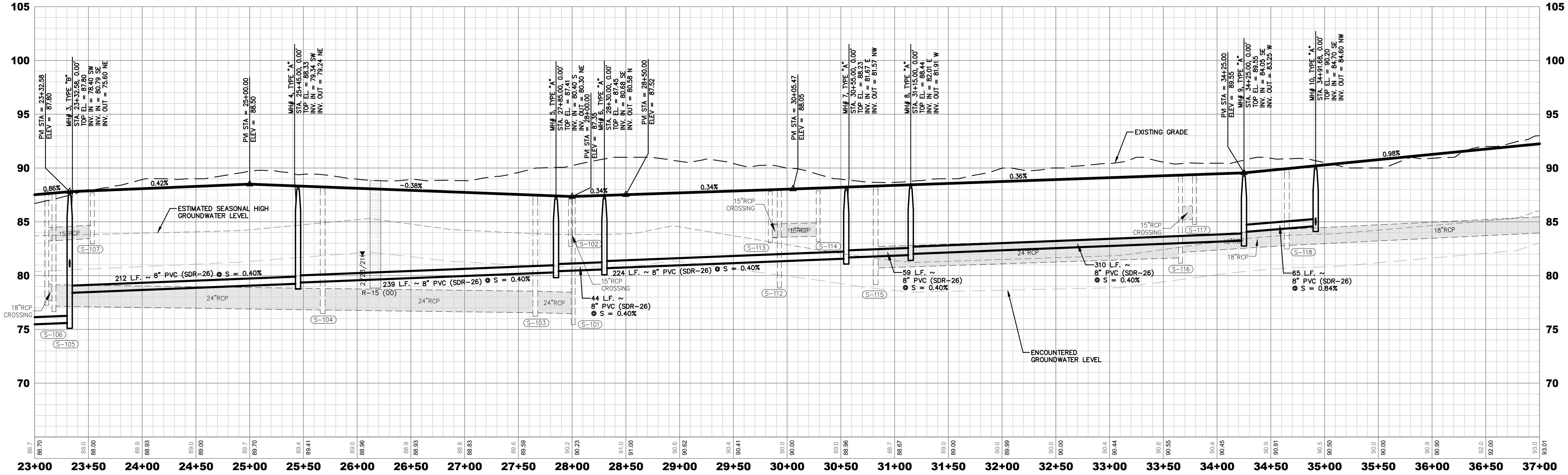
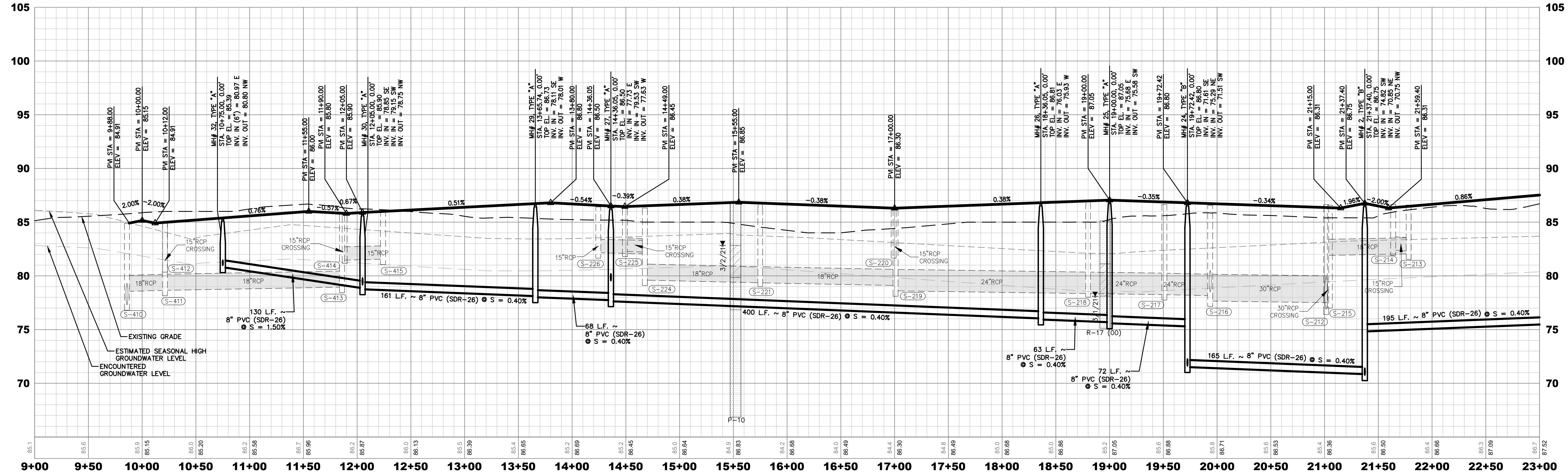

105
100
95
90
85
80
75
70
PVI STA = 23+32.58
ELEV = 87.80
MH# 3, TYPE "B"
STA. 23+32.58, 0.00'
TOP EL. = 87.80
INV. IN = 78.40 SW
INV. IN = 80.79 SE
INV. OUT = 75.60 NE
PVI STA = 25+00.00
ELEV = 88.50
MH# 4, TYPE "A"
STA. 25+45.00, 0.00'
TOP EL. = 88.33
INV. IN = 79.34 SW
INV. OUT = 79.24 NE
MH# 5, TYPE "A"
STA. 27+85.00, 0.00'
TOP EL. = 87.41
INV. IN = 80.40 S
INV. OUT = 80.30 NE
PVI STA = 28+00.00
ELEV = 87.35
MH# 6, TYPE "A"
STA. 28+30.00, 0.00'
TOP EL. = 87.45
INV. IN = 80.68 SE
INV. OUT = 80.58 N
PVI STA = 28+50.00
ELEV = 87.52
PVI STA = 30+05.47
ELEV = 88.05
MH# 7, TYPE "A"
STA. 30+55.00, 0.00'
TOP EL. = 88.23
INV. IN = 81.67 E
INV. OUT = 81.57 NW
MH# 8, TYPE "A"
STA. 31+15.00, 0.00'
TOP EL. = 88.44
INV. IN = 82.01 E
INV. OUT = 81.91 W
PVI STA = 34+25.00
ELEV = 89.55
MH# 9, TYPE "A"
STA. 34+25.00, 0.00'
TOP EL. = 89.55
INV. IN = 84.05 SE
INV. OUT = 83.25 W
MH# 10, TYPE "A"
STA. 34+91.68, 0.00'
TOP EL. = 90.20
INV. IN = 84.70 SE
INV. OUT = 84.60 NW
0.86%
0.42%
-0.38%
0.34%
0.34%
0.36%
0.98%
EXISTING GRADE
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
ENCOUNTERED GROUNDWATER LEVEL
15"RCP
15"RCP CROSSING
18"RCP CROSSING
18"RCP
24"RCP
212 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
239 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
224 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
44 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
59 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
310 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
65 L.F. ~ 8" PVC (SDR-26) @ S = 0.84%
2/25/21
R-15 (00)
S-101
S-102
S-103
S-104
S-105
S-106
S-107
S-112
S-113
S-114
S-115
S-116
S-117
S-118
86.70
88.00
88.93
89.00
89.70
89.41
88.96
88.93
88.83
89.59
90.23
91.00
90.62
90.41
90.00
88.96
88.67
89.00
89.99
90.00
90.44
90.55
90.45
90.91
90.50
90.00
90.90
92.00
93.01
23+00
23+50
24+00
24+50
25+00
25+50
26+00
26+50
27+00
27+50
28+00
28+50
29+00
29+50
30+00
30+50
31+00
31+50
32+00
32+50
33+00
33+50
34+00
34+50
35+00
35+50
36+00
36+50
37+00

ROAD C
(23+00.00–37+00.00)
SCALE: 1"=50' VERT., 1"=5' HORZ.


105
100
95
90
85
80
75
70
PVI STA = 9+88.00
ELEV = 84.91
PVI STA = 10+00.00
ELEV = 85.15
PVI STA = 10+12.00
ELEV = 84.91
MH# 32, TYPE "A"
STA. 10+75.00, 0.00'
TOP EL. = 85.39
INV. IN (6") = 80.97 E
INV. OUT = 80.80 NW
PVI STA = 11+55.00
ELEV = 86.00
PVI STA = 11+90.00
ELEV = 85.80
PVI STA = 12+05.00
ELEV = 85.90
MH# 30, TYPE "A"
STA. 12+05.00, 0.00'
TOP EL. = 85.90
INV. IN = 78.85 SE
INV. IN = 79.15 SW
INV. OUT = 78.75 NW
MH# 29, TYPE "A"
STA. 13+65.74, 0.00'
TOP EL. = 86.73
INV. IN = 78.11 SE
INV. OUT = 78.01 W
PVI STA = 13+80.00
ELEV = 86.80
PVI STA = 14+36.05
ELEV = 86.50
MH# 27, TYPE "A"
STA. 14+36.05, 0.00'
TOP EL. = 86.50
INV. IN = 77.73 E
INV. IN = 79.53 SW
INV. OUT = 77.63 W
PVI STA = 14+49.00
ELEV = 86.45
PVI STA = 15+55.00
ELEV = 86.85
PVI STA = 17+00.00
ELEV = 86.30
MH# 26, TYPE "A"
STA. 18+36.05, 0.00'
TOP EL. = 86.81
INV. IN = 76.03 E
INV. OUT = 75.93 W
PVI STA = 19+00.00
ELEV = 87.05
MH# 25, TYPE "A"
STA. 19+00.00, 0.00'
TOP EL. = 87.05
INV. IN = 75.68 E
INV. OUT = 75.58 SW
PVI STA = 19+72.42
ELEV = 86.80
MH# 24, TYPE "B"
STA. 19+72.42, 0.00'
TOP EL. = 86.80
INV. IN = 71.61 SE
INV. IN = 75.29 NE
INV. OUT = 71.51 SW
PVI STA = 21+15.00
ELEV = 86.31
PVI STA = 21+37.40
ELEV = 86.75
MH# 2, TYPE "B"
STA. 21+37.40, 0.00'
TOP EL. = 86.75
INV. IN = 74.82 SW
INV. IN = 70.85 NE
INV. OUT = 70.75 NW
PVI STA = 21+59.40
ELEV = 86.31
2.00%
-2.00%
0.76%
-0.57%
0.67%
0.51%
-0.54%
-0.39%
0.38%
-0.38%
0.38%
-0.35%
-0.34%
1.96%
-2.00%
0.86%
EXISTING GRADE
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
ENCOUNTERED GROUNDWATER LEVEL
15"RCP CROSSING
15"RCP
18"RCP
24"RCP
30"RCP
30"RCP CROSSING
15"RCP CROSSING
130 L.F. ~ 8" PVC (SDR-26) @ S = 1.50%
161 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
68 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
400 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
63 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
72 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
165 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
195 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
3/2/21
R-17 (00)
P-10
S-410
S-411
S-412
S-413
S-414
S-415
S-212
S-213
S-214
S-215
S-216
S-217
S-218
S-219
S-220
S-221
S-224
S-225
S-226
85.15
85.20
85.58
85.96
85.87
86.13
86.39
86.65
86.69
86.45
86.64
86.83
86.68
86.49
86.30
86.49
86.68
86.86
87.05
86.88
86.71
86.53
86.36
86.50
86.66
87.09
87.52
9+00
9+50
10+00
10+50
11+00
11+50
12+00
12+50
13+00
13+50
14+00
14+50
15+00
15+50
16+00
16+50
17+00
17+50
18+00
18+50
19+00
19+50
20+00
20+50
21+00
21+50
22+00
22+50
23+00

ROAD C
(9+00.00–23+00.00)
SCALE: 1"=50' VERT., 1"=5' HORZ.

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C.A. Number: 3650 L.A. Number: LC26000311

No.	Date	Revision	By
7	:		
6	:		
5	:		
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2	:		
1	:		

ROADWAY & SEWER PROFILES

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	O.C.: RCW
Date: AUGUST 2022	
Scale: ########	
Sheet 12D	

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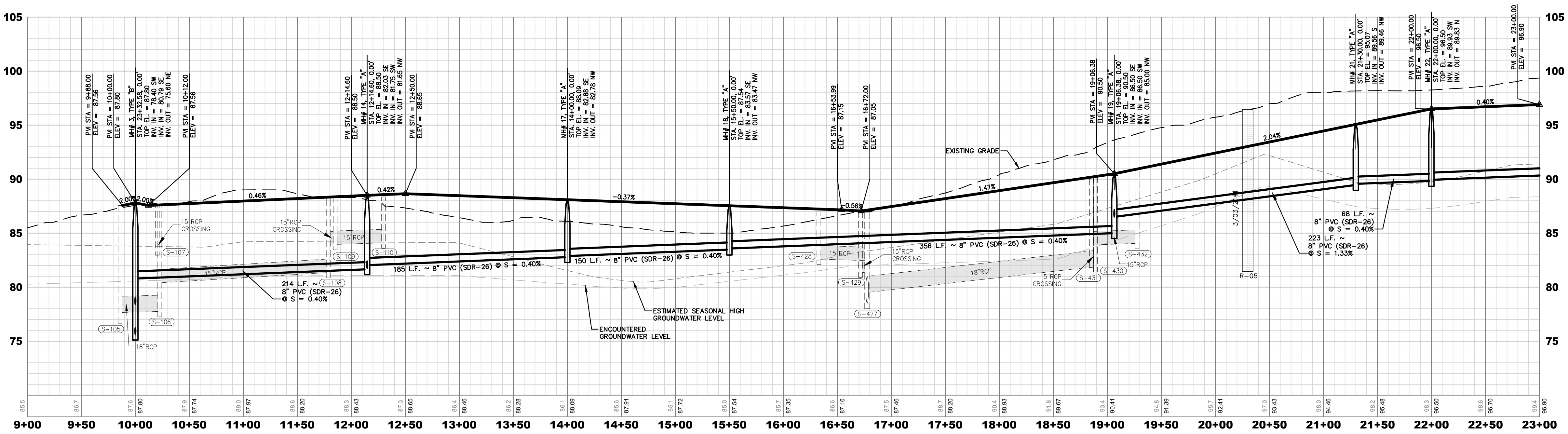
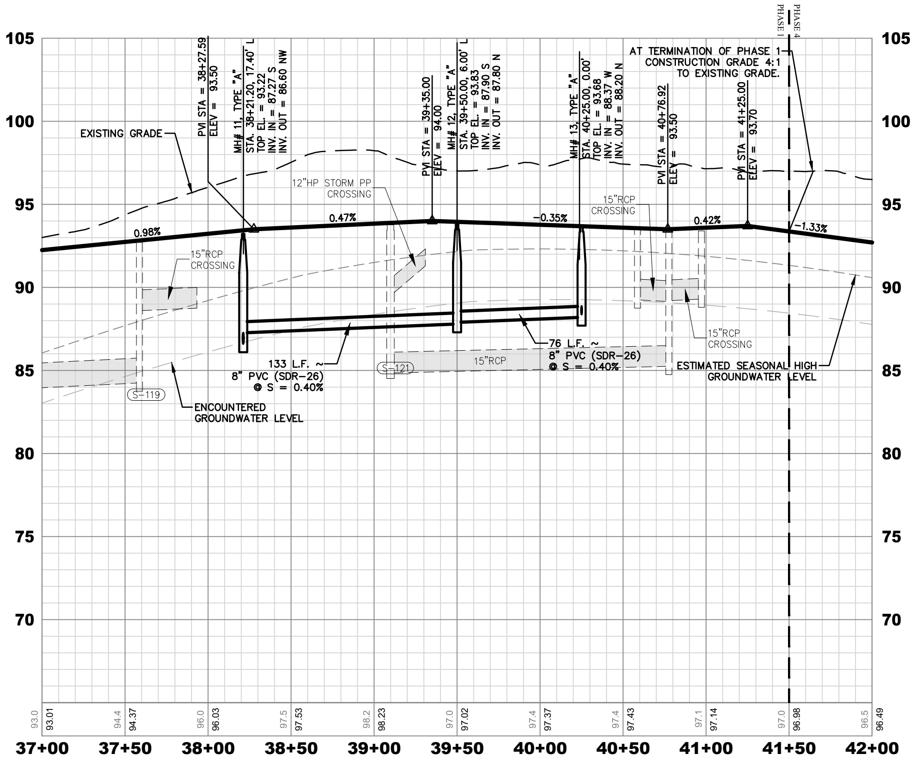

105
100
95
90
85
80
75
PVI STA = 9+88.00 ELEV = 87.56
PVI STA = 10+00.00 ELEV = 87.80
MH# 3, TYPE "B" STA. 23+32.58, 0.00' TOP EL. = 87.80 INV. IN = 78.40 SW INV. IN = 80.79 SE INV. OUT = 75.60 NE
PVI STA = 10+12.00 ELEV = 87.56
PVI STA = 12+14.60 ELEV = 88.50
MH# 14, TYPE "A" STA. 12+14.60, 0.00' TOP EL. = 88.50 INV. IN = 82.03 SE INV. IN = 81.75 SW INV. OUT = 81.65 NW
PVI STA = 12+50.00 ELEV = 88.65
MH# 17, TYPE "A" STA. 14+00.00, 0.00' TOP EL. = 88.09 INV. IN = 82.88 SE INV. OUT = 82.78 NW
MH# 18, TYPE "A" STA. 15+50.00, 0.00' TOP EL. = 87.54 INV. IN = 83.57 SE INV. OUT = 83.47 NW
PVI STA = 16+53.99 ELEV = 87.15
PVI STA = 16+72.00 ELEV = 87.05
PVI STA = 19+06.38 ELEV = 90.50
MH# 19, TYPE "A" STA. 19+06.38, 0.00' TOP EL. = 90.50 INV. IN = 86.50 SE INV. IN = 86.50 SW INV. OUT = 85.00 NW
MH# 21, TYPE "A" STA. 21+30.00, 0.00' TOP EL. = 95.07 INV. IN = 89.56 S INV. OUT = 89.46 NW
PVI STA = 22+00.00 ELEV = 96.50
MH# 22, TYPE "A" STA. 22+00.00, 0.00' TOP EL. = 96.50 INV. IN = 89.93 SW INV. OUT = 89.83 N
PVI STA = 23+00.00 ELEV = 96.90
2.00%
2.00%
0.46%
0.42%
-0.37%
-0.56%
1.47%
2.04%
0.40%
EXISTING GRADE
15"RCP CROSSING
15"RCP
18"RCP
S-105
S-106
S-107
S-108
S-109
S-110
S-427
S-428
S-429
S-430
S-431
S-432
R-05
3/03/21
214 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
185 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
150 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
356 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
223 L.F. ~ 8" PVC (SDR-26) @ S = 1.33%
68 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
ENCOUNTERED GROUNDWATER LEVEL
87.80
87.74
87.97
88.20
88.43
88.65
88.46
88.28
88.09
87.91
87.72
87.54
87.35
87.16
87.46
88.20
88.93
89.67
90.41
91.39
92.41
93.43
94.46
95.48
96.50
96.70
96.90
9+00
9+50
10+00
10+50
11+00
11+50
12+00
12+50
13+00
13+50
14+00
14+50
15+00
15+50
16+00
16+50
17+00
17+50
18+00
18+50
19+00
19+50
20+00
20+50
21+00
21+50
22+00
22+50
23+00

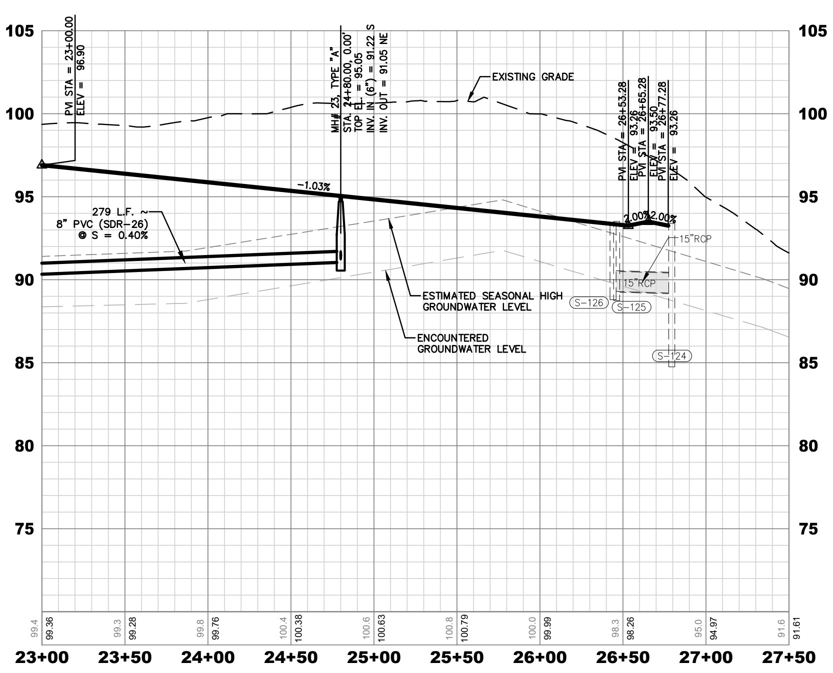
ROAD D

(9+00.00–23+00.00)
SCALE: 1"=50' VERT., 1"=5' HORZ.


105
100
95
90
85
80
75
70
EXISTING GRADE
PVI STA = 38+27.59 ELEV = 93.50
MH# 11, TYPE "A" STA. 38+21.20, 17.40' L TOP EL. = 93.22 INV. IN = 87.27 S INV. OUT = 86.60 NW
PVI STA = 39+35.00 ELEV = 94.00
MH# 12, TYPE "A" STA. 39+50.00, 6.00' L TOP EL. = 93.83 INV. IN = 87.90 S INV. OUT = 87.80 N
MH# 13, TYPE "A" STA. 40+25.00, 0.00' TOP EL. = 93.68 INV. IN = 88.37 W INV. OUT = 88.20 N
PVI STA = 40+76.92 ELEV = 93.50
PVI STA = 41+25.00 ELEV = 93.70
PHASE 1
PHASE 4
AT TERMINATION OF PHASE 1 CONSTRUCTION GRADE 4:1 TO EXISTING GRADE.
0.98%
0.47%
-0.35%
0.42%
-1.33%
15"RCP CROSSING
12"HP STORM PP CROSSING
15"RCP
S-119
S-121
133 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
76 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
ENCOUNTERED GROUNDWATER LEVEL
93.01
94.37
96.03
97.53
98.23
97.02
97.37
97.43
97.14
96.98
96.49
37+00
37+50
38+00
38+50
39+00
39+50
40+00
40+50
41+00
41+50
42+00

ROAD C

(37+00.00–42+00.00)
SCALE: 1"=50' VERT., 1"=5' HORZ.


105
100
95
90
85
80
75
PVI STA = 23+00.00 ELEV = 96.90
MH# 23, TYPE "A" STA. 24+80.00, 0.00' TOP EL. = 95.05 INV. IN (6") = 91.22 S INV. OUT = 91.05 NE
EXISTING GRADE
PVI STA = 26+53.28 ELEV = 93.26
PVI STA = 26+65.28 ELEV = 93.50
PVI STA = 26+77.28 ELEV = 93.26
-1.03%
2.00%
2.00%
279 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
15"RCP
S-124
S-125
S-126
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
ENCOUNTERED GROUNDWATER LEVEL
99.36
99.28
99.76
100.38
100.63
100.79
99.99
98.26
94.97
91.61
23+00
23+50
24+00
24+50
25+00
25+50
26+00
26+50
27+00
27+50

ROAD D

(23+00.00–27+50.00)
SCALE: 1"=50' VERT., 1"=5' HORZ.

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7	..		
6	..		
5	..		
4	..		
3	..		
2	..		
1	..		

ROADWAY & SEWER PROFILES

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	O.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 50'	
Sheet 12E	

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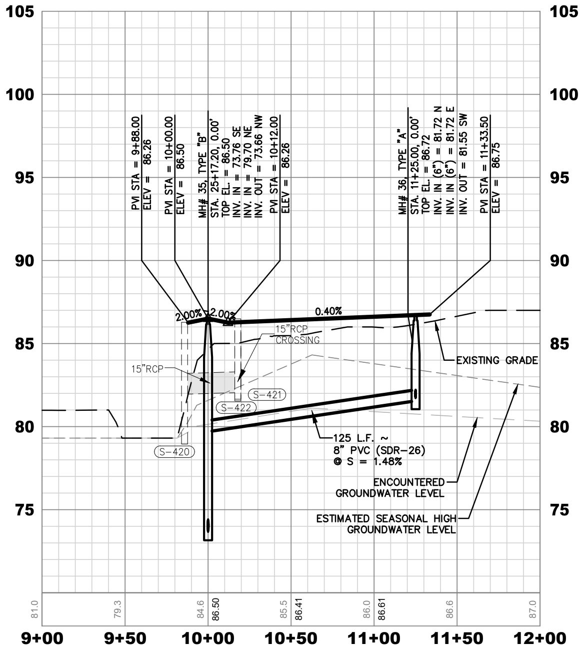
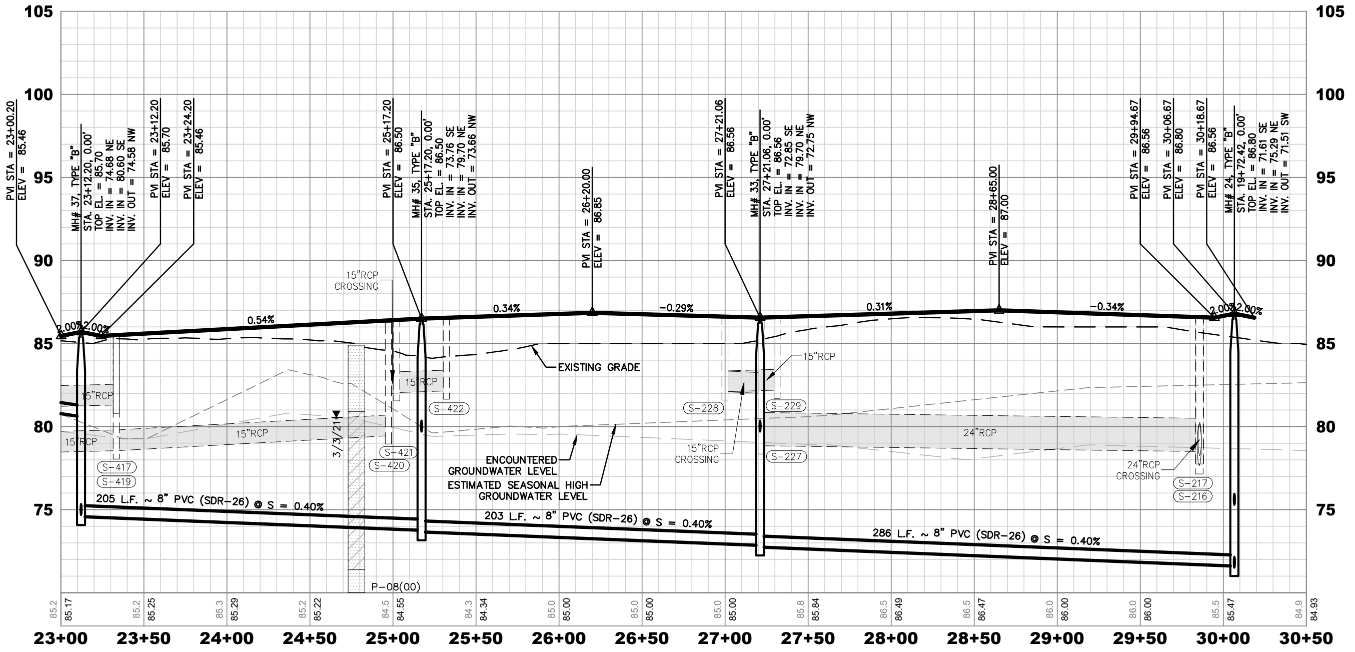

105
100
95
90
85
80
75
PVI STA = 9+88.00
ELEV = 86.26
PVI STA = 10+00.00
ELEV = 86.50
MH# 35, TYPE "B"
STA. 25+17.20, 0.00'
TOP EL. = 86.50
INV. IN = 73.76 SE
INV. IN = 79.70 NE
INV. OUT = 73.66 NW
PVI STA = 10+12.00
ELEV = 86.26
MH# 36, TYPE "A"
STA. 11+25.00, 0.00'
TOP EL. = 86.72
INV. IN (6") = 81.72 N
INV. IN (6") = 81.72 E
INV. OUT = 81.55 SW
PVI STA = 11+33.50
ELEV = 86.75
2.00%
2.00%
0.40%
15"RCP CROSSING
15"RCP
S-421
S-422
S-420
EXISTING GRADE
125 L.F. ~ 8" PVC (SDR-26) @ S = 1.48%
ENCOUNTERED GROUNDWATER LEVEL
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
81.0
79.3
84.6
86.50
85.5
86.41
86.0
86.61
86.6
87.0
9+00
9+50
10+00
10+50
11+00
11+50
12+00

ROAD G

(9+00.00–12+00.00)

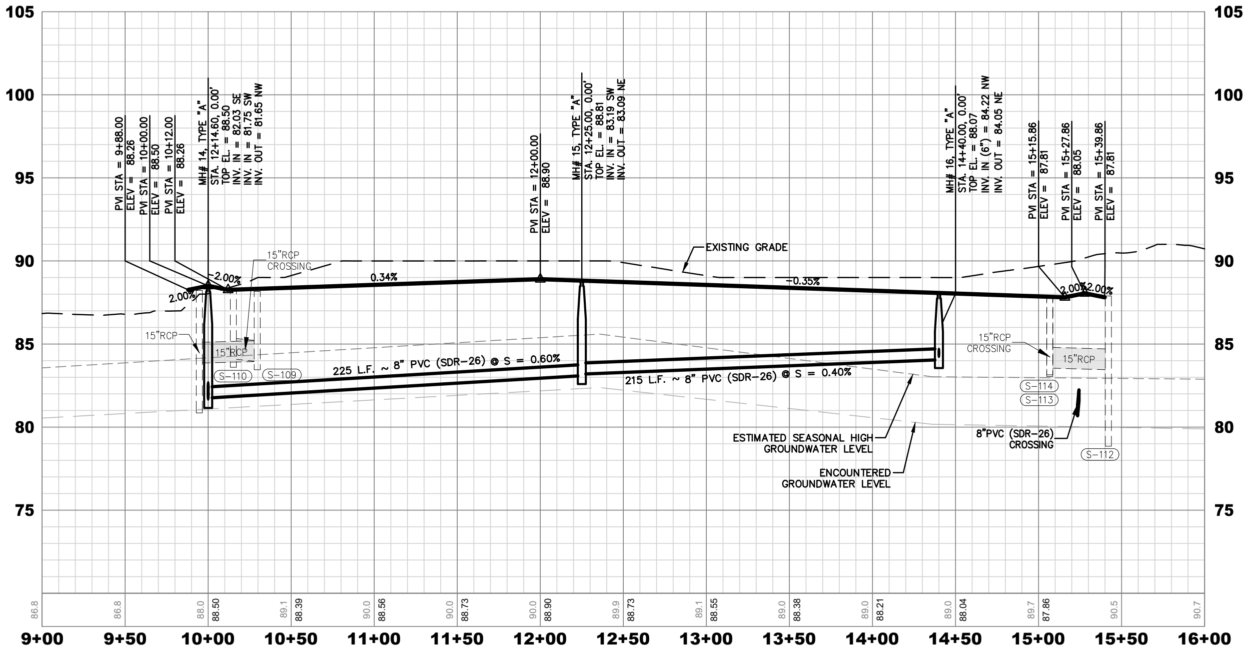
SCALE: 1"=50' VERT., 1"=5' HORZ.


105
100
95
90
85
80
75
PVI STA = 23+00.20
ELEV = 85.46
MH# 37, TYPE "B"
STA. 23+12.20, 0.00'
TOP EL. = 85.70
INV. IN = 74.68 NE
INV. IN = 80.60 SE
INV. OUT = 74.58 NW
PVI STA = 23+12.20
ELEV = 85.70
PVI STA = 23+24.20
ELEV = 85.46
PVI STA = 25+17.20
ELEV = 86.50
MH# 35, TYPE "B"
STA. 25+17.20, 0.00'
TOP EL. = 86.50
INV. IN = 73.76 SE
INV. IN = 79.70 NE
INV. OUT = 73.66 NW
PVI STA = 26+20.00
ELEV = 86.85
PVI STA = 27+21.06
ELEV = 86.56
MH# 33, TYPE "B"
STA. 27+21.06, 0.00'
TOP EL. = 86.56
INV. IN = 72.85 SE
INV. IN = 79.70 NE
INV. OUT = 72.75 NW
PVI STA = 28+65.00
ELEV = 87.00
PVI STA = 29+94.67
ELEV = 86.56
PVI STA = 30+06.67
ELEV = 86.80
PVI STA = 30+18.67
ELEV = 86.56
MH# 24, TYPE "B"
STA. 19+72.42, 0.00'
TOP EL. = 86.80
INV. IN = 71.61 SE
INV. IN = 75.29 NE
INV. OUT = 71.51 SW
2.00%
2.00%
0.54%
0.34%
-0.29%
0.31%
-0.34%
2.00%
2.00%
15"RCP CROSSING
15"RCP
15"RCP
15"RCP
15"RCP
24"RCP
24"RCP CROSSING
S-417
S-419
S-420
S-421
S-422
S-228
S-229
S-227
S-217
S-216
3/3/21
P-08(00)
EXISTING GRADE
ENCOUNTERED GROUNDWATER LEVEL
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
205 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
203 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
286 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
85.2
85.17
85.2
85.25
85.3
85.29
85.2
85.22
84.5
84.55
84.3
84.34
85.0
85.00
85.0
85.00
85.0
85.00
85.8
85.84
86.5
86.49
86.5
86.47
86.0
86.00
86.0
86.00
85.5
85.47
84.9
84.93
23+00
23+50
24+00
24+50
25+00
25+50
26+00
26+50
27+00
27+50
28+00
28+50
29+00
29+50
30+00
30+50

ROAD H

(23+00.00–30+50.00)

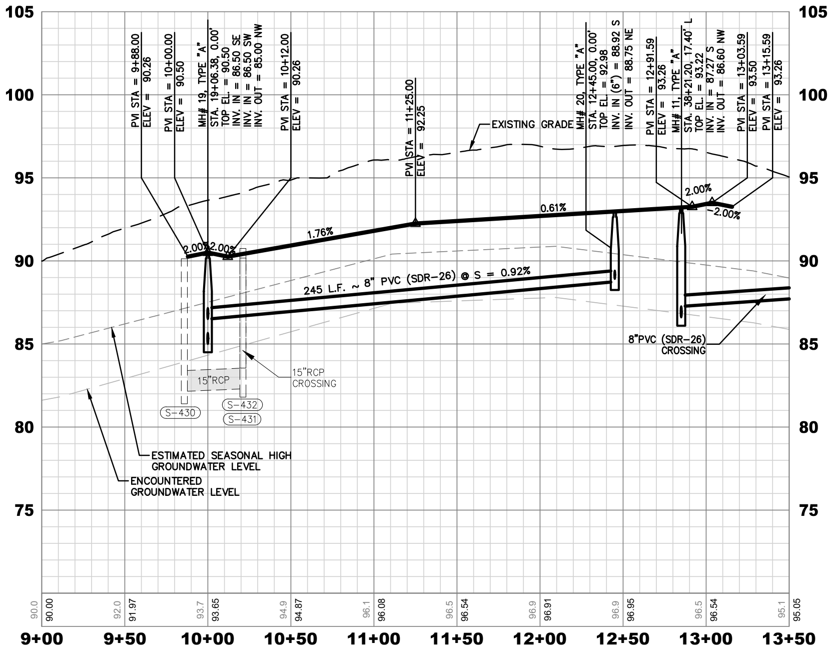
SCALE: 1"=50' VERT., 1"=5' HORZ.


105
100
95
90
85
80
75
PVI STA = 9+88.00
ELEV = 88.26
PVI STA = 10+00.00
ELEV = 88.50
PVI STA = 10+12.00
ELEV = 88.26
MH# 14, TYPE "A"
STA. 12+14.60, 0.00'
TOP EL. = 88.50
INV. IN = 82.03 SE
INV. IN = 81.75 SW
INV. OUT = 81.65 NW
PVI STA = 12+00.00
ELEV = 88.90
MH# 15, TYPE "A"
STA. 12+25.00, 0.00'
TOP EL. = 88.81
INV. IN = 83.19 SW
INV. OUT = 83.09 NE
MH# 16, TYPE "A"
STA. 14+40.00, 0.00'
TOP EL. = 88.07
INV. IN (6") = 84.22 NW
INV. OUT = 84.05 NE
PVI STA = 15+15.86
ELEV = 87.81
PVI STA = 15+27.86
ELEV = 88.05
PVI STA = 15+39.86
ELEV = 87.81
2.00%
2.00%
0.34%
-0.35%
2.00%
2.00%
15"RCP CROSSING
15"RCP
15"RCP
15"RCP CROSSING
15"RCP
S-110
S-109
S-114
S-113
S-112
EXISTING GRADE
225 L.F. ~ 8" PVC (SDR-26) @ S = 0.60%
215 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
ENCOUNTERED GROUNDWATER LEVEL
8"PVC (SDR-26) CROSSING
88.8
86.8
88.0
88.50
89.1
88.39
90.0
88.56
90.0
88.73
90.0
88.90
89.9
88.73
89.1
88.55
89.0
88.38
89.0
88.21
89.0
88.04
89.7
87.86
90.5
90.7
9+00
9+50
10+00
10+50
11+00
11+50
12+00
12+50
13+00
13+50
14+00
14+50
15+00
15+50
16+00

ROAD E

(9+00.00–16+00.00)

SCALE: 1"=50' VERT., 1"=5' HORZ.


105
100
95
90
85
80
75
PVI STA = 9+88.00
ELEV = 90.26
PVI STA = 10+00.00
ELEV = 90.50
MH# 19, TYPE "A"
STA. 19+06.38, 0.00'
TOP EL. = 90.50
INV. IN = 86.50 SE
INV. IN = 86.50 SW
INV. OUT = 85.00 NW
PVI STA = 10+12.00
ELEV = 90.26
PVI STA = 11+25.00
ELEV = 92.25
EXISTING GRADE
MH# 20, TYPE "A"
STA. 12+45.00, 0.00'
TOP EL. = 92.98
INV. IN (6") = 88.92 S
INV. OUT = 88.75 NE
PVI STA = 12+91.59
ELEV = 93.26
MH# 11, TYPE "A"
STA. 38+21.20, 17.40' L
TOP EL. = 93.22
INV. IN = 87.27 S
INV. OUT = 86.60 NW
PVI STA = 13+03.59
ELEV = 93.50
PVI STA = 13+15.59
ELEV = 93.26
2.00%
2.00%
1.76%
0.61%
2.00%
-2.00%
245 L.F. ~ 8" PVC (SDR-26) @ S = 0.92%
8"PVC (SDR-26) CROSSING
15"RCP
15"RCP CROSSING
S-430
S-432
S-431
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
ENCOUNTERED GROUNDWATER LEVEL
90.0
90.00
92.0
91.97
93.7
93.65
94.9
94.87
96.1
96.08
96.5
96.54
96.9
96.91
96.9
96.95
96.5
96.54
95.1
95.05
9+00
9+50
10+00
10+50
11+00
11+50
12+00
12+50
13+00
13+50

ROAD F

(9+00.00–13+50.00)

SCALE: 1"=50' VERT., 1"=5' HORZ.

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C.A. Numbed: 3650 L.A. Number: LC26000311

No.	Date	Revision	By
7	:		
6	:		
5	:		
4	:		
3	:		
2	:		
1	:		

ROADWAY & SEWER PROFILES

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER 69260
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
O.C.: RCW
Date: AUGUST 2022
Scale: 1" = 50'
Sheet 12F

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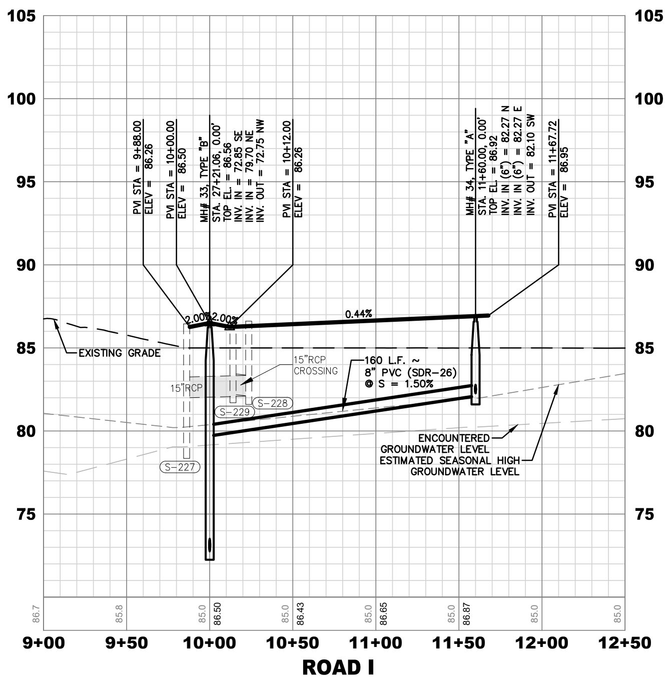
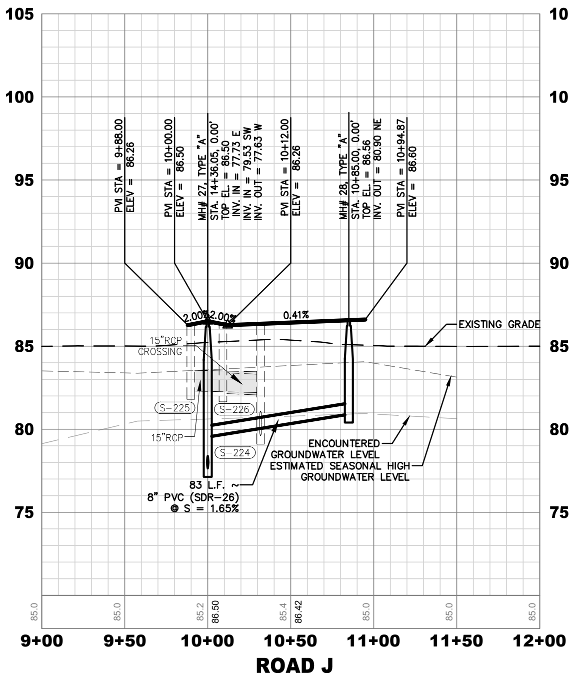

105
100
95
90
85
80
75
PVI STA = 9+88.00
ELEV = 86.26
PVI STA = 10+00.00
ELEV = 86.50
MH# 33, TYPE "B"
STA. 27+21.06, 0.00'
TOP EL. = 86.56
INV. IN = 72.85 SE
INV. IN = 79.70 NE
INV. OUT = 72.75 NW
PVI STA = 10+12.00
ELEV = 86.26
MH# 34, TYPE "A"
STA. 11+60.00, 0.00'
TOP EL. = 86.92
INV. IN (6") = 82.27 N
INV. IN (6") = 82.27 E
INV. OUT = 82.10 SW
PVI STA = 11+67.72
ELEV = 86.95
2.00%
2.00%
0.44%
EXISTING GRADE
15"RCP
15"RCP CROSSING
160 L.F. ~ 8" PVC (SDR-26) @ S = 1.50%
S-227
S-228
S-229
ENCOUNTERED GROUNDWATER LEVEL
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
9+00
9+50
10+00
10+50
11+00
11+50
12+00
12+50

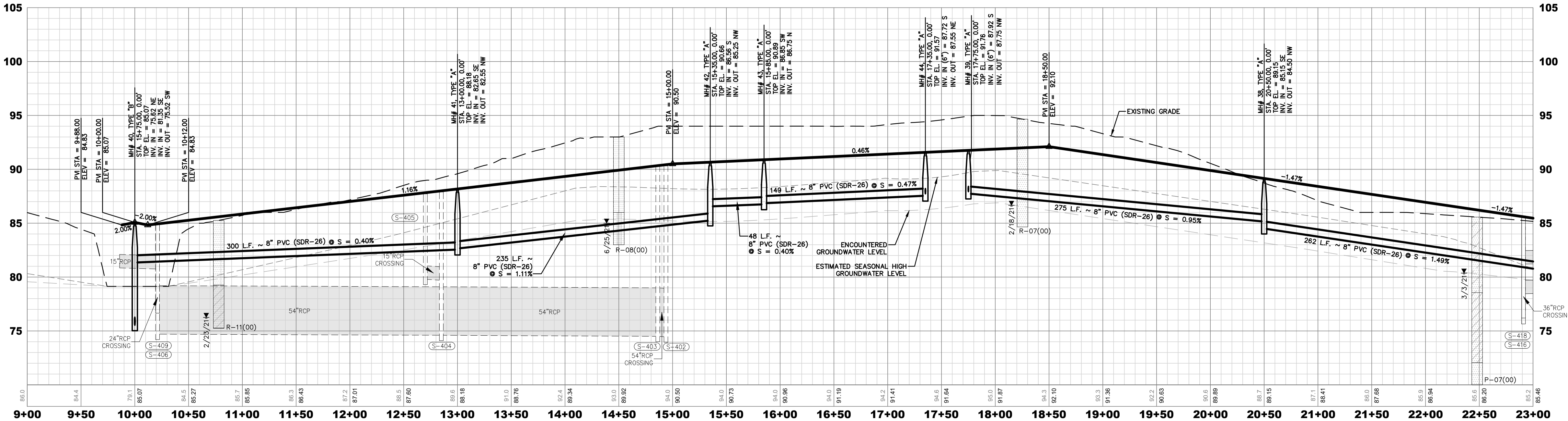
ROAD I

(9+00.00-12+50.00)
SCALE: 1"=50' VERT., 1"=5' HORZ.


105
100
95
90
85
80
75
PVI STA = 9+88.00
ELEV = 86.26
PVI STA = 10+00.00
ELEV = 86.50
MH# 27, TYPE "A"
STA. 14+36.05, 0.00'
TOP EL. = 86.50
INV. IN = 77.73 E
INV. IN = 79.53 SW
INV. OUT = 77.63 W
PVI STA = 10+12.00
ELEV = 86.26
MH# 28, TYPE "A"
STA. 10+85.00, 0.00'
TOP EL. = 86.56
INV. OUT = 80.90 NE
PVI STA = 10+94.87
ELEV = 86.60
2.00%
2.00%
0.41%
EXISTING GRADE
15"RCP CROSSING
15"RCP
S-225
S-226
S-224
83 L.F. ~ 8" PVC (SDR-26) @ S = 1.65%
ENCOUNTERED GROUNDWATER LEVEL
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
9+00
9+50
10+00
10+50
11+00
11+50
12+00

ROAD J

(9+00.00-12+00.00)
SCALE: 1"=50' VERT., 1"=5' HORZ.


105
100
95
90
85
80
75
PVI STA = 9+88.00
ELEV = 84.83
PVI STA = 10+00.00
ELEV = 85.07
MH# 40, TYPE "B"
STA. 15+75.00, 0.00'
TOP EL. = 85.07
INV. IN = 75.62 NE
INV. IN = 81.35 SE
INV. OUT = 75.52 SW
PVI STA = 10+12.00
ELEV = 84.83
MH# 41, TYPE "A"
STA. 13+00.00, 0.00'
TOP EL. = 88.18
INV. IN = 82.65 SE
INV. OUT = 82.55 NW
PVI STA = 15+00.00
ELEV = 90.50
MH# 42, TYPE "A"
STA. 15+35.00, 0.00'
TOP EL. = 90.66
INV. IN = 86.56 S
INV. OUT = 85.25 NW
MH# 43, TYPE "A"
STA. 15+85.00, 0.00'
TOP EL. = 90.89
INV. IN = 86.85 SW
INV. OUT = 86.75 N
MH# 44, TYPE "A"
STA. 17+35.00, 0.00'
TOP EL. = 91.57
INV. IN (6") = 87.72 S
INV. OUT = 87.55 NE
MH# 39, TYPE "A"
STA. 17+75.00, 0.00'
TOP EL. = 91.76
INV. IN (6") = 87.92 S
INV. OUT = 87.75 NW
PVI STA = 18+50.00
ELEV = 92.10
MH# 38, TYPE "A"
STA. 20+50.00, 0.00'
TOP EL. = 89.15
INV. IN = 85.15 SE
INV. OUT = 84.50 NW
EXISTING GRADE
2.00%
-2.00%
1.16%
0.46%
-1.47%
-1.47%
300 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
235 L.F. ~ 8" PVC (SDR-26) @ S = 1.11%
48 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
149 L.F. ~ 8" PVC (SDR-26) @ S = 0.47%
275 L.F. ~ 8" PVC (SDR-26) @ S = 0.95%
262 L.F. ~ 8" PVC (SDR-26) @ S = 1.49%
ENCOUNTERED GROUNDWATER LEVEL
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
15"RCP
24"RCP CROSSING
15"RCP CROSSING
54"RCP
54"RCP
54"RCP CROSSING
36"RCP CROSSING
S-409
S-406
S-405
S-404
S-403
S-402
S-418
S-416
2/23/21
R-11(00)
6/25/21
R-08(00)
2/18/21
R-07(00)
3/3/21
P-07(00)
9+00
9+50
10+00
10+50
11+00
11+50
12+00
12+50
13+00
13+50
14+00
14+50
15+00
15+50
16+00
16+50
17+00
17+50
18+00
18+50
19+00
19+50
20+00
20+50
21+00
21+50
22+00
22+50
23+00

ROAD H

(9+00.00-23+00.00)
SCALE: 1"=50' VERT., 1"=5' HORZ.

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C.A. Number: 3650 L.A. Number: LC26000311

No.	Date	Revision	By

ROADWAY & SEWER
PROFILES

HILLSIDE GROVE
HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 50'	
Sheet 12G	

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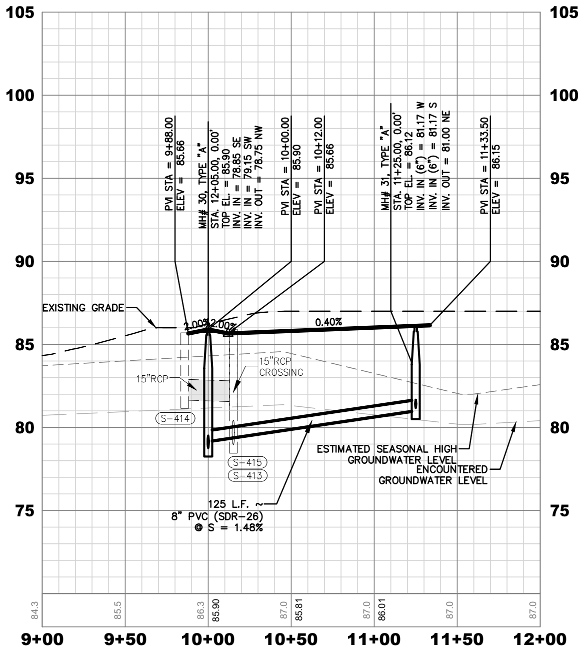
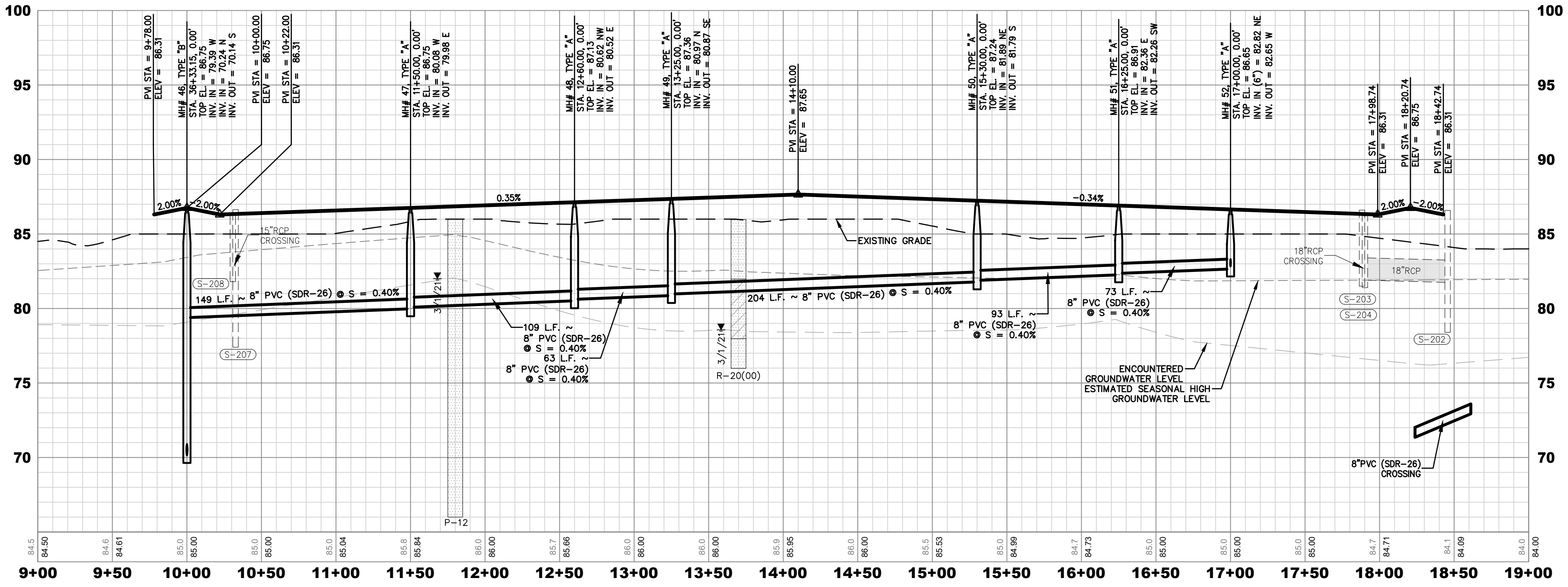


105
100
95
90
85
80
75
PVI STA = 9+88.00
ELEV = 85.66
MH# 30, TYPE "A"
STA. 12+05.00, 0.00'
TOP EL. = 85.90
INV. IN = 78.85 SE
INV. IN = 79.15 SW
INV. OUT = 78.75 NW
PVI STA = 10+00.00
ELEV = 85.90
PVI STA = 10+12.00
ELEV = 85.66
MH# 31, TYPE "A"
STA. 11+25.00, 0.00'
TOP EL. = 86.12
INV. IN (6") = 81.17 W
INV. IN (6") = 81.17 S
INV. OUT = 81.00 NE
PVI STA = 11+33.50
ELEV = 86.15
EXISTING GRADE
2.00%
2.00%
0.40%
15"RCP
15"RCP CROSSING
S-414
S-415
S-413
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
ENCOUNTERED GROUNDWATER LEVEL
125 L.F. ~
8" PVC (SDR-26)
@ S = 1.48%
9+00
9+50
10+00
10+50
11+00
11+50
12+00

ROAD L

(9+00.00–12+00.00)

SCALE: 1"=50' VERT., 1"=5' HORZ.



100
95
90
85
80
75
70
PVI STA = 9+78.00
ELEV = 86.31
MH# 46, TYPE "B"
STA. 36+33.15, 0.00'
TOP EL. = 86.75
INV. IN = 79.39 W
INV. IN = 70.24 N
INV. OUT = 70.14 S
PVI STA = 10+00.00
ELEV = 86.75
PVI STA = 10+22.00
ELEV = 86.31
MH# 47, TYPE "A"
STA. 11+50.00, 0.00'
TOP EL. = 86.75
INV. IN = 80.08 W
INV. OUT = 79.98 E
MH# 48, TYPE "A"
STA. 12+60.00, 0.00'
TOP EL. = 87.13
INV. IN = 80.62 NW
INV. OUT = 80.52 E
MH# 49, TYPE "A"
STA. 13+25.00, 0.00'
TOP EL. = 87.36
INV. IN = 80.97 N
INV. OUT = 80.87 SE
PVI STA = 14+10.00
ELEV = 87.65
MH# 50, TYPE "A"
STA. 15+30.00, 0.00'
TOP EL. = 87.24
INV. IN = 81.89 NE
INV. OUT = 81.79 S
MH# 51, TYPE "A"
STA. 16+25.00, 0.00'
TOP EL. = 86.91
INV. IN = 82.36 E
INV. OUT = 82.26 SW
MH# 52, TYPE "A"
STA. 17+00.00, 0.00'
TOP EL. = 86.65
INV. IN (6") = 82.82 NE
INV. OUT = 82.65 W
PVI STA = 17+98.74
ELEV = 86.31
PVI STA = 18+20.74
ELEV = 86.75
PVI STA = 18+42.74
ELEV = 86.31
2.00%
2.00%
0.35%
-0.34%
2.00%
-2.00%
15"RCP CROSSING
EXISTING GRADE
18"RCP CROSSING
18"RCP
S-208
S-207
S-203
S-204
S-202
149 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
109 L.F. ~
8" PVC (SDR-26)
@ S = 0.40%
63 L.F. ~
8" PVC (SDR-26)
@ S = 0.40%
204 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
93 L.F. ~
8" PVC (SDR-26)
@ S = 0.40%
73 L.F. ~
8" PVC (SDR-26)
@ S = 0.40%
3/1/21
3/1/21
P-12
R-20(00)
ENCOUNTERED GROUNDWATER LEVEL
ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
8"PVC (SDR-26) CROSSING
9+00
9+50
10+00
10+50
11+00
11+50
12+00
12+50
13+00
13+50
14+00
14+50
15+00
15+50
16+00
16+50
17+00
17+50
18+00
18+50
19+00

ROAD K

(9+00.00–19+00.00)

SCALE: 1"=50' VERT., 1"=5' HORZ.

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No.	Date	Revision	By
7			
6			
5			
4			
3			
2			
1			

ROADWAY & SEWER PROFILES

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 50'	
Sheet 12H	

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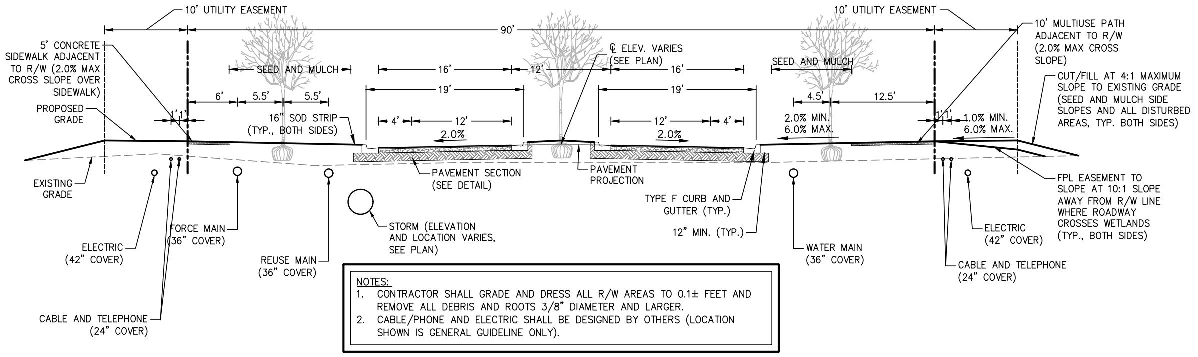
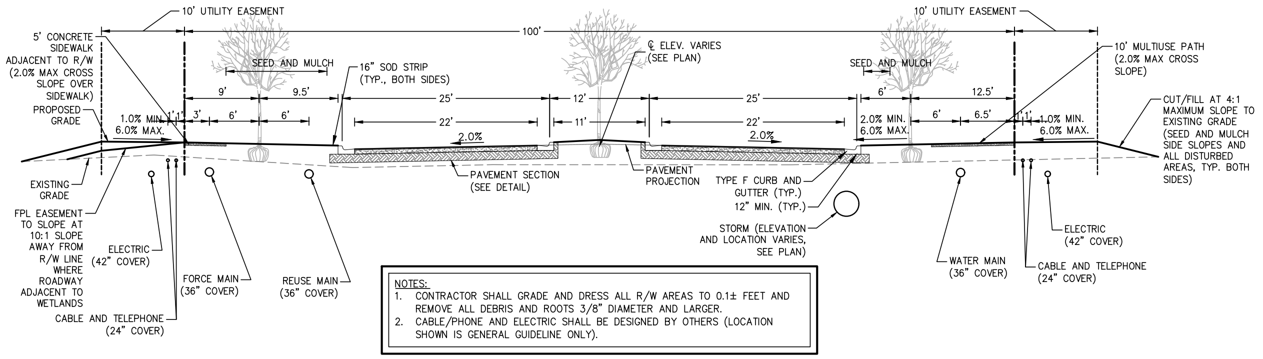

10' UTILITY EASEMENT
10' UTILITY EASEMENT
90'
5' CONCRETE SIDEWALK ADJACENT TO R/W (2.0% MAX CROSS SLOPE OVER SIDEWALK)
PROPOSED GRADE
EXISTING GRADE
SEED AND MULCH
SEED AND MULCH
6'
5.5'
5.5'
1' 1'
16" SOD STRIP (TYP., BOTH SIDES)
16'
12'
16'
19'
19'
4'
12'
12'
4'
2.0%
2.0%
℄ ELEV. VARIES (SEE PLAN)
4.5'
12.5'
2.0% MIN. 6.0% MAX.
1.0% MIN. 6.0% MAX.
10' MULTIUSE PATH ADJACENT TO R/W (2.0% MAX CROSS SLOPE)
CUT/FILL AT 4:1 MAXIMUM SLOPE TO EXISTING GRADE (SEED AND MULCH SIDE SLOPES AND ALL DISTURBED AREAS, TYP. BOTH SIDES)
FPL EASEMENT TO SLOPE AT 10:1 SLOPE AWAY FROM R/W LINE WHERE ROADWAY CROSSES WETLANDS (TYP., BOTH SIDES)
PAVEMENT SECTION (SEE DETAIL)
PAVEMENT PROJECTION
TYPE F CURB AND GUTTER (TYP.)
12" MIN. (TYP.)
STORM (ELEVATION AND LOCATION VARIES, SEE PLAN)
ELECTRIC (42" COVER)
FORCE MAIN (36" COVER)
REUSE MAIN (36" COVER)
CABLE AND TELEPHONE (24" COVER)
WATER MAIN (36" COVER)
ELECTRIC (42" COVER)
CABLE AND TELEPHONE (24" COVER)

NOTES:
1. CONTRACTOR SHALL GRADE AND DRESS ALL R/W AREAS TO 0.1± FEET AND REMOVE ALL DEBRIS AND ROOTS 3/8" DIAMETER AND LARGER.
2. CABLE/PHONE AND ELECTRIC SHALL BE DESIGNED BY OTHERS (LOCATION SHOWN IS GENERAL GUIDELINE ONLY).

TYPICAL ROADWAY CROSS SECTION FOR 90' RIGHT OF WAY

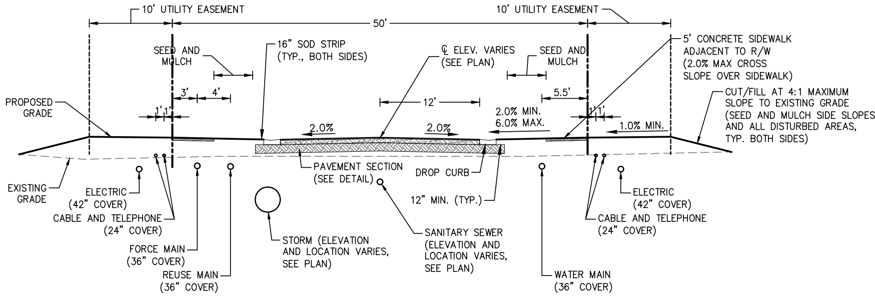
N.T.S.


10' UTILITY EASEMENT
10' UTILITY EASEMENT
100'
5' CONCRETE SIDEWALK ADJACENT TO R/W (2.0% MAX CROSS SLOPE OVER SIDEWALK)
PROPOSED GRADE
EXISTING GRADE
FPL EASEMENT TO SLOPE AT 10:1 SLOPE AWAY FROM R/W LINE WHERE ROADWAY ADJACENT TO WETLANDS
SEED AND MULCH
SEED AND MULCH
16" SOD STRIP (TYP., BOTH SIDES)
9'
9.5'
1.0% MIN. 6.0% MAX.
1' 1'
3'
6'
6'
25'
12'
25'
22'
11'
22'
2.0%
2.0%
℄ ELEV. VARIES (SEE PLAN)
6'
12.5'
2.0% MIN. 6.0% MAX.
6'
6.5'
1.0% MIN. 6.0% MAX.
10' MULTIUSE PATH (2.0% MAX CROSS SLOPE)
CUT/FILL AT 4:1 MAXIMUM SLOPE TO EXISTING GRADE (SEED AND MULCH SIDE SLOPES AND ALL DISTURBED AREAS, TYP. BOTH SIDES)
PAVEMENT SECTION (SEE DETAIL)
PAVEMENT PROJECTION
TYPE F CURB AND GUTTER (TYP.)
12" MIN. (TYP.)
STORM (ELEVATION AND LOCATION VARIES, SEE PLAN)
ELECTRIC (42" COVER)
FORCE MAIN (36" COVER)
REUSE MAIN (36" COVER)
CABLE AND TELEPHONE (24" COVER)
WATER MAIN (36" COVER)
ELECTRIC (42" COVER)
CABLE AND TELEPHONE (24" COVER)

NOTES:
1. CONTRACTOR SHALL GRADE AND DRESS ALL R/W AREAS TO 0.1± FEET AND REMOVE ALL DEBRIS AND ROOTS 3/8" DIAMETER AND LARGER.
2. CABLE/PHONE AND ELECTRIC SHALL BE DESIGNED BY OTHERS (LOCATION SHOWN IS GENERAL GUIDELINE ONLY).

TYPICAL ROADWAY CROSS SECTION FOR 100' RIGHT OF WAY (4 LANE SECTION)

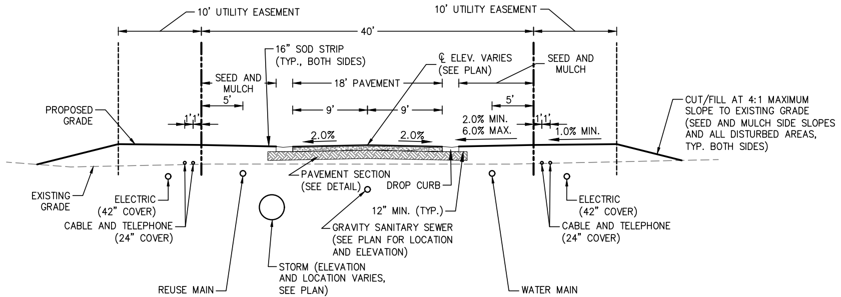
N.T.S.


10' UTILITY EASEMENT
10' UTILITY EASEMENT
50'
SEED AND MULCH
16" SOD STRIP (TYP., BOTH SIDES)
℄ ELEV. VARIES (SEE PLAN)
SEED AND MULCH
5' CONCRETE SIDEWALK ADJACENT TO R/W (2.0% MAX CROSS SLOPE OVER SIDEWALK)
PROPOSED GRADE
1' 1'
3'
4'
12'
5.5'
2.0% MIN. 6.0% MAX.
1' 1'
2.0%
2.0%
1.0% MIN.
CUT/FILL AT 4:1 MAXIMUM SLOPE TO EXISTING GRADE (SEED AND MULCH SIDE SLOPES AND ALL DISTURBED AREAS, TYP. BOTH SIDES)
EXISTING GRADE
ELECTRIC (42" COVER)
CABLE AND TELEPHONE (24" COVER)
FORCE MAIN (36" COVER)
REUSE MAIN (36" COVER)
PAVEMENT SECTION (SEE DETAIL)
DROP CURB
12" MIN. (TYP.)
STORM (ELEVATION AND LOCATION VARIES, SEE PLAN)
SANITARY SEWER (ELEVATION AND LOCATION VARIES, SEE PLAN)
WATER MAIN (36" COVER)
ELECTRIC (42" COVER)
CABLE AND TELEPHONE (24" COVER)

NOTES:
1. CONTRACTOR SHALL GRADE AND DRESS ALL R/W AREAS TO 0.1± FEET AND REMOVE ALL DEBRIS AND ROOTS 3/8" DIAMETER AND LARGER.
2. CABLE/PHONE AND ELECTRIC SHALL BE DESIGNED BY OTHERS (LOCATION SHOWN IS GENERAL GUIDELINE ONLY).

TYPICAL ROADWAY CROSS SECTION FOR 50' RIGHT OF WAY

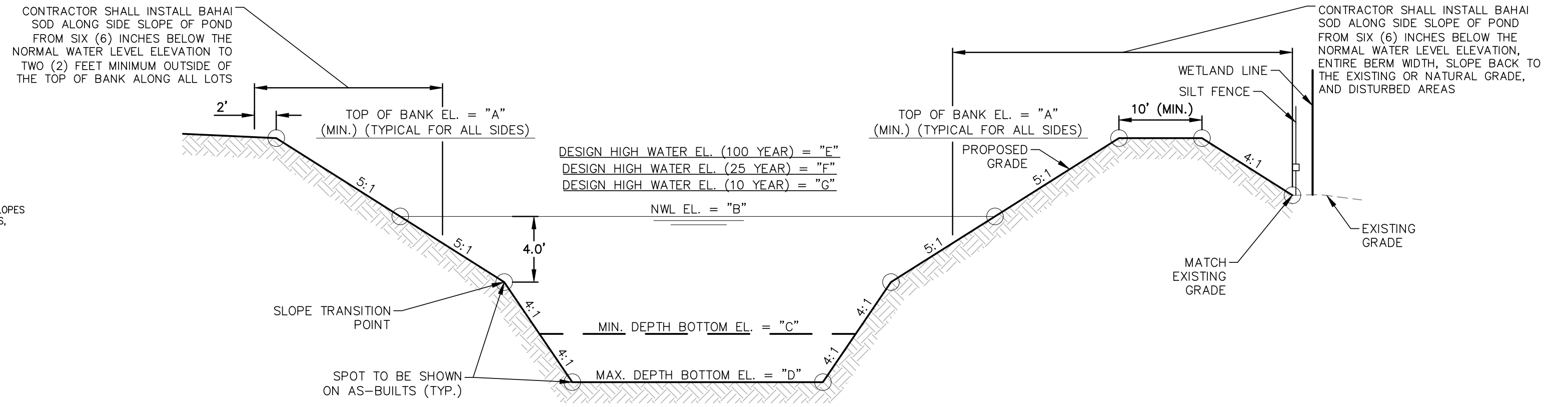
N.T.S.


10' UTILITY EASEMENT
10' UTILITY EASEMENT
40'
16" SOD STRIP (TYP., BOTH SIDES)
℄ ELEV. VARIES (SEE PLAN)
SEED AND MULCH
SEED AND MULCH
18' PAVEMENT
5'
9'
9'
5'
PROPOSED GRADE
1' 1'
2.0% MIN. 6.0% MAX.
1' 1'
1.0% MIN.
2.0%
2.0%
CUT/FILL AT 4:1 MAXIMUM SLOPE TO EXISTING GRADE (SEED AND MULCH SIDE SLOPES AND ALL DISTURBED AREAS, TYP. BOTH SIDES)
EXISTING GRADE
ELECTRIC (42" COVER)
CABLE AND TELEPHONE (24" COVER)
PAVEMENT SECTION (SEE DETAIL)
DROP CURB
12" MIN. (TYP.)
GRAVITY SANITARY SEWER (SEE PLAN FOR LOCATION AND ELEVATION)
STORM (ELEVATION AND LOCATION VARIES, SEE PLAN)
REUSE MAIN (36" COVER)
WATER MAIN (36" COVER)
ELECTRIC (42" COVER)
CABLE AND TELEPHONE (24" COVER)

NOTES:
1. CONTRACTOR SHALL GRADE AND DRESS ALL R/W AREAS TO 0.1± FEET AND REMOVE ALL DEBRIS AND ROOTS 3/8" DIAMETER AND LARGER.
2. CABLE/PHONE AND ELECTRIC SHALL BE DESIGNED BY OTHERS (LOCATION SHOWN IS GENERAL GUIDELINE ONLY).

TYPICAL ROADWAY CROSS SECTION FOR ALLEYWAY

N.T.S.


CONTRACTOR SHALL INSTALL BAHAI SOD ALONG SIDE SLOPE OF POND FROM SIX (6) INCHES BELOW THE NORMAL WATER LEVEL ELEVATION TO TWO (2) FEET MINIMUM OUTSIDE OF THE TOP OF BANK ALONG ALL LOTS
2'
TOP OF BANK EL. = "A" (MIN.) (TYPICAL FOR ALL SIDES)
DESIGN HIGH WATER EL. (100 YEAR) = "E"
DESIGN HIGH WATER EL. (25 YEAR) = "F"
DESIGN HIGH WATER EL. (10 YEAR) = "G"
NWL EL. = "B"
5:1
5:1
4.0'
4:1
4:1
SLOPE TRANSITION POINT
MIN. DEPTH BOTTOM EL. = "C"
MAX. DEPTH BOTTOM EL. = "D"
SPOT TO BE SHOWN ON AS-BUILTS (TYP.)
4:1
4:1
5:1
5:1
TOP OF BANK EL. = "A" (MIN.) (TYPICAL FOR ALL SIDES)
PROPOSED GRADE
10' (MIN.)
4:1
CONTRACTOR SHALL INSTALL BAHAI SOD ALONG SIDE SLOPE OF POND FROM SIX (6) INCHES BELOW THE NORMAL WATER LEVEL ELEVATION, ENTIRE BERM WIDTH, SLOPE BACK TO THE EXISTING OR NATURAL GRADE, AND DISTURBED AREAS
WETLAND LINE
SILT FENCE
EXISTING GRADE
MATCH EXISTING GRADE

VARIABLE	DESCRIPTION	SMF–01	SMF–02	SMF–03	SMF–04	SMF–05	SMF–06	SMF–07	SMF–08	SMF–09	SMF–10
"A"	TOP OF BANK EL. (MIN.)	87.00	86.50	85.50	85.50	84.50	84.50	84.50	86.00	86.00	86.50
"B"	NORMAL WATER LEVEL EL.	84.00	82.30	81.50	81.50	81.50	81.50	81.50	83.00	83.00	83.00
"C"	MIN. DEPTH BOTTOM EL.	76.00	74.30	73.50	73.50	73.50	73.50	73.50	75.00	75.00	75.00
"D"	MAX. DEPTH BOTTOM EL.	72.00	70.30	69.50	69.50	69.50	69.50	69.50	71.00	71.00	71.00
"E"	DHW EL. (100 YR.)	86.07	86.47	85.12	85.94	83.20	83.16	83.54	85.06	85.36	85.41
"F"	DHW EL. (25 YR.)	85.50	85.72	84.31	84.46	82.71	82.71	82.86	84.65	84.72	84.74
"G"	DHW EL. (10 YR.)	85.12	85.11	83.65	83.67	82.42	82.43	82.46	84.35	84.38	84.38

VARIABLE	DESCRIPTION	SMF–11	SMF–12	SMF–13	SMF–14	SMF–15	SMF–16	SMF–17	SMF–18	SMF–19
"A"	TOP OF BANK EL. (MIN.)	86.50	86.00	84.50	84.50	86.00	86.00	85.50	85.50	85.50
"B"	NORMAL WATER LEVEL EL.	83.00	84.00	81.50	81.50	83.00	83.00	82.00	82.00	82.00
"C"	MIN. DEPTH BOTTOM EL.	75.00	76.00	73.50	73.50	75.00	75.00	74.00	74.00	74.00
"D"	MAX. DEPTH BOTTOM EL.	71.00	72.00	69.50	69.50	71.00	71.00	70.00	70.00	70.00
"E"	DHW EL. (100 YR.)	85.71	84.79	83.02	83.44	84.37	85.55	84.49	85.22	84.95
"F"	DHW EL. (25 YR.)	85.10	84.56	82.56	82.87	83.97	84.85	84.01	84.24	84.15
"G"	DHW EL. (10 YR.)	84.65	84.38	82.27	82.52	83.73	84.39	83.62	83.66	83.67

NOTES:
1. SIDE SLOPES SHALL NOT BE STEEPER THAN 4:1 TO DEPTH SHOWN ABOVE (PER SJRWMD REQUIREMENTS). CONTRACTOR SHALL VERIFY SLOPES ON RECORD DRAWINGS AT SPOTS SHOWN ABOVE AND AT TURN POINTS AND AT 100' MAXIMUM INTERVALS.
2. CONTRACTOR SHALL FILL EMBANKMENTS (BERMS) THAT ARE ABOVE EXISTING GRADE IN LIFTS NOT EXCEEDING 8" THICKNESS. SURFACE OF FILL SHALL BE SCARIFIED BETWEEN SUCCESSIVE LIFTS TO PROVIDE BOND AND PRECLUDE SEEPAGE PATHS OR SLICK INTERFACES. FILL SOILS SHALL CONSIST OF CLAYEY FINE SANDS (SC) WITH A MIN. 15% OF FINES PASSING THE NO. 200 SIEVE. EMBANKMENT SHALL BE COMPACTED TO 98% OF MODIFIED PROCTOR MAX. DRY DENSITY WITH 2% OF OPTIMUM MOISTURE CONTENT. CONTRACTOR SHALL PROVIDE DENSITY TESTS ALONG POND EMBANKMENTS AT 200' INTERVALS.
3. CONTRACTOR MAY DISPOSE OF UNSUITABLE MATERIAL IN BOTTOM OF STORM WATER MANAGEMENT FACILITY PROVIDED THAT ALL UNSUITABLE MATERIAL DISPOSED OF IS COVERED WITH A MINIMUM OF 24" OF CLEAN FILL; HOWEVER, CONTRACTOR SHALL NOT DISPOSE OF UNSUITABLE MATERIAL IN SIDE SLOPES OR BERMS, FINAL DEPTH SHALL BE AS SHOWN ON PERMITTED CONSTRUCTION PLANS.

TYPICAL SECTION THRU STORM WATER MANAGEMENT FACILITY

N.T.S.

J:\21\21-04-0008 Preserve at Howey\Design\Dwgs\Plots\21-04-0008 Pdets.dwg

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry: 3650 L.A. Number LC26000311

No.	Date	Revision	By
7	:		
6	:		
5	:		
4	:		
3	:		
2	:		
1	:		

PAVING AND DRAINAGE DETAILS

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
Q.C.: RCW
Date: AUGUST 2022
Scale: N.T.S.
Sheet 13A

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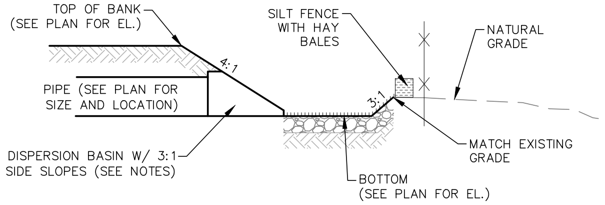
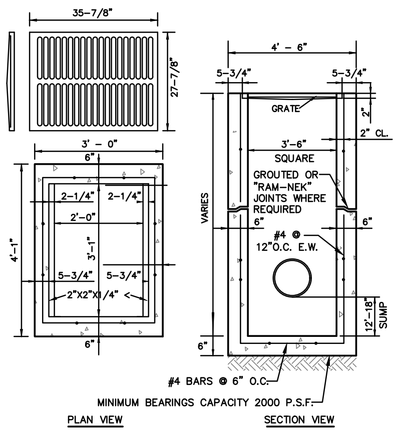

TOP OF BANK
(SEE PLAN FOR EL.)
SILT FENCE
WITH HAY
BALES
NATURAL
GRADE
4:1
3:1
PIPE (SEE PLAN FOR
SIZE AND LOCATION)
DISPERSION BASIN W/ 3:1
SIDE SLOPES (SEE NOTES)
MATCH EXISTING
GRADE
BOTTOM
(SEE PLAN FOR EL.)

NOTES:
1. CONTRACTOR SHALL PROVIDE 1' MIN. DEPTH OF STONE (SIZE 3"–6" DIAMETER) OVER TOP OF FILTER FABRIC ALONG ENTIRE BOTTOM OF DISPERSION BASIN. 2" OF FILL TO BE PLACED OVER BEDDING STONE AND LEVELED IN PREPARATION FOR SODDING.
2. CONTRACTOR SHALL PROVIDE SILT FENCE AND HAY BALES ALONG ENTIRE PERIMETER OF DISPERSION BASIN IN ACCORDANCE WITH SEDIMENT AND EROSION CONTROL PLAN.
3. CONTRACTOR SHALL SOD ENTIRE DISPERSION BASIN AND ALL DISTURBED AREAS.
4. THE CONTRACTOR SHALL STAKE LIMITS OF CONSTRUCTION AND PLACE SILT FENCE PRIOR TO CONSTRUCTION AND SHALL AVOID IMPACTS OUTSIDE LIMITS SHOWN ON PLANS.

TYPICAL DISPERSION BASIN DETAIL

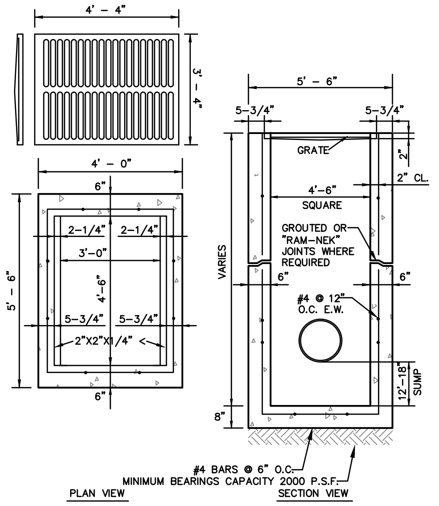
N.T.S.


35-7/8"
27-7/8"
3' - 0"
6"
2-1/4"
2-1/4"
2'-0"
4'-1"
3'-1"
5-3/4"
5-3/4"
2"X2"X1/4"
6"
4' - 6"
5-3/4"
5-3/4"
GRATE
2"
2" CL.
3'-6"
SQUARE
GROUTED OR "RAM-NEK" JOINTS WHERE REQUIRED
VARIES
6"
6"
#4 @ 12"O.C. E.W.
12'-18" SUMP
6"
#4 BARS @ 6" O.C.
MINIMUM BEARINGS CAPACITY 2000 P.S.F.
PLAN VIEW
SECTION VIEW

NOTES:
1. CONCRETE DESIGN STRENGTH 4,000 PSI.
2. ALL GRATES TO BE TRAFFIC BEARING GRATE.
3. CONTRACTOR SHALL PLACE A 10' WIDE SOD COLLAR AROUND ALL INLETS (NOT IN PAVEMENT)

STORM SEWER TYPE "C" INLET

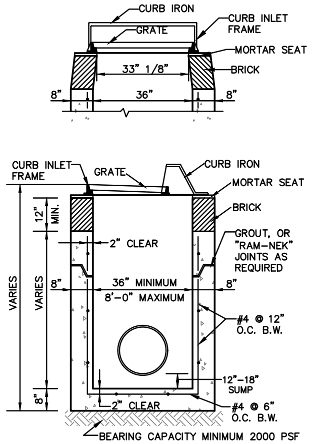
N.T.S.


4' - 4"
3' - 4"
4' - 0"
6"
2-1/4"
2-1/4"
3'-0"
5' - 6"
4'-6"
5-3/4"
5-3/4"
2"X2"X1/4"
6"
5' - 6"
5-3/4"
5-3/4"
GRATE
2"
2" CL.
4'-6"
SQUARE
GROUTED OR "RAM-NEK" JOINTS WHERE REQUIRED
VARIES
6"
6"
#4 @ 12" O.C. E.W.
12'-18" SUMP
8"
#4 BARS @ 6" O.C.
MINIMUM BEARINGS CAPACITY 2000 P.S.F.
PLAN VIEW
SECTION VIEW

NOTES:
1. CONCRETE DESIGN STRENGTH 4,000 PSI.
2. ALL GRATES TO BE TRAFFIC BEARING GRATE.
3. CONTRACTOR SHALL PLACE A 10' WIDE SOD COLLAR AROUND INLETS (NOT IN PAVEMENT).
4. PROVIDE KNOCKOUTS FOR UNDERDRAIN.

STORM SEWER TYPE "E" INLET

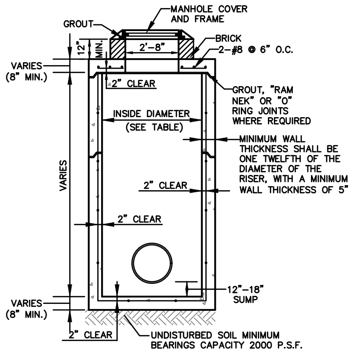
N.T.S.


CURB IRON
GRATE
CURB INLET FRAME
MORTAR SEAT
BRICK
33" 1/8"
8"
36"
8"
CURB INLET FRAME
GRATE
CURB IRON
MORTAR SEAT
BRICK
12" MIN.
2" CLEAR
GROUT, OR "RAM-NEK" JOINTS AS REQUIRED
VARIES
VARIES
8"
36" MINIMUM
8'-0" MAXIMUM
8"
#4 @ 12" O.C. B.W.
12"-18" SUMP
8"
2" CLEAR
#4 @ 6" O.C. B.W.
BEARING CAPACITY MINIMUM 2000 PSF

NOTES:
1. PROVISION SHALL BE MADE AT THE TIME OF DRAINAGE STRUCTURE PRE- CASTING TO PROVIDE OPENINGS FOR UNDERDRAIN STUBOUTS ON EACH SIDE OF INLET.
2. CONCRETE DESIGN STRENGTH 4,000 PSI.
3. PIPE SHALL NOT BE IN CONSTRUCTION JOINT.

TYPE "A" SINGLE CURB INLET

N.T.S.


GROUT
MANHOLE COVER AND FRAME
BRICK
2'-8"
2-#8 @ 6" O.C.
12" MIN.
VARIES (8" MIN.)
2" CLEAR
GROUT, "RAM NEK" OR "O" RING JOINTS WHERE REQUIRED
INSIDE DIAMETER (SEE TABLE)
MINIMUM WALL THICKNESS SHALL BE ONE TWELFTH OF THE DIAMETER OF THE RISER, WITH A MINIMUM WALL THICKNESS OF 5"
VARIES
2" CLEAR
2" CLEAR
12"-18" SUMP
VARIES (8" MIN.)
2" CLEAR
UNDISTURBED SOIL MINIMUM BEARINGS CAPACITY 2000 P.S.F.

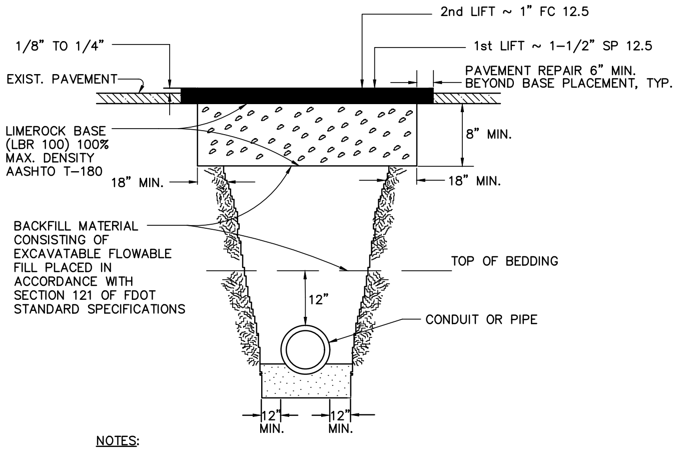
INSIDE DIAMETER TABLE

J-1	J-1A	J-1B	J-1C	J-1D	J-1E	J-1F
4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"

NOTES:
1. CONCRETE DESIGN STRENGTH 4,000 PSI.
2. PRECAST IN ACCORDANCE WITH LATEST EDITIONS OF ASTM C 478.
3. PIPES SHALL BE FLUSH WITH INSIDE WALL.
4. IN PAVED AREAS FRAME AND GRATE MUST MATCH FINAL ASPHALT AND CROSS-SLOPE.
5. RING AND COVER SHALL BE TRAFFIC BEARING

STORM SEWER J-1 MANHOLE

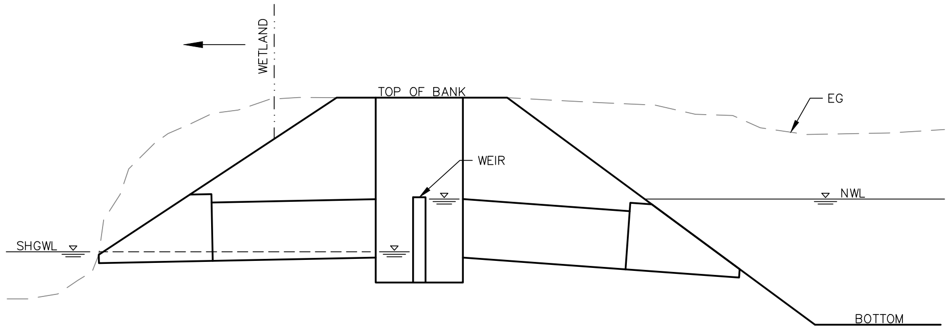
N.T.S.


2nd LIFT ~ 1" FC 12.5
1/8" TO 1/4"
1st LIFT ~ 1-1/2" SP 12.5
EXIST. PAVEMENT
PAVEMENT REPAIR 6" MIN. BEYOND BASE PLACEMENT, TYP.
LIMEROCK BASE (LBR 100) 100% MAX. DENSITY AASHTO T-180
8" MIN.
18" MIN.
18" MIN.
BACKFILL MATERIAL CONSISTING OF EXCAVATABLE FLOWABLE FILL PLACED IN ACCORDANCE WITH SECTION 121 OF FDOT STANDARD SPECIFICATIONS
TOP OF BEDDING
12"
CONDUIT OR PIPE
12" MIN.
12" MIN.

NOTES:
1. METHOD AND MATERIALS OF REPAIR SUBJECT TO FDOT CONSTRUCTION REQUIREMENTS..
2. ANY ASPHALT CUTS IN THE ROAD NEED TO BE CUT OUT AND REPLACED.
3. SUITABLE BACKFILL MATERIAL FOR SAWCUT AREA IS LIMITED TO EXCAVATABLE FLOWABLE FILL PLACED IN ACCORDANCE WITH SECTION 121 OF FDOT STANDARD SPECIFICATIONS.
4. DO NOT ALLOW THE UTILITY BEING INSTALLED TO FLOAT. IF A METHOD IS PROVIDED TO PREVENT FLOTATION FROM OCCURRING,
5. PLACE FLOWABLE FILL MIDWAY UP ON BOTH SIDES OF THE UTILITY AND TO THE BOTTOM OF THE EXISTING BASE COURSE.

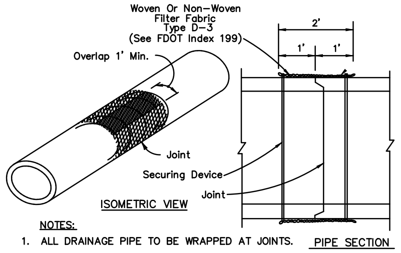
STANDARD PAVEMENT REPAIR DETAIL

N.T.S.


WETLAND
TOP OF BANK
EG
WEIR
NWL
SHGWL
BOTTOM

STORMWATER POND OUTFALL TO WETLANDS

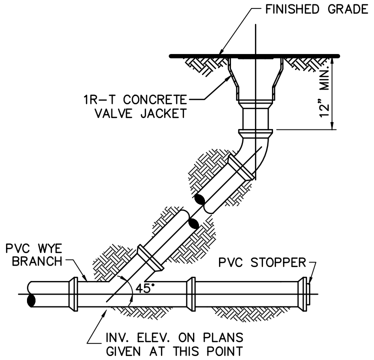
N.T.S.


Woven Or Non-Woven Filter Fabric Type D-3 (See FDOT Index 199)
Overlap 1' Min.
2'
1'
1'
Joint
Securing Device
Joint
ISOMETRIC VIEW
PIPE SECTION

NOTES:
1. ALL DRAINAGE PIPE TO BE WRAPPED AT JOINTS.
2. COST OF FILTER FABRIC JACKET TO BE INCLUDED IN COST OF PIPE CULVERTS.

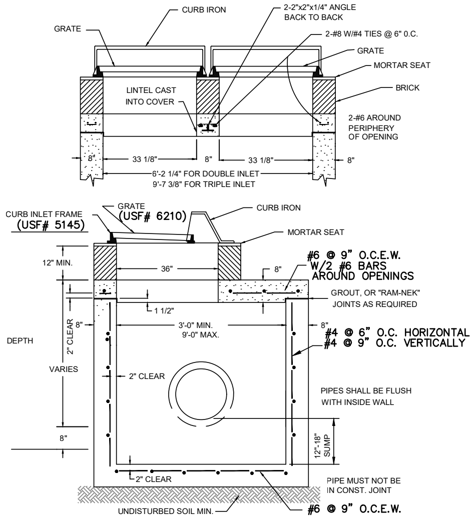
FILTER FABRIC JACKET

N.T.S.


FINISHED GRADE
1R-T CONCRETE VALVE JACKET
12" MIN.
PVC WYE BRANCH
PVC STOPPER
45°
INV. ELEV. ON PLANS GIVEN AT THIS POINT

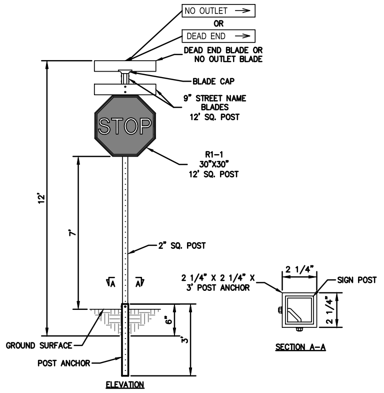
CLEANOUT DETAIL

N.T.S.


CURB IRON
2-2"x2"x1/4" ANGLE BACK TO BACK
GRATE
2-#8 W/#4 TIES @ 6" O.C.
GRATE
MORTAR SEAT
BRICK
LINTEL CAST INTO COVER
2-#6 AROUND PERIPHERY OF OPENING
8"
33 1/8"
8"
33 1/8"
8"
6'-2 1/4" FOR DOUBLE INLET
9'-7 3/8" FOR TRIPLE INLET
CURB INLET FRAME (USF# 5145)
GRATE (USF# 6210)
CURB IRON
MORTAR SEAT
12" MIN.
36"
8"
#6 @ 9" O.C.E.W. W/2 #6 BARS AROUND OPENINGS
GROUT, OR "RAM-NEK" JOINTS AS REQUIRED
1 1/2"
2" CLEAR
8"
3'-0" MIN.
9'-0" MAX.
8"
#4 @ 6" O.C. HORIZONTAL
#4 @ 9" O.C. VERTICALLY
DEPTH
VARIES
2" CLEAR
PIPES SHALL BE FLUSH WITH INSIDE WALL
8"
12"-18" SUMP
2" CLEAR
PIPE MUST NOT BE IN CONST. JOINT
UNDISTURBED SOIL MIN. BEARING CAPACITY 2000 PSF
#6 @ 9" O.C.E.W.

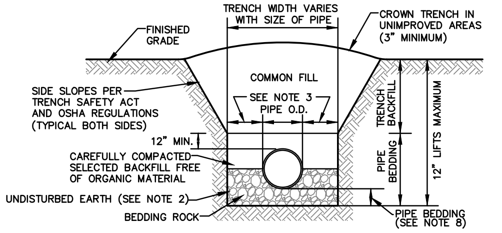
TYPE "B" DOUBLE CURB INLET

N.T.S.


NO OUTLET
OR
DEAD END
DEAD END BLADE OR NO OUTLET BLADE
BLADE CAP
9" STREET NAME BLADES 12' SQ. POST
STOP
R1-1 30"X30" 12' SQ. POST
12'
7'
2" SQ. POST
A
A
6"
3'
GROUND SURFACE
POST ANCHOR
2 1/4" X 2 1/4" X 3' POST ANCHOR
2 1/4"
2 1/4"
SIGN POST
SECTION A-A
ELEVATION

SIGN INSTALLATION DETAIL

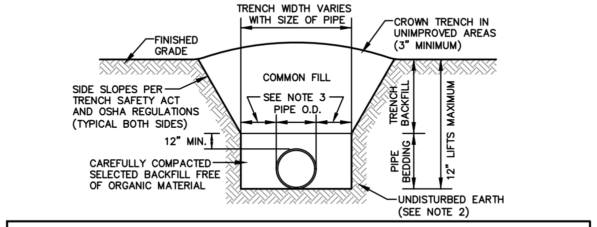
N.T.S.


FINISHED GRADE
TRENCH WIDTH VARIES WITH SIZE OF PIPE
CROWN TRENCH IN UNIMPROVED AREAS (3" MINIMUM)
COMMON FILL
SIDE SLOPES PER TRENCH SAFETY ACT AND OSHA REGULATIONS (TYPICAL BOTH SIDES)
SEE NOTE 3
PIPE O.D.
TRENCH BACKFILL
12" LIFTS MAXIMUM
12" MIN.
CAREFULLY COMPACTED SELECTED BACKFILL FREE OF ORGANIC MATERIAL
PIPE BEDDING
UNDISTURBED EARTH (SEE NOTE 2)
BEDDING ROCK
PIPE BEDDING (SEE NOTE 8)

NOTES:
1. TRENCH AND PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% MAX. DENSITY (AASHTO T–180).
2. USE TYPE A BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE COUNTY.
3. 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
4. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
5. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
6. REFER TO MANUAL FOR SHEETING AND BRACING IN EXCAVATIONS.
7. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES SURFACE RESTORATION WITHIN COUNTY RIGHT–OF–WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT–OF–WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.
8. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. THE COUNTY SHALL DETERMINE IN THE FIELD REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION.

TYPE A BEDDING AND TRENCH DETAIL

N.T.S.


FINISHED GRADE
TRENCH WIDTH VARIES WITH SIZE OF PIPE
CROWN TRENCH IN UNIMPROVED AREAS (3" MINIMUM)
COMMON FILL
SIDE SLOPES PER TRENCH SAFETY ACT AND OSHA REGULATIONS (TYPICAL BOTH SIDES)
SEE NOTE 3
PIPE O.D.
TRENCH BACKFILL
12" LIFTS MAXIMUM
12" MIN.
CAREFULLY COMPACTED SELECTED BACKFILL FREE OF ORGANIC MATERIAL
PIPE BEDDING
UNDISTURBED EARTH (SEE NOTE 2)

NOTES:
1. TRENCH AND PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% MAX. DENSITY (AASHTO T–180).
2. USE TYPE A BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE COUNTY.
3. 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
4. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
5. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
6. REFER TO MANUAL FOR SHEETING AND BRACING IN EXCAVATIONS.
7. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES SURFACE RESTORATION WITHIN COUNTY RIGHT–OF–WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT–OF–WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS

TYPE B BEDDING AND TRENCH DETAIL

N.T.S.

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry: 3650 L.A. Number LC26000311

No.	Date	Revision	By
1	. .		
2	. .		
3	. .		
4	. .		
5	. .		
6	. .		
7	. .		

PAVING AND DRAINAGE
DETAILS

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	O.C.: RCW
Date: AUGUST 2022	
Scale: N.T.S.	
Sheet 13B	

Printed: Sep 28, 2022 - 4:24pm Printed By: Garrett
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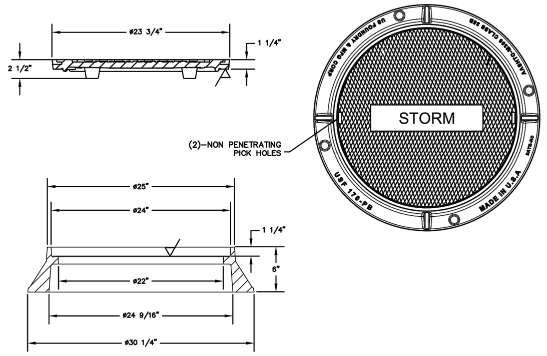
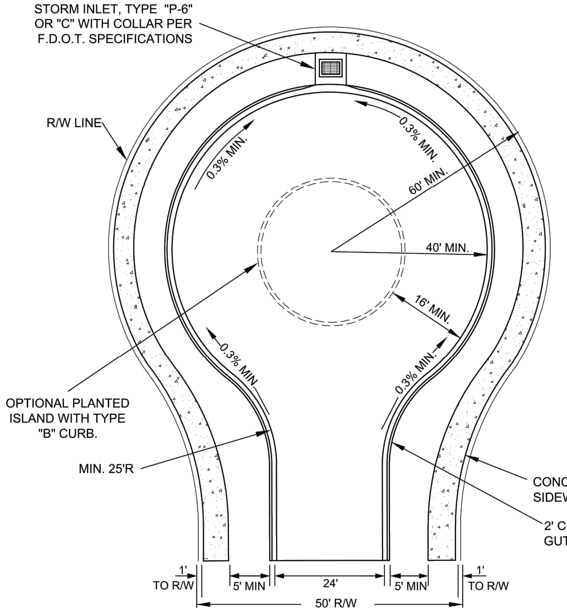

ø23 3/4"
1 1/4"
2 1/2"
STORM
(2)–NON PENETRATING PICK HOLES
US FOUNDRY & MFG CORP
AASHTO-M306 CLASS 35B
DATE-HC
MADE IN U.S.A
USF 170-PB
ø25"
ø24"
1 1/4"
6"
ø22"
ø24 9/16"
ø30 1/4"

*MODEL USF 170–PB RING AND CE–PB COVER
RING NO. 8021468
COVER NO. 8017533
MATERIAL AASHTO M306 GRAY IRON CLASS35B

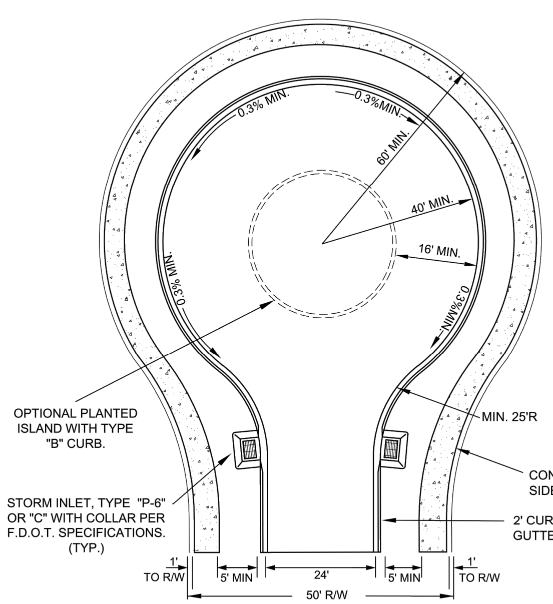
STORMWATER MANHOLE COVER

NOT TO SCALE


STORM INLET, TYPE "P-6" OR "C" WITH COLLAR PER F.D.O.T. SPECIFICATIONS
R/W LINE
0.3% MIN.
0.3% MIN.
60' MIN.
40' MIN.
16' MIN.
0.3% MIN.
0.3% MIN.
OPTIONAL PLANTED ISLAND WITH TYPE "B" CURB.
MIN. 25'R
CONCRETE SIDEWALK
2' CURB AND GUTTER
1' TO R/W
5' MIN
24'
5' MIN
1' TO R/W
50' R/W

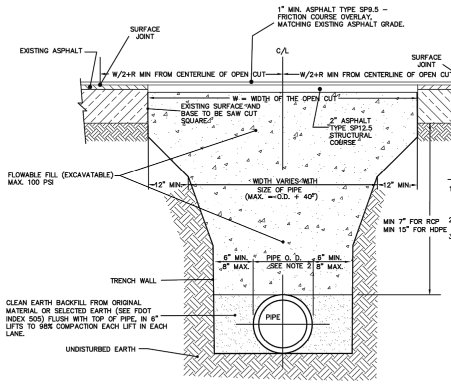
CUL-D-SAC WITH SINGLE STORM INLET

(N.T.S.)


0.3% MIN.
0.3%MIN.
60' MIN.
40' MIN.
16' MIN.
0.3% MIN
0.3%MIN
OPTIONAL PLANTED ISLAND WITH TYPE "B" CURB.
MIN. 25'R
CONCRETE SIDEWALK
STORM INLET, TYPE "P-6" OR "C" WITH COLLAR PER F.D.O.T. SPECIFICATIONS. (TYP.)
2' CURB AND GUTTER
1' TO R/W
5' MIN
24'
5' MIN
1' TO R/W
50' R/W

CUL-DE-SAC WITH TWO STORM INLETS

(N.T.S.)


1" MIN. ASPHALT TYPE SP9.5 – FRICTION COURSE OVERLAY, MATCHING EXISTING ASPHALT GRADE.
SURFACE JOINT
EXISTING ASPHALT
C/L
SURFACE JOINT
EXISTING ASPHALT
W/2+R MIN FROM CENTERLINE OF OPEN CUT
W/2+R MIN FROM CENTERLINE OF OPEN CUT
W = WIDTH OF THE OPEN CUT
EXISTING SURFACE AND BASE TO BE SAW CUT SQUARE
2" ASPHALT TYPE SP12.5 STRUCTURAL COURSE
FLOWABLE FILL (EXCAVATABLE) MAX. 100 PSI
12" MIN.
WIDTH VARIES WITH SIZE OF PIPE (MAX. = O.D. + 40")
12" MIN.
MIN 7" FOR RCP
MIN 15" FOR HDPE
6" MIN. 8" MAX.
PIPE O. D. SEE NOTE 2
6" MIN. 8" MAX.
TRENCH WALL
CLEAN EARTH BACKFILL FROM ORIGINAL MATERIAL OR SELECTED EARTH (SEE FDOT INDEX 505) FLUSH WITH TOP OF PIPE, IN 6" LIFTS TO 98% COMPACTION EACH LIFT IN EACH LANE.
PIPE
UNDISTURBED EARTH

OPEN CUT NOTES

1. PIPE TRENCHES OUTSIDE ROADWAY WILL REQUIRE CLEAN EARTH BACKFILL FROM ORIGINAL MATERIAL OR SELECTED EARTH (PER FDOT INDEX 505) IN 6" LIFTS AT 95% COMPACTION FOR EACH LIFT.
2. THE PIPE O. D. REFERS TO OUTSIDE EDGES OF MULTIPLE PIPES.
3. THE VALUE OF "R" IS THE MIN AMOUNT OVERLAY OF EXISTING ASPHALT PER "TABLE 1" PAST THE OPEN CUT. THIS DISTANCE MAY BE INCREASED DEPENDING ON PROJECTS LIMITS.

TABLE 1

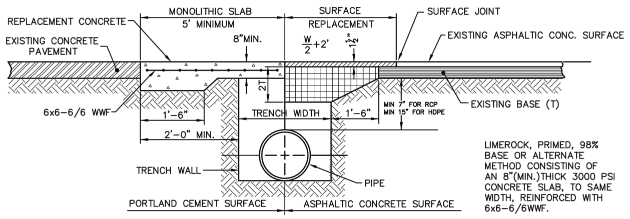
ROAD TYPE	R
LOCAL ROAD	2'
COLLECTOR ROAD UP TO 45 MPH	15'
COLLECTOR ROAD GREATER THAN 45 MPH	25'

*NOTES:

OPEN CUTS WILL NOT BE ALLOWED UNLESS SPECIFICALLY AUTHORIZED BY THE TOWN.

THIS DETAIL REPRESENTS THE STANDARD INSTALLATION OF CROSS PIPES FOR APPROVED OPEN CUTS OF TOWN ROADWAYS DURING CONSTRUCTION.

OPEN CUT & REPAIR (N.T.S.)


REPLACEMENT CONCRETE
MONOLITHIC SLAB 5' MINIMUM
SURFACE REPLACEMENT
SURFACE JOINT
EXISTING ASPHALTIC CONC. SURFACE
EXISTING CONCRETE PAVEMENT
8"MIN.
W/2+2'
1½"
2T
6x6–6/6 WWF
1'–6"
2'–0" MIN.
TRENCH WIDTH
1'–6"
MIN 7" FOR RCP
MIN 15" FOR HDPE
EXISTING BASE (T)
TRENCH WALL
PIPE
PORTLAND CEMENT SURFACE
ASPHALTIC CONCRETE SURFACE

LIMEROCK, PRIMED, 98% BASE OR ALTERNATE METHOD CONSISTING OF AN 8"(MIN.)THICK 3000 PSI CONCRETE SLAB, TO SAME WIDTH, REINFORCED WITH 6x6–6/6WWF.

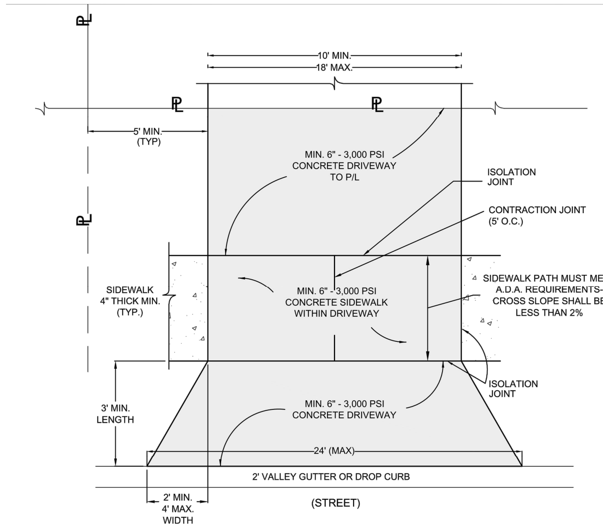
*NOTES:

OPEN CUTS WILL NOT BE ALLOWED UNLESS SPECIFICALLY AUTHORIZED BY THE TOWN.

THIS DETAIL REPRESENTS AN EXCEPTION TO THE STANDARD INSTALLATION OF CROSS PIPES FOR APPROVED OPEN CUTS OF ROADWAYS DURING CONSTRUCTION AND SHALL ONLY BE USED WITH THE PRIOR APPROVAL OF THE TOWN.

OPEN CUT & REPAIR ALTERNATE

(N.T.S.)


PL
10' MIN.
18' MAX.
PL
PL
5' MIN. (TYP)
PL
MIN. 6" - 3,000 PSI CONCRETE DRIVEWAY TO P/L
ISOLATION JOINT
CONTRACTION JOINT (5' O.C.)
SIDEWALK 4" THICK MIN. (TYP.)
MIN. 6" - 3,000 PSI CONCRETE SIDEWALK WITHIN DRIVEWAY
SIDEWALK PATH MUST MEET A.D.A. REQUIREMENTS- CROSS SLOPE SHALL BE LESS THAN 2%
ISOLATION JOINT
3' MIN. LENGTH
MIN. 6" - 3,000 PSI CONCRETE DRIVEWAY
24' (MAX)
2' VALLEY GUTTER OR DROP CURB
2' MIN. 4' MAX. WIDTH
(STREET)

Apron Flare Width: Minimum 2' each side.
Maximum 4' each side,
Not to Exceed 24' Total Width.

RESIDENTIAL DRIVEWAY APRON (N.T.S.)

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
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Florida Registry: 3650 L.A. Number LC26000311

No.	Date	Revision	By
7	..		
6	..		
5	..		
4	..		
3	..		
2	..		
1	..		

PAVING AND DRAINAGE DETAILS

HILLSIDE GROVE
HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
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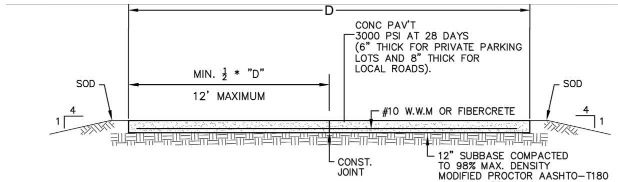
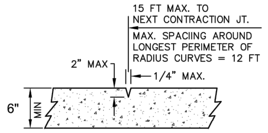
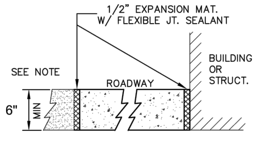

D
CONC PAV'T
3000 PSI AT 28 DAYS
(6" THICK FOR PRIVATE PARKING LOTS AND 8" THICK FOR LOCAL ROADS).
MIN. ½ * "D"
12' MAXIMUM
SOD
SOD
4
1
4
1
#10 W.W.M OR FIBERCRETE
CONST. JOINT
12" SUBBASE COMPACTED TO 98% MAX. DENSITY MODIFIED PROCTOR AASHTO–T180 MINIMUM LBR = 40

TYPICAL PAVEMENT SECTION

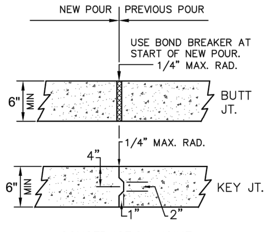
NOTE: FOR ROADWAYS, THE CROSSSLOPE SHALL BE 1/4" PER FOOT. FOR PRIVATE PARKING AREAS THE MINIMUM ALLOWABLE PAVEMENT SLOPE SHALL BE NO LESS THAN 0.50% MEASURED FROM THE RECEIVING INLET, GUTTER, OR FLUME TO ANY PAVEMENT.


15 FT MAX. TO NEXT CONTRACTION JT.
MAX. SPACIING AROUND LONGEST PERIMETER OF RADIUS CURVES = 12 FT
2" MAX
1/4" MAX.
6"
MIN

CONTRACTION JOINT


1/2" EXPANSION MAT. W/ FLEXIBLE JT. SEALANT
SEE NOTE
ROADWAY
BUILDING OR STRUCT.
6"
MIN

EXPANSION JOINT

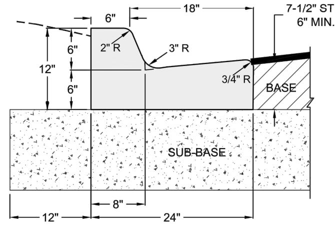

NEW POUR
PREVIOUS POUR
USE BOND BREAKER AT START OF NEW POUR.
1/4" MAX. RAD.
6"
MIN
BUTT JT.
1/4" MAX. RAD.
4"
6"
MIN
KEY JT.
1"
2"

CONSTRUCTION JOINT

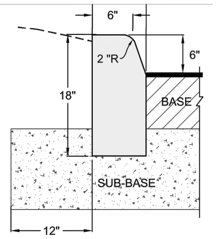
NOTES:

1. CONTRACTION JTS. MAY BE HAND FORMED, SAWED OR CONSTRUCTED W/ A 1/4" PREMOLDED FILLER JT. JOINTS MUST BE SAW CUT THE SAME DAY AS THE POUR.
2. EXPANSION JOINTS TO BE PLACED BETWEEN ROADWAY AND CURB. ALSO AT ANY PERMANENT STRUCTURE ABUTTING OR WITHIN THE PAVED AREA INCLUDING SIDEWALKS.
3. USE OF WOOD IS NOT AN ACCEPTABLE ALTERNATIVE TO FLEXIBLE JOINT SEALANTS.
4. FINAL DETERMINATION OF CONSTRUCTION JOINT SELECTION AND APPLICATION SHALL BE MADE BY THE ENGINEER OF RECORD BASED ON PROJECT REQUIREMENTS AND LOCATION.
5. CONSTRUCTION JOINTS WITHIN THE SLAB AREA SHOULD NOT CONTAIN PREMOLDED EXPANSION JOINT FILLER.

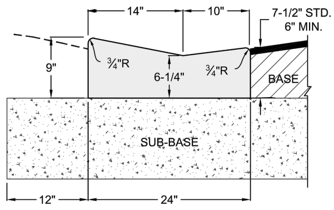
CONCRETE PAVEMENT (N.T.S.)


6"
18"
7-1/2" STD.
6" MIN.
6"
2" R
3" R
12"
3/4" R
BASE
6"
SUB-BASE
12"
8"
24"

TYPE "F" CURB


6"
2 "R
6"
18"
BASE
SUB-BASE
12"

TYPE "D" CURB

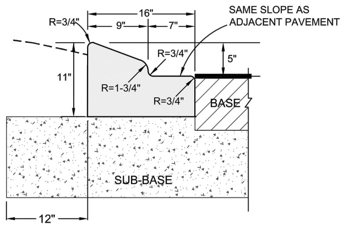

14"
10"
7-1/2" STD.
6" MIN.
9"
¾"R
¾"R
6-1/4"
BASE
SUB-BASE
12"
24"

DROP CURB (MIAMI TYPE)

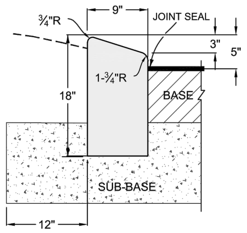
NOTES:

1. ALL CURBS TO BE CONSTRUCTED OF 28 DAY, 3,000 P.S.I. CONCRETE.
2. 1/2" PRE-MOLDED EXPANSION JOINT REQUIRED EVERY 500', CONSTRUCTION JOINT REQUIRED EVERY 10' MAXIMUM (4' MINIMUM).
3. 1/2" PRE-MOLDED EXPANSION JOINT REQUIRED AT EACH SIDE OF ALL STORM INLET STRUCTURES AND AT ALL RADIUS POINTS.
4. SUB-BASE TO BE COMPACTED AND TESTED TO 98% MINIMUM DENSITY WITH MINIMUM L.B.R. 40 BASED ON AASHTO T-180 MODIFIED PROCTOR TEST.
5. EXPANSION JOINT MATERIAL MUST COVER THE ENTIRE CROSS SECTION OF CURB.

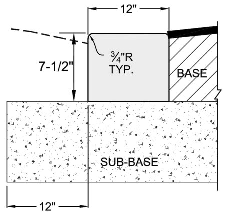
CONCRETE CURB (1) (N.T.S.)


R=3/4"
16"
9"
7"
SAME SLOPE AS ADJACENT PAVEMENT
R=3/4"
5"
11"
R=1-3/4"
R=3/4"
BASE
SUB-BASE
12"

TYPE "A" CURB

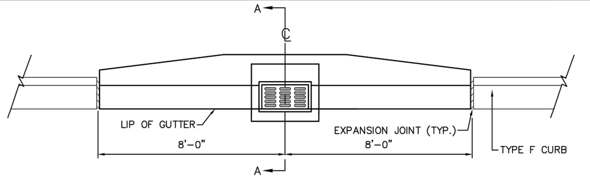

¾"R
9"
JOINT SEAL
3"
5"
1-¾"R
18"
BASE
SUB-BASE
12"

TYPE "B" CURB

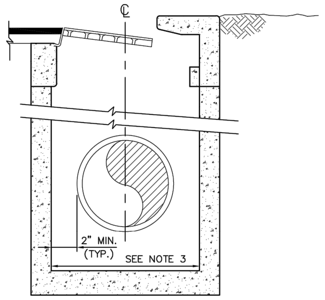

12"
7-1/2"
¾"R TYP.
BASE
SUB-BASE
12"

RIBBON CURB

CONCRETE CURB (2) (N.T.S.)


A
℄
LIP OF GUTTER
8'-0"
EXPANSION JOINT (TYP.)
8'-0"
TYPE F CURB
A

PLAN


℄
2" MIN. (TYP.)
SEE NOTE 3

SECTION "A–A"

NOTES:

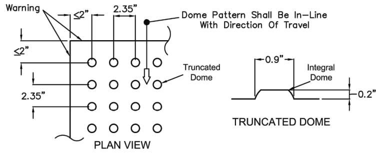
1. CURB INLET TOPS SHALL BE FDOT TYPE 5 OR TYPE 6. (TYPE 6 SHOWN). FRAME AND COVER SHALL BE STEEL MEETING ASTM A–36 OR CAST IRON, CLASS No. 30 IN ACCORDANCE WITH ASTM A–48.
2. PRECAST STRUCTURES SHALL BE FDOT TYPE P OR J AND MAY BE CIRCULAR, SQUARE OR RECTANGULAR, WALL THICKNESS AND REINFORCEMENT SHALL BE IN ACCORDANCE WITH ASTM C–478.
3. MINIMUM INSIDE DIMENSIONS SHALL BE 4' DIAMETER FOR CIRCULAR AND 3'–6" FOR SQUARE OR RECTANGULAR.
4. ALTERNATE DRAINAGE INLET DESIGNS MAY BE PROPOSED BY ENGINEER.

CURB INLET (N.T.S.)

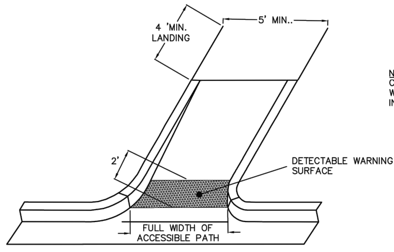
NOTE:
ALL SIDEWALK CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES.

LIQUID FORMED OR THERMO PLASTIC METHOD OF CONSTRUCTION OF THE WARNING SURFACE IS NOT ACCEPTABLE

LENGTH OF SURFACE SHALL BE 2' IN THE DIRECTION OF TRAVEL WITH A WIDTH EQUAL TO THE WIDTH OF THE ACCESSIBLE WALKWAY.

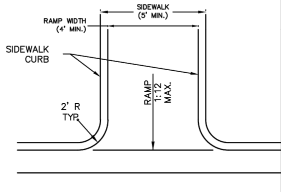

Edge Of Detectable Warning
≤2"
2.35"
Dome Pattern Shall Be In–Line With Direction Of Travel
≤2"
2.35"
Truncated Dome
PLAN VIEW
0.9"
Integral Dome
0.2"
TRUNCATED DOME

CURB RAMP DETECTABLE WARNING SURFACE

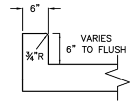

4 'MIN. LANDING
5' MIN..
2'
DETECTABLE WARNING SURFACE
FULL WIDTH OF ACCESSIBLE PATH

NOTE:
CURB RAMPS ON ACCESSIBLE ROUTES SHALL COMPLY WITH FDOT DESIGN STANDARDS, LATEST EDITION, INDEX 304.

PICTORAL VIEW
CURB RAMP TYPE CR-E
FDOT INDEX 304


SIDEWALK (5' MIN.)
RAMP WIDTH (4' MIN.)
SIDEWALK CURB
2' R TYP.
RAMP 1:12 MAX.

PLAN VIEW
CURB RAMP TYPE CR-E
FDOT INDEX 304


6"
¾"R
VARIES 6" TO FLUSH

SIDEWALK CURB DETAIL
NOT TO SCALE

SIDEWALK CURB RAMP (N.T.S.)

CURB RAMP – GENERAL NOTES

ALL REFERENCES TO FDOT AND ADA STANDARDS SHALL MEAN THE LATEST EDITION

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 all street intersections and at turnouts that have curbed returns. Partial curb returns shall extend to the limit prescribed by FDOT Index No. 515 to accommodate curb ramps. Ramps constructed at locations without sidewalks shall have a 5' x 5' landing constructed at the top of each ramp.
2. The location of curb ramps shall be as shown in the plans, but shall conform to F.D.O.T. standard details. All ramps, landings and curbs shall be constructed with minimum 3000 psi, Class A concrete and shall have minimum thickness of 6 inches. All concrete for pedestrian areas shall have a medium broom finish and standard color, unless specifically required by the plans.
3. Curb ramp running slopes at unrestrained sites shall not be steeper than 1 : 12 and cross slope shall not be steeper than 2%. 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.
4. If a curb ramp is located where pedestrians must walk across the ramp, then the walk shall have transitions with a maximum longitudinal slope of 1 : 12. and a 2% cross–slope. Ramps with curb returns may be used to provide guidance, avoid an obstacle, or when R/W limitations prohibit flares. Improvements for directional guidance are required whenever necessary to guide or re–direct the pedestrian towards the receiving ramp.
5. All curb ramps shall have detectable warning surfaces that extend the full width of the ramp and 24" from the back of curb in the direction of travel. Detectable warning surfaces shall be constructed in conformance with A.D.A. Standards For Accessible Design, A.D.A. Accessibility Guidelines, Section 4.29.2, Transition slopes are not to have detectable warnings. Dome pattern shall be in–line with direction of travel.
6. The color requirement for detectable warnings is to provide a dark–on–light visual contrast between the detectable warning surface and the adjacent walking surface. Where adjacent walking surfaces are dark colored and/or constructed with materials other than standard Class I Portland Cement Concrete in accordance with the Standard Specifications, the Contractor must provide a detectable warning surface color that provides the necessary contrast, with the adjacent concrete. The standard color is dark red brick or yellow colored detectable warning tile with standard concrete unless otherwise noted.
7. Where a curb ramp is constructed within existing curb, curb and gutter or sidewalk, the existing concrete shall be removed to the nearest joint beyond the transition slope so that no remaining section of concrete is less than 5' long. The existing sidewalk shall be removed to the nearest joint beyond the transition slope, if the ramp must extend into the sidewalk.
8. Expansion joints shall be placed at all perimeter edges abutting concrete, but no joints shall be made in the ramp itself.

SIDEWALK CURB RAMP GENERAL NOTES

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry: 3650 L.A. Number LC26000311

No.	Date	Revision	By
1			
2			
3			
4			
5			
6			
7			

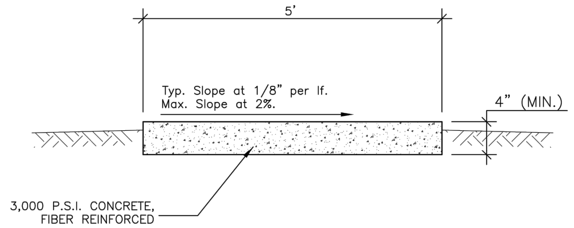
PAVING AND DRAINAGE
DETAILS

HILLSIDE GROVE
HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

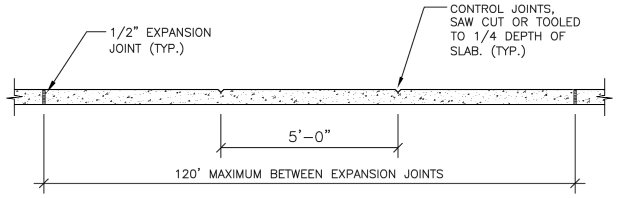
JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: N.T.S.	
Sheet 13D	

Printed By: Garrett
Printed: Sep 28 2022 - 4:24pm
J:\21\21-04-0008 Preserve at Howey\Design\Dwgs\Plots\21-04-0008 Pdets.dwg


5'
Typ. Slope at 1/8" per lf.
Max. Slope at 2%.
4" (MIN.)
3,000 P.S.I. CONCRETE, FIBER REINFORCED

SECTION


1/2" EXPANSION JOINT (TYP.)
CONTROL JOINTS, SAW CUT OR TOOLED TO 1/4 DEPTH OF SLAB. (TYP.)
5'–0"
120' MAXIMUM BETWEEN EXPANSION JOINTS

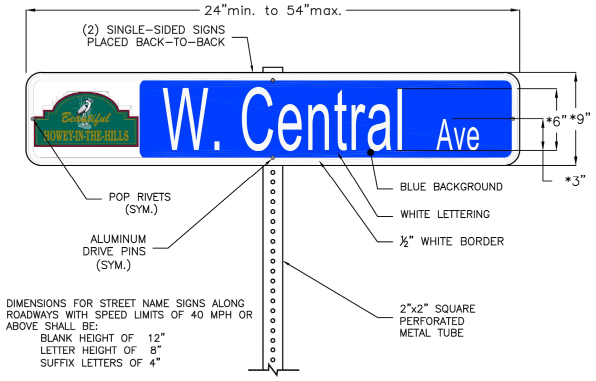
PROFILE

SIDEWALK (N.T.S.)

SIDEWALK CONSTRUCTION- GENERAL NOTES

1. SIDEWALKS, BIKE PATHS, RAMPS, AND DRIVEWAY APRONS SHALL BE CONSTRUCTED OF PLAIN PORTLAND CEMENT CONCRETE WITH A MAXIMUM SLUMP OF 3 INCHES, A MINIMUM DEVELOPED COMPRESSIVE STRENGTH OF 3,000 P.S.I. IN 28 DAYS, AND A MINIMUM UNIFORM THICKNESS OF 4 INCHES WHERE INTENDED SOLELY FOR PEDESTRIAN TRAFFIC, AND 6 INCHES THICK WHERE MOTOR VEHICLES ARE LIKELY TO CROSS.
2. SIDEWALKS AND BIKE PATHS SHALL BE PLACED PARALLEL TO, AND ONE FOOT WITHIN THE RIGHT–OF–WAY LINE EXCEPT THAT THE CITY MAY APPROVE DEVIATIONS TO SAVE SPECIMEN TREES PROVIDED THAT THE PAVEMENT REMAINS WITHIN THE RIGHT–OF–WAY, OR ADJACENT EASEMENT DEDICATED FOR SIDEWALK USE, IS NOT DIMINISHED IN WIDTH, AND REMAINS AT LEAST 3 FEET FROM THE EDGE OF THE STREET PAVEMENT, UNLESS OTHERWISE APPROVED BY THE CITY.
3. THE TOP OF THE CONCRETE SHALL BE AT AN ELEVATION NO LOWER THAN THE CROWN OF THE ADJACENT ROADWAY, AND NO HIGHER THAN 6 INCHES ABOVE THE CROWN UNLESS APPROVED BY THE CITY TO MAKE A MORE NATURAL TRANSITION WITH THE ADJACENT LAND. UNDER NO CIRCUMSTANCES WILL THE SIDEWALK EXCEED ADA MAXIMUM GRADES.
4. ISOLATION JOINTS (TYPE A JOINTS) SHALL BE PROVIDED BETWEEN EXISTING SLABS OR STRUCTURES AND FRESH CONCRETE, TO SEPARATE PEDESTRIAN SECTIONS FROM SECTIONS WHICH WILL ENCOUNTER VEHICLE TRAFFIC, TO SEPARATE FRESH PLACEMENT FROM CONCRETE WHICH HAS SET FOR MORE THAN 60 MINUTES, AND NO FARTHER APART THAN 120 FEET IN SIDEWALKS AND BIKE PATHS. JOINT MATERIAL SHALL BE AS SPECIFIED IN FDOT STANDARDS AND SPECIFICATIONS AND SHALL BE RUBBER, PLASTIC OR OTHER APPROVED NON–BIODEGRADABLE ELASTOMERIC MATERIAL. WOOD IS PROHIBITED.
5. CONTROL JOINTS (TYPE B JOINTS) SHALL BE TOOLED INTO THE FRESH CONCRETE, OR SAW–CUT WITHIN 24 HOURS OF PLACEMENT, TO A DEPTH EQUAL TO 1/4 THE SLAB THICKNESS AND SPACED APART A DISTANCE EQUAL TO THE WIDTH OF THE SLAB OR 5 FEET, WHICHEVER IS GREATEST.
6. THE SLAB SURFACE SHALL BE BROOM FINISHED TO BE SLIP RESISTANT, AND SHALL MATCH AS CLOSELY AS POSSIBLE THE FINISH OF EXISTING ADJACENT SLABS AND ALL EDGES SHALL BE TOOLED TO ELIMINATE SHARP CORNERS.
7. THE BEARING SUBSURFACE SHALL HAVE ALL ORGANIC, LOOSE, AND DELETERIOUS MATTER REMOVED, AND THE REMAINING CLEAN SOIL SHALL BE SMOOTH, SOUND, AND SOLID. ANY FILL MATERIAL SHALL BE COMPACTED WITH A VIBRATORY OR IMPACT COMPACTION MACHINE IN MAXIMUM 12 INCH LIFTS OR COMPACTED WITH A HAND TAMPER IN MAXIMUM 4 INCH LIFTS. THE CITY SHALL REQUIRE A COMPACTION TEST FOR EACH LIFT IF THE TOTAL FILLED SECTION IS MORE THEN 12 INCHES DEEP OR IF THE SUBSURFACE HAS BEEN DISTURBED MORE THAN 12 INCHES DEEP. WHERE SUCH TEST IS REQUIRED, THE RESULTS SHALL SHOW A MINIMUM PROCTOR FIELD DENSITY OF 95 PERCENT.
8. ALL CONCRETE WORK IN THE RIGHT–OF–WAY SHALL BE INSPECTED BY THE CITY AFTER THE SUBSOIL IS PREPARED AND THE FORMS ARE SET, BUT BEFORE THE CONCRETE PLACEMENT BEGINS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE FINISHED SLAB FROM ALL DAMAGE AND VANDALISM UNTIL THE CITY ACCEPTS OR APPROVES THE SLAB.
10. SIDEWALKS LOCATED WITHIN THE RIGHT–OF–WAY SHALL NOT BE TINTED, STAINED, COLORED, OR COATED, UNLESS APPROVED BY THE CITY ENGINEER.
11. ALL FORMS SHALL BE REMOVED PRIOR TO ACCEPTANCE OR APPROVAL AND THE DISTURBED GROUND SHALL BE BACK–FILLED, RE–GRADED, AND SODDED SO THAT THE WEAR SURFACE OF THE CONCRETE IS REASONABLY FLUSH WITH THE ADJACENT GRADE.
12. THE CITY MAY REQUIRE ADDITIONAL JOINTS AROUND UTILITY STRUCTURES LOCATED WITHIN THE SIDEWALK.

SIDEWALK - GENERAL NOTES


24"min. to 54"max.
(2) SINGLE–SIDED SIGNS PLACED BACK–TO–BACK
Beautiful
HOWEY-IN-THE-HILLS
W. Central
Ave
*6"
*9"
*3"
POP RIVETS (SYM.)
ALUMINUM DRIVE PINS (SYM.)
BLUE BACKGROUND
WHITE LETTERING
½" WHITE BORDER
2"x2" SQUARE PERFORATED METAL TUBE

*NOTE
DIMENSIONS FOR STREET NAME SIGNS ALONG ROADWAYS WITH SPEED LIMITS OF 40 MPH OR ABOVE SHALL BE:
BLANK HEIGHT OF 12"
LETTER HEIGHT OF 8"
SUFFIX LETTERS OF 4"

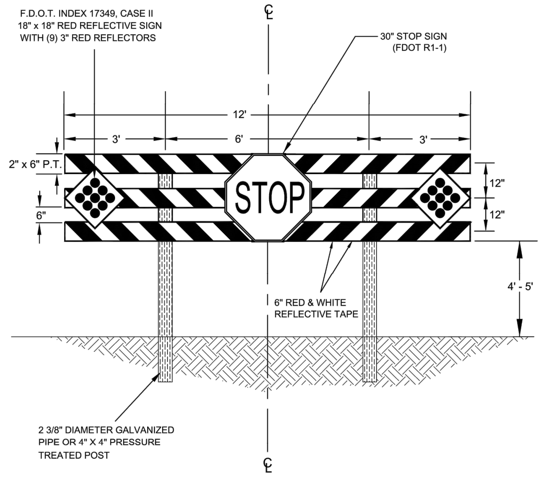
SIGN BLANKS:
- .063" ALUMINUM
- ALUMINUM CHEMICALLY TREATED TO MEET ATSM B449 STANDARD (PRE–TREATMENT FOR PAINT OR REFLECTIVE SHEETING)
- DIMENSIONS ARE TO BE 9" or 12" HEIGHT X 24" MINIMUM TO 54" MAXIMUM LENGTH. BLANK LENGTH TO BE DETERMINED BY ROAD NAME LENGTH AND BE ESTABLISHED IN 6" INCREMENTS, I.E. (24",30",36",42",48" OR 54")

COLOR:
- THE BACKGROUND SHALL BE HIGH INTENSITY PRISMATIC GREATER WHITE SHEETING WITH BLUE TRANSPARENT FILM OVERLAY.

LEGEND/LETTERING:
- ONE–HALF INCH (1/2") WHITE BORDER, 1/2" FROM THE EDGE.
- STREET NAMES SHALL BE 6" or 8" SERIES B LETTERS.
- THE ABBREVIATED SUFFIX "Rd", "Ave", "Dr", ETC., SHALL BE 3" or 4" SERIES B.

MOUNTING:
- MOUNTING SHALL BE TWO SINGLE–SIDED SIGNS WITH ATTRIBUTES ABOVE, MOUNTED BACK TO BACK, WITH ENDS POP RIVETED TOGETHER ON 2"x2" METAL POST, ATTACHED WITH ALUMINUM DRIVE PINS. NO EDGE–CLAMPING STYLE MOUNTING BLOCKS ARE TO BE USED.

STREET SIGN (N.T.S.)

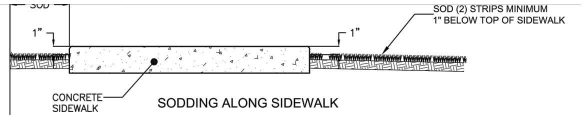

F.D.O.T. INDEX 17349, CASE II 18" x 18" RED REFLECTIVE SIGN WITH (9) 3" RED REFLECTORS
℄
30" STOP SIGN (FDOT R1-1)
12'
3'
6'
3'
2" x 6" P.T.
6"
12"
12"
STOP
4' - 5'
6" RED & WHITE REFLECTIVE TAPE
2 3/8" DIAMETER GALVANIZED PIPE OR 4" X 4" PRESSURE TREATED POST
℄

STREET CENTERLINE

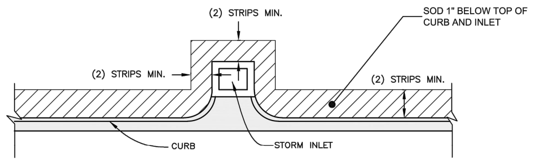
NOTES:

* BARRICADE TO BE USED FOR CITY AND PRIVATE STREETS, NOT APPLICABLE FOR MAJOR STREETS.
* A DEAD END SIGN (F.D.O.T. W14-1) SHALL BE POSTED AT A SUFFICIENT ADVANCE DISTANCE TO PERMIT VEHICLE OPERATOR TO TURN OFF, IF POSSIBLE AT THE NEAREST INTERSECTING STREET.
* BARRICADE SIGNS AND MARKERS SHALL BE IN ACCORDANCE WITH F.DO.T. DESIGN STANDARDS, LATEST EDITION, INDEX #17349.

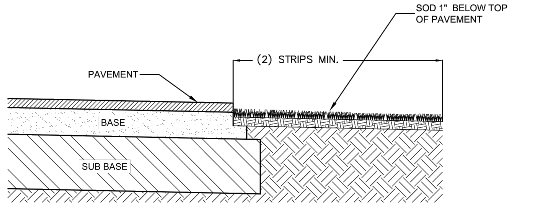
ROAD BARRICADE (N.T.S.)


SOD
1"
1"
SOD (2) STRIPS MINIMUM 1" BELOW TOP OF SIDEWALK
CONCRETE SIDEWALK

SODDING ALONG SIDEWALK


(2) STRIPS MIN.
SOD 1" BELOW TOP OF CURB AND INLET
(2) STRIPS MIN.
(2) STRIPS MIN.
CURB
STORM INLET

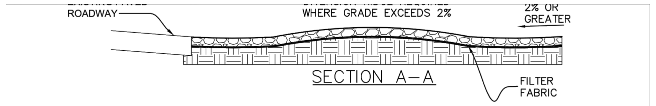
SODDING ALONG INLET AND CURB


SOD 1" BELOW TOP OF PAVEMENT
(2) STRIPS MIN.
PAVEMENT
BASE
SUB BASE

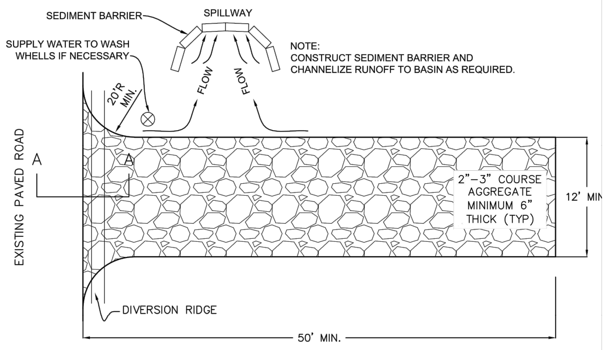
SODDING ALONG PAVED STREET

NOTE:
ANY EXISTING SODDED AREAS THAT ARE DISTURBED BY CONSTRUCTION SHALL BE RESODDED WITH LIKE SOD AND RESTORED TO ITS ORIGINAL STATE.

SOD PLANTING (N.T.S.)


ROADWAY
WHERE GRADE EXCEEDS 2%
2% OR GREATER
FILTER FABRIC

SECTION A–A


SEDIMENT BARRIER
SPILLWAY
SUPPLY WATER TO WASH WHELLS IF NECESSARY
20'R MIN.
FLOW
FLOW
EXISTING PAVED ROAD
A
A
2"–3" COURSE AGGREGATE MINIMUM 6" THICK (TYP)
12' MIN
DIVERSION RIDGE
50' MIN.

NOTE:
CONSTRUCT SEDIMENT BARRIER AND CHANNELIZE RUNOFF TO BASIN AS REQUIRED.

NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS–OR–WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. ALL MATERIALS SPILLED, DROPPED, OR TRACkED ONTO PUBLIC ROADS (INCLUDING AGGREGATE AND CONSTRUCTION MUD) SHALL BE REMOVED DAILY, OR MORE FREQUENTLY IF SO DIRECTED.

TEMPORARY CONSTRUCTION ENTRANCE (N.T.S.)

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry: 3650 L.A. Number LC26000311

No.	Date	Revision	By
7	:		
6	:		
5	:		
4	:		
3	:		
2	:		
1	:		

PAVING AND DRAINAGE
DETAILS

HILLSIDE GROVE

HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

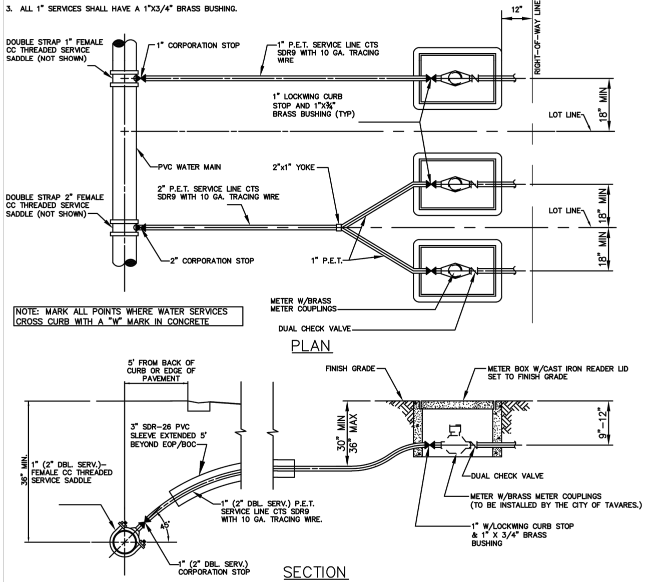
JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: N.T.S.	
Sheet 13E	

Printed: Sep 28, 2022 - 5:23pm   Printed By: Garrett

NOTES:

1. METERS TO BE INSTALLED BY THE CITY OF TAVARES.
2. ALL METER BOXES SHALL BE STANDARD PLASTIC RECTANGLE WITH A 1 1/4" PRE-DRILLED HOLE FOR THE TOUCH OR RF METER PAD. (CONTACT CITY FOR DETAILS).
3. ALL 1" SERVICES SHALL HAVE A 1"X3/4" BRASS BUSHING.


12"
RIGHT-OF-WAY LINE
DOUBLE STRAP 1" FEMALE CC THREADED SERVICE SADDLE (NOT SHOWN)
1" CORPORATION STOP
1" P.E.T. SERVICE LINE CTS SDR9 WITH 10 GA. TRACING WIRE
1" LOCKWING CURB STOP AND 1"X¾" BRASS BUSHING (TYP)
LOT LINE
18" MIN
PVC WATER MAIN
2"x1" YOKE
2" P.E.T. SERVICE LINE CTS SDR9 WITH 10 GA. TRACING WIRE
DOUBLE STRAP 2" FEMALE CC THREADED SERVICE SADDLE (NOT SHOWN)
2" CORPORATION STOP
1" P.E.T.
METER W/BRASS METER COUPLINGS
DUAL CHECK VALVE
5' FROM BACK OF CURB OR EDGE OF PAVEMENT
FINISH GRADE
METER BOX W/CAST IRON READER LID SET TO FINISH GRADE
3" SDR-26 PVC SLEEVE EXTENDED 5' BEYOND EOP/BOC
30" MIN 36" MAX
9"-12"
36" MIN.
1" (2" DBL. SERV.)- FEMALE CC THREADED SERVICE SADDLE
1" (2" DBL. SERV.) P.E.T. SERVICE LINE CTS SDR9 WITH 10 GA. TRACING WIRE.
45°
DUAL CHECK VALVE
METER W/BRASS METER COUPLINGS (TO BE INSTALLED BY THE CITY OF TAVARES.)
1" W/LOCKWING CURB STOP & 1" X 3/4" BRASS BUSHING
1" (2" DBL. SERV.) CORPORATION STOP

NOTE: MARK ALL POINTS WHERE WATER SERVICES CROSS CURB WITH A "W" MARK IN CONCRETE

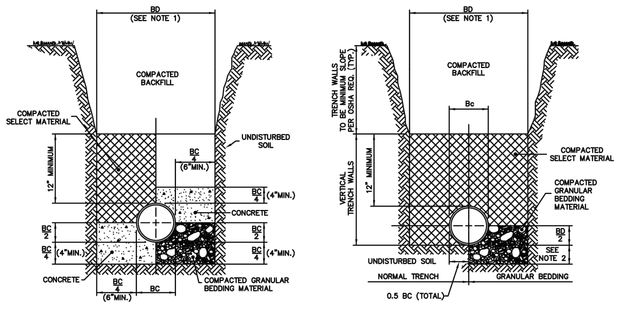
PLAN

SECTION

SERVICE CONNECTION—SINGLE FAMILY

NOT TO SCALE

(NOTE: METERS TO BE INSTALLED BY CITY OF TAVARES.)


BD (SEE NOTE 1)
COMPACTED BACKFILL
COMPACTED SELECT MATERIAL
UNDISTURBED SOIL
12" MINIMUM
BC/4 (6"MIN.)
BC/4 (4"MIN.)
CONCRETE
BC/2
COMPACTED GRANULAR BEDDING MATERIAL
BC
TRENCH WALLS TO BE MINIMUM SLOPE PER OSHA REQ. (TYP.)
VERTICAL TRENCH WALLS
Bc
COMPACTED GRANULAR BEDDING MATERIAL
BD/2
SEE NOTE 2
UNDISTURBED SOIL
NORMAL TRENCH
GRANULAR BEDDING
0.5 BC (TOTAL)

CLASS "A" BEDDING
SPECIAL CONDITIONS

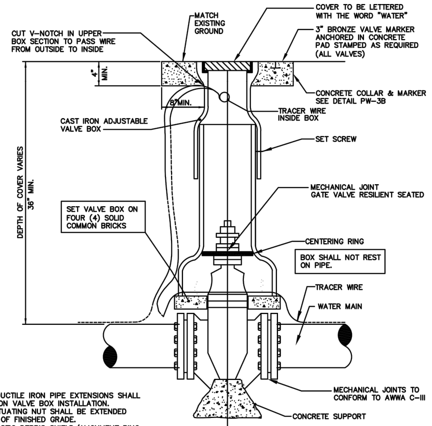
CLASS "B" BEDDING
NORMAL CONDITIONS

NOTES: FOR BEDDING AND TRENCHING

1. DIMENSION BC = PIPE O.D.
   DIMENSION BD = TRENCH WIDTH AT TOP OF PIPE
   MAXIMUM BD = BC + 30"
   MINIMUM BD = MAXIMUM DIMENSION OF BELL + 8" (UNSHEETED TRENCH)
2. DEPTH FOR REMOVAL FOR UNSUITABLE MATERIAL SHALL BE AS REQUIRED TO REACH SUITABLE FOUNDATION. FOR ROCK OR OTHER NON-CUSHIONING MATERIAL, DEPTH SHALL BE 6" BELOW BOTTOM OF UTILITY.
3. ALL BACKFILL AND SELECT MATERIAL UNDER ALL ROADWAYS, DRIVES (INCLUDING DIRT DRIVES), AND PARKING AREAS SHALL BE COMPACTED TO 98% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY. (AASHTO T-180). BACKFILL AND SELECT MATERIAL UNDER ALL OTHER AREAS SHALL BE COMPACTED AS FOLLOWS: FROM BOTTOM OF TRENCH TO 12" ABOVE TOP OF PIPE – 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY (AASHTO T-180). FROM 12" ABOVE TOP OF PIPE TO TOP OF BACKFILL – 90% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY (AASHTO T-180)

TRENCHING AND BEDDING

NOT TO SCALE

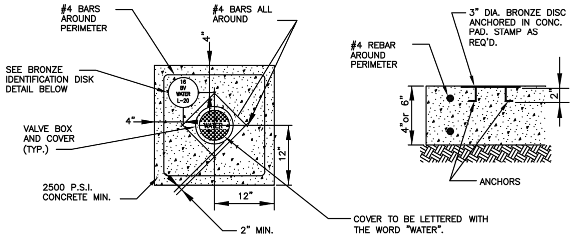

MATCH EXISTING GROUND
COVER TO BE LETTERED WITH THE WORD "WATER"
CUT V-NOTCH IN UPPER BOX SECTION TO PASS WIRE FROM OUTSIDE TO INSIDE
3" BRONZE VALVE MARKER ANCHORED IN CONCRETE PAD STAMPED AS REQUIRED (ALL VALVES)
4" MIN.
CONCRETE COLLAR & MARKER SEE DETAIL PW-3B
8" MIN.
TRACER WIRE INSIDE BOX
CAST IRON ADJUSTABLE VALVE BOX
SET SCREW
DEPTH OF COVER VARIES 36" MIN.
MECHANICAL JOINT GATE VALVE RESILIENT SEATED
SET VALVE BOX ON FOUR (4) SOLID COMMON BRICKS
CENTERING RING
BOX SHALL NOT REST ON PIPE.
TRACER WIRE
WATER MAIN
MECHANICAL JOINTS TO CONFORM TO AWWA C-III
CONCRETE SUPPORT

NOTES

1. PVC PIPE OR DUCTILE IRON PIPE EXTENSIONS SHALL NOT BE USED ON VALVE BOX INSTALLATION.
2. THE VALVE ACTUATING NUT SHALL BE EXTENDED WITHIN 2 FEET OF FINISHED GRADE.
3. PROVIDE A PLASTIC DEBRIS SHIELD/ALIGNMENT RING WHICH INSTALLS BELOW THE VALVE ACTUATING NUT. THIS SHIELD SHALL CENTER THE RISER PIPE BOX OVER THE ACTUATING NUT AND MINIMIZE INFILTRATION.
4. FOR NEW CONSTRUCTION, THE VALVE BOX SHALL BE ADJUSTED TO MIDRANGE TO ALLOW FOR FUTURE BOX ADJUSTMENTS.
5. VALVE BOX SHALL BE A TWO PIECE SCREW TYPE.

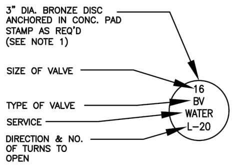
GATE VALVE AND BOX

NOT TO SCALE


#4 BARS AROUND PERIMETER
#4 BARS ALL AROUND
4"
SEE BRONZE IDENTIFICATION DISK DETAIL BELOW
16 BV WATER L-20
WATER
VALVE BOX AND COVER (TYP.)
12"
2500 P.S.I. CONCRETE MIN.
2" MIN.
COVER TO BE LETTERED WITH THE WORD "WATER".
#4 REBAR AROUND PERIMETER
3" DIA. BRONZE DISC ANCHORED IN CONC. PAD. STAMP AS REQ'D.
4" or 6"
2"
ANCHORS

NOTE:

1. BRONZE IDENTIFICATION DISC SHALL BE REQUIRED FOR ALL VALVES.
2. 6" THICK CONCRETE PAD IN ROADWAY OR PAVED AREAS, 4" THICK CONCRETE PAD IN OTHER AREAS.


3" DIA. BRONZE DISC ANCHORED IN CONC. PAD STAMP AS REQ'D (SEE NOTE 1)
SIZE OF VALVE
TYPE OF VALVE
SERVICE
DIRECTION & NO. OF TURNS TO OPEN
16
BV
WATER
L-20

BRONZE IDENTIFICATION DISC DETAIL

VALVE COLLAR

NOT TO SCALE

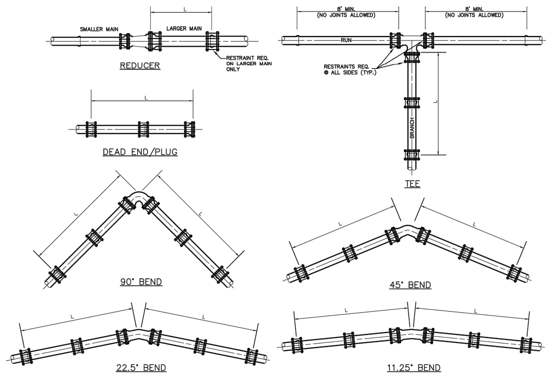

SMALLER MAIN
LARGER MAIN
L
RESTRAINT REQ. ON LARGER MAIN ONLY
REDUCER
8' MIN. (NO JOINTS ALLOWED)
RUN
RESTRAINTS REQ. @ ALL SIDES (TYP.)
BRANCH
DEAD END/PLUG
TEE
90° BEND
45° BEND
22.5° BEND
11.25° BEND

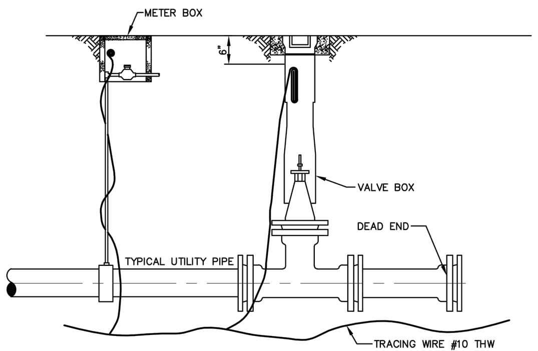
TABLE OF THRUST RESTRAINT LENGTHS															
PIPE SIZE (Inches)	90° BEND		45° BEND		22 1/2° BEND		11 1/4" BEND		TEES		DEAD END & PLUG		REDUCER		
	P.V.C. (L)	DUCTILE IRON (L)	P.V.C. (L)	DUCTILE IRON (L)	P.V.C. (L)	DUCTILE IRON (L)	P.V.C. (L)	DUCTILE IRON (L)	P.V.C. (L)	DUCTILE IRON (L)	P.V.C. (L)	DUCTILE IRON (L)	PIPE SIZES	P.V.C. (L)	DUCTILE IRON (L)
4	20'	16'	8'	7'	4'	3'	2'	2'	15'	10'	45'	29'	6"x4"	33'	21'
6	28'	22'	12'	9'	6'	4'	3'	2'	33'	21'	63'	40'	8"x6"	34'	22'
8	36'	29'	15'	12'	7'	6'	4'	3'	52'	33'	82'	52'	10"x8"	33'	21'
10	43'	34'	18'	14'	9'	7'	4'	3'	68'	43'	98'	63'	12"x10"	34'	22'
12	50'	40'	21'	17'	10'	8'	5'	4'	84'	54'	116'	74'	16"x12"	63'	40'
16	63'	51'	26'	21'	13'	10'	6'	5'	116'	74'	148'	94'	18"x16"	33'	21'
18	70,	56'	29'	23'	14'	11'	7'	6'	131'	83'	163'	103'	20"x18"	33'	21'
20	75'	61'	31'	25'	15'	12'	7'	6'	145'	92'	178'	113'	20"x20"	62'	39'
24	86'	70'	36'	29'	17'	14'	9'	7'	173'	110'	207'	132'			

THRUST RESTRAINT DESIGN NOTES

1. RESTRAINT JOINTS, FITTINGS, & VALVE REQUIREMENTS CALCULATED BY THE THRUST RESTRAINT DESIGN PROGRAM PROVIDED BY EBBA IRON SALES, INC.
2. DATA BASED ON MAX. PRESSURE OF 150 p.s.i., THE UNIFIED SOILS CLASSIFICATION SYSTEM (SOIL TYPE SP), THE PIPE BEDDED IN NATIVE SOIL w/ A MINIMUM OF 2.5' COMPACTED FILL OVER THE PIPE, AND USING A SAFETY FACTOR OF 1.5 FOR THE DATA.
3. ALL FITTINGS & VALVES SHALL HAVE RESTRAINED WITH "MEGA-LUG' RESTRAINTS, & ALL BELL & SPIGOT JOINTS TO BE RESTRAINED WITH A RESTRAINING HARNESS WITHIN THE REQUIRED LENGTH OF RESTRAINED PIPE (L).

THRUST RESTRAINT

NOT TO SCALE


METER BOX
6"
VALVE BOX
DEAD END
TYPICAL UTILITY PIPE
TRACING WIRE #10 THW SOLID COPPER COATED

ALL PIPE INSTALLED VIA OPEN CUT SHALL BE INSTALLED WITH #10 THW SOLID COPPER COATED TRACING WIRE. ALL PIPE INSTALLED VIA HDD SHALL BE INSTALLED WITH TWO #10 COPPER CLAD STEEL WIRES.

THE TRACING WIRE MUST BE INSTALLED DIRECTLY BELOW THE PIPE AND BROUGHT TO THE SURFACE AT 500' MINIMUM INTERVALS. WIRE SHALL EXTEND A MINIMUM OF 12" ABOVE GRADE AT EACH INTERVAL AND BE COILED AND PLACED IN A VALVE BOX, METER BOX, MANHOLE, CLEANOUT, LOCATE WIRE BOX, OR OTHER APPLICABLE STRUCTURE.

COLOR CODING:

POTABLE WATER SYSTEM: BLUE
REUSE WATER SYSTEM: PANTONE PURPLE
SANITARY SEWER, FORCE MAINS AND LOW PRESSURE SEWER SYSTEMS: GREEN

1. FOR LOW PRESSURE SEWER, POTABLE WATER AND REUSE WATER SYSTEMS: WIRE SHALL BE INSTALLED BELOW ALL MAINS AND SERVICE LINES AND ATTACHED TO VALVES, HYDRANTS AND FITTINGS. WIRE INSTALLED WITH SERVICE LINES SHALL CONNECT TO THE WIRE INSTALLED BELOW THE MAIN AND EXTEND TO THE CURB STOP.
2. FIRE SPRINKLER LINES: WIRE SHALL CONNECT TO THE WIRE INSTALLED BELOW THE MAIN AND EXTEND TO THE RISER CONNECTION.
3. SANITARY SEWER FORCE MAINS: WIRE SHALL BE INSTALLED BELOW THE FORCE MAIN AND ATTACHED TO ALL VALVES AND FITTINGS AND BROUGHT TO THE SURFACE AND PLACED IN A METAL, CITY OF TAVARES APPROVED, VALVE BOX.
4. DEAD END MAINS: WIRE SHALL BE PLACED IN A PROPERLY IDENTIFIED METAL VALVE BOX AT THE END OF THE RUN.
5. WIRE SHALL NOT BE FASTENED OR COILED TO VALVE OPERATING NUT.
6. UTILITY TRACING WIRE SHALL BE IN ACCORDANCE WITH CITY CSM AND PER CITY'S APPROVED MANUFACTURER LIST.

UTILITY PIPE LOCATION MATERIAL – WIRE

NOT TO SCALE

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WATER AND SEWER
DETAILS

HILLSIDE GROVE

HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW   Drawn: JEW
Checked: JEW   Q.C.: RCW
Date: AUGUST 2022
Scale:
Sheet 14A

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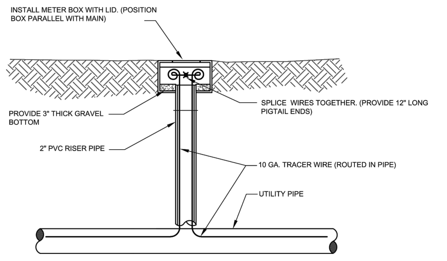
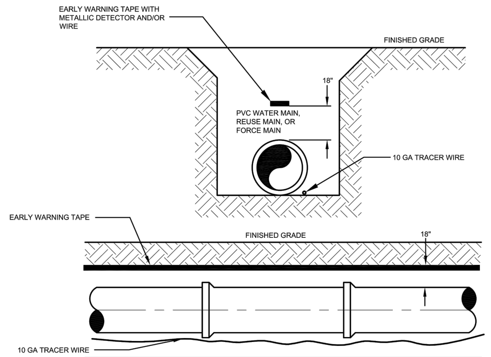

INSTALL METER BOX WITH LID. (POSITION BOX PARALLEL WITH MAIN)
PROVIDE 3" THICK GRAVEL BOTTOM
2" PVC RISER PIPE
SPLICE WIRES TOGETHER. (PROVIDE 12" LONG PIGTAIL ENDS)
10 GA. TRACER WIRE (ROUTED IN PIPE)
UTILITY PIPE

TRACER WIRE BOX UTILIZING METER BOX

NOTES:

1. TRACER WIRE STATION BOX TO BE INSTALLED WHERE THE WIRE CANNOT BE BROUGHT TO GRADE IN A VALVE BOX WITHIN THE MANDATORY 500 FOOT INTERVAL OR WHERE A SPLICE MUST BE MADE ON THE TRACER WIRING. NO UNDERGROUND SPLICES.
2. BOXES SHALL NOT BE LOCATED IN ROADWAYS OR DRIVEWAYS.
3. BOX AND LID PER DETAIL PW-19.
4. TRAFFIC RATED LID (STANDARD-NON BOLT DOWN)
5. LID COLOR SHALL BE PRE-MANUFACTURED OR PAINTED TO MATCH SERVICE (BLUE= POTABLE WATER, GREEN=WASTEWATER, PANTONE PURPLE=RECLAIMED WATER)

TRACER WIRE BOX

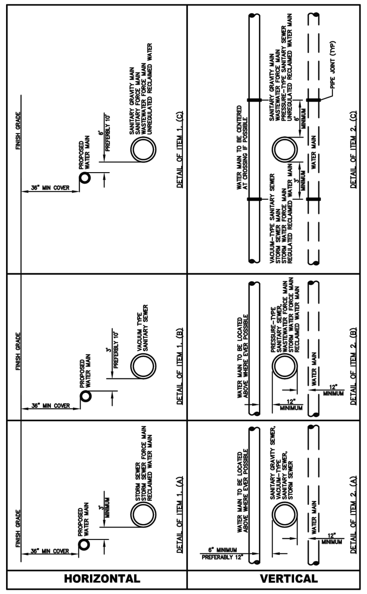

EARLY WARNING TAPE WITH METALLIC DETECTOR AND/OR WIRE
FINISHED GRADE
18"
PVC WATER MAIN, REUSE MAIN, OR FORCE MAIN
10 GA TRACER WIRE
EARLY WARNING TAPE
FINISHED GRADE
18"
10 GA TRACER WIRE

NOTES:

1. ALL MAINS INSTALLED BY OPEN CUT SHALL HAVE AN "EARLY WARNING" PROTECTION TAPE AND WIRE INSTALLED CONTINUOUSLY ALONG THE ALIGNMENT. THE PROTECTION TAPE SHALL BE PER THE CITY'S APPROVED MANUFACTURER LIST. TAPE SHALL BE INSTALLED DURING BACKFILLING 18" ABOVE THE PIPE AND SHALL BE CONTINUOUSLY MARKED FOR THE TYPE OF PIPE (EXAMPLE: CAUTION, WATER MAIN BURIED BELOW"). THE TAPE SHALL HAVE A METALLIC DETECTABLE STRIP INCLUDED AND COLOR CODED AS FOLLOWS:
   - BLUE - POTABLE WATER
   - GREEN - SANITARY FORCE MAIN, GRAVITY SEWER, LOW PRESSURE MAIN
   - PANTONE PURPLE - RECLAIMED WATER
   - RED - DEDICATED FIRE LINE
2. ALL PVC MAINS SHALL BE A SOLID COLOR AS DESCRIBED ABOVE.
   ALL DUCTILE IRON MAINS SHALL BE WRAPPED WITH COLOR CODED BAGS.
   ALL POTABLE WATER PIPE SHALL BEAR THE NATIONAL SANITATION FOUNDATION (NSL) SEAL OF APPROVAL.

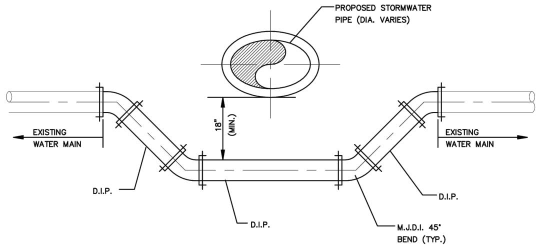
UTILITY PIPE LOCATION MATERIAL – TAPE

NOT TO SCALE


FINISH GRADE
36" MIN COVER
PROPOSED WATER MAIN
6' PREFERBLY 10'
SANITARY GRAVITY MAIN
SANITARY FORCE MAIN
WASTEWATER FORCE MAIN
UNREGULATED RECLAIMED WATER
DETAIL OF ITEM 1. (C)
WATER MAIN TO BE CENTERED AT CROSSING IF POSSIBLE
VACUUM-TYPE SANITARY SEWER
STORM SEWER MAIN
STORM WATER FORCE MAIN
REGULATED RECLAIMED WATER MAIN
3' MINIMUM
6' MINIMUM
SANITARY GRAVITY MAIN
WASTEWATER FORCE MAIN
PRESSURE-TYPE SANITARY SEWER
UNREGULATED RECLAIMED WATER MAIN
WATER MAIN
PIPE JOINT (TYP)
DETAIL OF ITEM 2. (C)
FINISH GRADE
36" MIN COVER
PROPOSED WATER MAIN
3' PREFERBLY 10'
VACUUM TYPE SANITARY SEWER
DETAIL OF ITEM 1. (B)
WATER MAIN TO BE LOCATED ABOVE WHERE EVER POSSIBLE
PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN STORM WATER FORCE MAIN RECLAIMED WATER MAIN
12" MINIMUM
WATER MAIN
12" MINIMUM
DETAIL OF ITEM 2. (B)
FINISH GRADE
36" MIN COVER
PROPOSED WATER MAIN
3' MINIMUM
STORM SEWER
STORM SEWER FORCE MAIN
RECLAIMED WATER MAIN
DETAIL OF ITEM 1. (A)
6" MINIMUM PREFERABLY 12"
WATER MAIN TO BE LOCATED ABOVE WHERE EVER POSSIBLE
SANITARY GRAVITY SEWER, VACUUM-TYPE SANITARY SEWER, STORM SEWER
WATER MAIN
12" MINIMUM
DETAIL OF ITEM 2. (A)
HORIZONTAL
VERTICAL

UTILITY SEPARATION

NOT TO SCALE

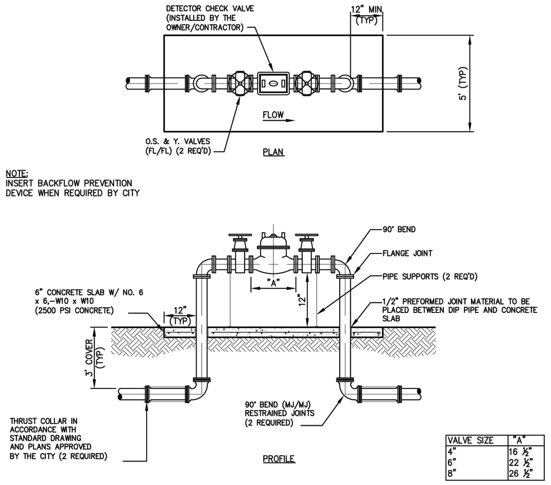

PROPOSED STORMWATER PIPE (DIA. VARIES)
18" (MIN.)
EXISTING WATER MAIN
EXISTING WATER MAIN
D.I.P.
D.I.P.
D.I.P.
M.J.D.I. 45° BEND (TYP.)

NOTES:

1. ALL PROPOSED JOINTS SHALL BE RESTRAINED.
2. ALL EXISTING JOINTS WITHIN SHALL BE RESTRAINED IN ACCORDANCE WITH GR–6.
3. ALL PIPING CLEARANCES SHALL BE IN ACCORDANCE WITH CHAPTER 62–555.314 F.A.C.

WATER LINE CROSSING

NOT TO SCALE


DETECTOR CHECK VALVE (INSTALLED BY THE OWNER/CONTRACTOR)
12" MIN (TYP)
5' (TYP)
FLOW
O.S. & Y. VALVES (FL/FL) (2 REQ'D)
PLAN
90° BEND
FLANGE JOINT
PIPE SUPPORTS (2 REQ'D)
"A"
12"
6" CONCRETE SLAB W/ NO. 6 x 6,–W10 x W10 (2500 PSI CONCRETE)
12" (TYP)
1/2" PREFORMED JOINT MATERIAL TO BE PLACED BETWEEN DIP PIPE AND CONCRETE SLAB
3' COVER (TYP)
90° BEND (MJ/MJ) RESTRAINED JOINTS (2 REQUIRED)
THRUST COLLAR IN ACCORDANCE WITH STANDARD DRAWING AND PLANS APPROVED BY THE CITY (2 REQUIRED)
PROFILE

NOTE:
INSERT BACKFLOW PREVENTION DEVICE WHEN REQUIRED BY CITY

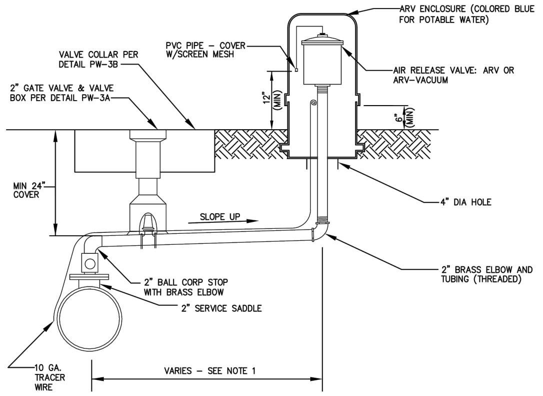
VALVE SIZE	"A"
4"	16 ½"
6"	22 ½"
8"	26 ½"

NOTES:

1. ALL ABOVE GROUND PIPE JOINTS SHALL BE FLANGED.
2. DETECTOR CHECK VALVE SHALL BE INSTALLED BY THE CONTRACTOR.

DETECTOR CHECK VALVE ASSEMBLY

NOT TO SCALE


ARV ENCLOSURE (COLORED BLUE FOR POTABLE WATER)
PVC PIPE – COVER W/SCREEN MESH
VALVE COLLAR PER DETAIL PW–3B
2" GATE VALVE & VALVE BOX PER DETAIL PW–3A
AIR RELEASE VALVE: ARV OR ARV–VACUUM
12" (MIN)
6" (MIN)
MIN 24" COVER
4" DIA HOLE
SLOPE UP
2" BRASS ELBOW AND TUBING (THREADED)
2" BALL CORP STOP WITH BRASS ELBOW
2" SERVICE SADDLE
10 GA. TRACER WIRE
VARIES – SEE NOTE 1

NOTES:

1. OFFSET DISTANCE SHOWN ON DRAWINGS.
2. ADJUST HORIZONTAL LOCATION OF ARV ENCLOSURE, AS REQUIRED TO AVOID SIDEWALK. LOCATE ARV ENCLOSURE WITHIN 1' OF R/W OR AS OTHERWISE DETERMINED BY THE CITY.

OFFSET AIR RELEASE VALVE VAULT

NOT TO SCALE

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WATER AND SEWER DETAILS

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
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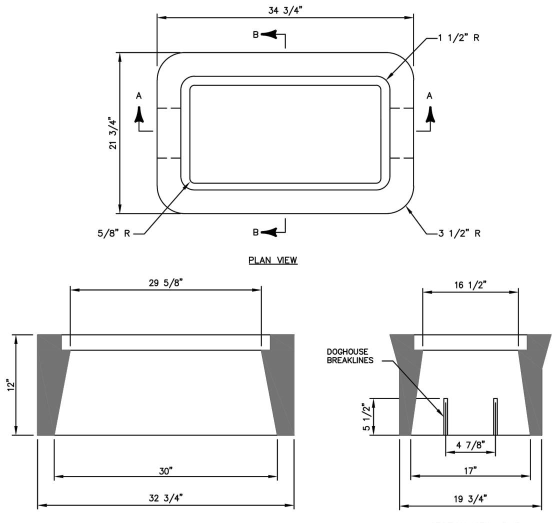
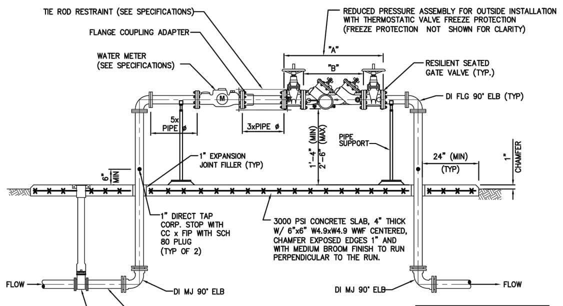

34 3/4"
B
1 1/2" R
A
A
21 3/4"
5/8" R
B
3 1/2" R
PLAN VIEW
29 5/8"
12"
30"
32 3/4"
SECTION VIEW A–A
16 1/2"
DOGHOUSE BREAKLINES
5 1/2"
4 7/8"
17"
19 3/4"
SECTION VIEW B–B

NOTE:
METER BOX SHALL BE COMPLETE WITH POLYMER COVER AND LID

JUMBO POLYMER METER BOX

NOT TO SCALE

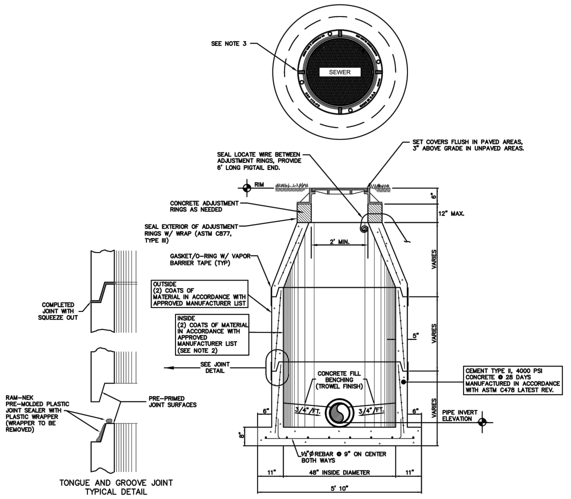

TIE ROD RESTRAINT (SEE SPECIFICATIONS)
FLANGE COUPLING ADAPTER
WATER METER (SEE SPECIFICATIONS)
REDUCED PRESSURE ASSEMBLY FOR OUTSIDE INSTALLATION WITH THERMOSTATIC VALVE FREEZE PROTECTION (FREEZE PROTECTION NOT SHOWN FOR CLARITY)
"A"
"B"
RESILIENT SEATED GATE VALVE (TYP.)
DI FLG 90° ELB (TYP)
5x PIPE ø
3xPIPE ø
1'-4" (MIN)
2'-6" (MAX)
PIPE SUPPORT
1" EXPANSION JOINT FILLER (TYP)
24" (MIN) (TYP)
1" CHAMFER
6" MIN
1" DIRECT TAP CORP. STOP WITH CC x FIP WITH SCH 80 PLUG (TYP OF 2)
3000 PSI CONCRETE SLAB, 4" THICK W/ 6"x6" W4.9xW4.9 WWF CENTERED, CHAMFER EXPOSED EDGES 1" AND WITH MEDIUM BROOM FINISH TO RUN PERPENDICULAR TO THE RUN.
FLOW
DI MJ 90° ELB
C-900 PVC
GATE VALVE AND BOX SEE DETAIL PW-3A
DI MJ 90° ELB
FLOW

DIMENSIONS			
PIPE SIZE	A	B	WT
	IN		LBS
3	41 11/16	25 9/16	213
4	50 7/16	32 5/16	360
6	59 11/16	38 9/16	601
8	69 3/16	46 1/16	892
10	84 3/16	58 1/16	1593

NOTES:
1. ALL ABOVE GROUND PIPE TO BE PAINTED WITH 2 COATS OF APPROVED BLUE PAINT.

REDUCED PRESSURE BACKFLOW PREVENTER W/ WATER METER DETAIL

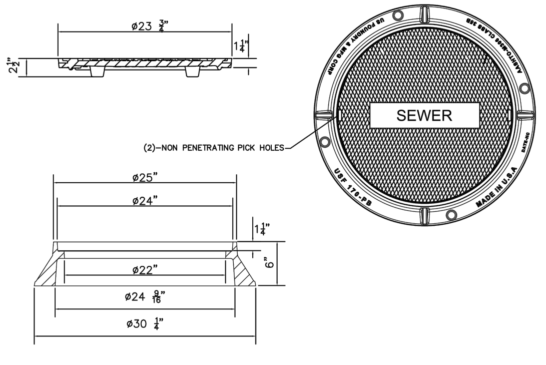
NOT TO SCALE


SEE NOTE 3
SEWER
SEAL LOCATE WIRE BETWEEN ADJUSTMENT RINGS, PROVIDE 6' LONG PIGTAIL END.
SET COVERS FLUSH IN PAVED AREAS, 3" ABOVE GRADE IN UNPAVED AREAS.
RIM
6"
12" MAX.
CONCRETE ADJUSTMENT RINGS AS NEEDED
SEAL EXTERIOR OF ADJUSTMENT RINGS W/ WRAP (ASTM C877, TYPE III)
2' MIN.
GASKET/O-RING W/ VAPOR BARRIER TAPE (TYP)
VARIES
OUTSIDE (2) COATS OF MATERIAL IN ACCORDANCE WITH APPROVED MANUFACTURER LIST
INSIDE (2) COATS OF MATERIAL IN ACCORDANCE WITH APPROVED MANUFACTURER LIST (SEE NOTE 2)
5"
VARIES
COMPLETED JOINT WITH SQUEEZE OUT
SEE JOINT DETAIL
CONCRETE FILL BENCHING (TROWEL FINISH)
CEMENT TYPE II, 4000 PSI CONCRETE @ 28 DAYS MANUFACTURED IN ACCORDANCE WITH ASTM C478 LATEST REV.
RAM-NEK PRE-MOLDED PLASTIC JOINT SEALER WITH PLASTIC WRAPPER (WRAPPER TO BE REMOVED)
PRE-PRIMED JOINT SURFACES
3/4"/FT.
3/4"/FT.
6"
6"
VARIES
PIPE INVERT ELEVATION
8"
1/2"ø REBAR @ 9" ON CENTER BOTH WAYS
11"
48" INSIDE DIAMETER
11"
5' 10"
TONGUE AND GROOVE JOINT TYPICAL DETAIL

NOTES
1. ALTERNATE-PRECAST MANHOLE TOPS MUST BE APPROVED IN ADVANCE.
2. LINER (150 MILS DFT) SHALL BE USED WHERE SHOWN ON DRAWINGS AND/OR REQUIRED BY THE CITY.
3. MANHOLE LID TO BE CENTERED OVER EFFLUENT PIPE.
4. INSTALL ONE CONTINUOUS PIECE OF RAM-NEK AROUND ENTIRE MATING SURFACE BETWEEN ADJUSTMENT RINGS AND MANHOLE FRAME.

SANITARY PRECAST MANHOLE

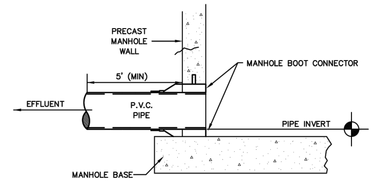
NOT TO SCALE


ø23 3/4"
1 1/4"
2 1/2"
SEWER
US FOUNDRY & MFG CORP
AASHTO-M306 CLASS 35B
USF 170-PB
MADE IN U.S.A
DATE-HC
(2)-NON PENETRATING PICK HOLES
ø25"
ø24"
1 1/4"
6"
ø22"
ø24 9/16"
ø30 1/4"

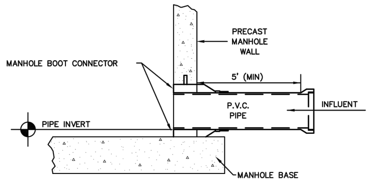
*MODEL USF 170-PB RING AND CE-PB COVER
RING NO. 8021468
COVER NO. 8017774
MATERIAL AASHTO M306 GRAY CAST IRON CLASS 35B

SANITARY MANHOLE COVER

NOT TO SCALE


PRECAST MANHOLE WALL
MANHOLE BOOT CONNECTOR
5' (MIN)
EFFLUENT
P.V.C. PIPE
PIPE INVERT
MANHOLE BASE

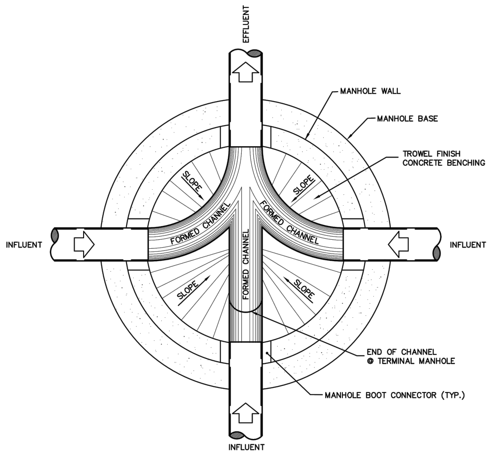
EFFLUENT CONNECTION


PRECAST MANHOLE WALL
MANHOLE BOOT CONNECTOR
5' (MIN)
P.V.C. PIPE
INFLUENT
PIPE INVERT
MANHOLE BASE

INFLUENT CONNECTION

PIPE CONNECTION TO PRECAST SANITARY MANHOLE

NOT TO SCALE


EFFLUENT
MANHOLE WALL
MANHOLE BASE
TROWEL FINISH CONCRETE BENCHING
SLOPE
SLOPE
FORMED CHANNEL
FORMED CHANNEL
FORMED CHANNEL
INFLUENT
INFLUENT
SLOPE
SLOPE
END OF CHANNEL @ TERMINAL MANHOLE
MANHOLE BOOT CONNECTOR (TYP.)
INFLUENT

FLOW PATTERNS FOR INVERT CHANNELS

NOTES:
1. INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS. HALF PIPE INVERT CHANNELS.
2. SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING FOR SMOOTH FLOWS.
3. CHANNELS FOR FUTURE CONNECTIONS (STUBS) SHALL BE CONSTRUCTED, FILLED WITH SAND AND COVERED WITH 1" OF MORTAR.

TYPICAL MANHOLE PLAN

NOT TO SCALE

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WATER AND SEWER
DETAILS

HILLSIDE GROVE
HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	O.C.: RCW
Date: AUGUST 2022	
Scale:	
Sheet 14C	

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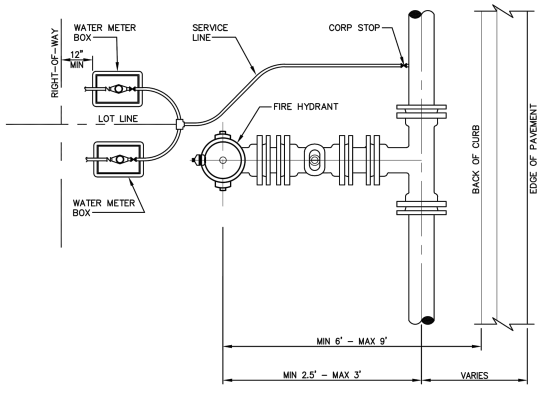


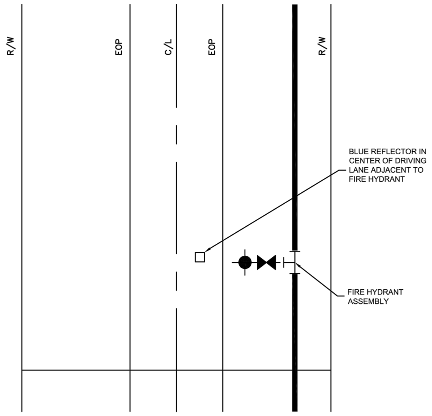
RIGHT–OF–WAY
WATER METER BOX
12" MIN
LOT LINE
WATER METER BOX
SERVICE LINE
CORP STOP
FIRE HYDRANT
BACK OF CURB
EDGE OF PAVEMENT
MIN 6' – MAX 9'
MIN 2.5' – MAX 3'
VARIES

NOTES:

1. ALL METER BOXES TO BE LOCATED INSIDE ROAD R/W LINE
2. DETAIL TO BE USED WHERE FIRE HYDRANTS AND WATER SERVICES ARE LOCATED ON PLANS AND CONFLICT APPEARS APPARENT.

TYPICAL WATER SERVICE AND HYDRANT LOCATION

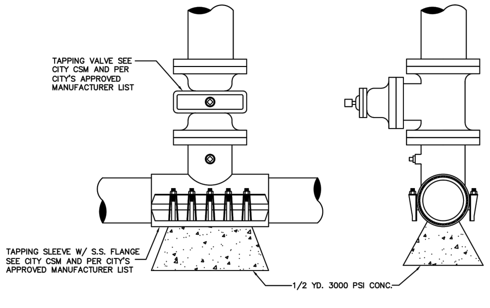
NOT TO SCALE



R/W
EOP
C/L
EOP
R/W
BLUE REFLECTOR IN CENTER OF DRIVING LANE ADJACENT TO FIRE HYDRANT
FIRE HYDRANT ASSEMBLY

FIRE HYDRANT REFLECTOR

NOT TO SCALE



TAPPING VALVE SEE CITY CSM AND PER CITY'S APPROVED MANUFACTURER LIST
TAPPING SLEEVE W/ S.S. FLANGE SEE CITY CSM AND PER CITY'S APPROVED MANUFACTURER LIST
1/2 YD. 3000 PSI CONC.

WET TAP SLEEVE AND TAPPING VALVE

NOT TO SCALE

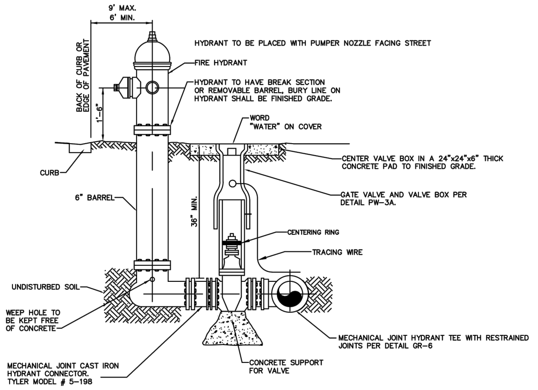
PAINTING

1. APPLY TWO COATS OF OSHA SAFETY INDUSTRIAL RED PAINT TO HYDRANT BARREL.
2. APPLY TWO COATS OF OSHA SAFETY INDUSTRIAL ENAMEL PAINT TO THE BONNET AND NOZZLE CAPS. THE UTILITY DEPARTMENT INSPECTOR WILL DETERMINE THE COLOR TO PAINT THE HYDRANT BONNET AND NOZZLE CAPS BY FLOW TESTING HYDRANT.

BLUE	1500 GPM OR MORE (SHERWIN WILLIAMS #SW4086)
GREEN	1000 GPM TO 1499 GPM (SHERWIN WILLIAMS #B54614)
ORANGE	500 GPM TO 999 GPM (SHERWIN WILLIAMS #B54E39)
RED	499 GPM OR LESS (SHERWIN WILLIAMS #B54R38)
RED	HYDRANT BARREL (SHERWIN WILLIAMS #B54R38)

SPECIFICATIONS

1. AWWA SPECIFICATIONS C–502
2. TWO 2–1/2" HOSE NOZZLE DISCHARGE
3. ONE 4–1/2" PUMPER NOZZLE DISCHARGE
4. ONE 1–1/2" OPERATING NUT, LEFT
5. ALL HYDRANTS SHALL BE EQUIPPED WITH FITTINGS TO ALLOW FOR ELEVATION ADJUSTMENTS.
6. 5¼" MAIN VALVE OPENING
7. RESTRAINED JOINTS OR ALL THREADED ROD REQUIRED TO SECURE PIPE, RISER AND VALVE IN THE FIRE HYDRANT ASSEMBLY TO THE MAIN

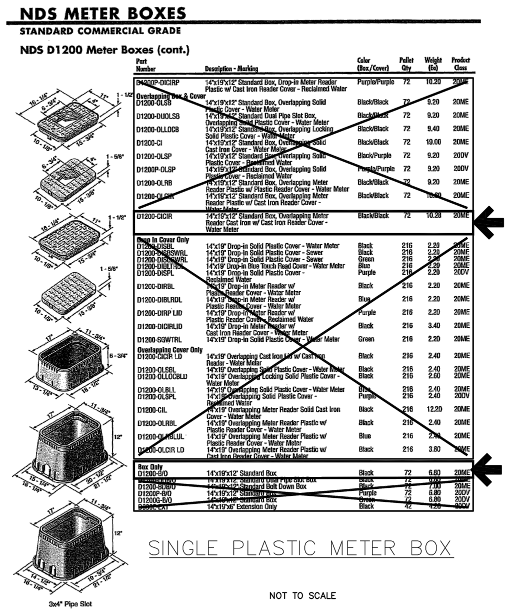


9' MAX.
6' MIN.
BACK OF CURB OR EDGE OF PAVEMENT
1'–6"
HYDRANT TO BE PLACED WITH PUMPER NOZZLE FACING STREET
FIRE HYDRANT
HYDRANT TO HAVE BREAK SECTION OR REMOVABLE BARREL, BURY LINE ON HYDRANT SHALL BE FINISHED GRADE.
WORD "WATER" ON COVER
CENTER VALVE BOX IN A 24"x24"x6" THICK CONCRETE PAD TO FINISHED GRADE.
CURB
6" BARREL
36" MIN.
GATE VALVE AND VALVE BOX PER DETAIL PW–3A.
CENTERING RING
TRACING WIRE
UNDISTURBED SOIL
WEEP HOLE TO BE KEPT FREE OF CONCRETE
MECHANICAL JOINT HYDRANT TEE WITH RESTRAINED JOINTS PER DETAIL GR–6
MECHANICAL JOINT CAST IRON HYDRANT CONNECTOR. TYLER MODEL # 5–198
CONCRETE SUPPORT FOR VALVE

FIRE HYDRANT WITH VALVE

NOT TO SCALE

(STANDARD FIRE HYDRANT ASSEMBLY)



NDS METER BOXES

STANDARD COMMERCIAL GRADE

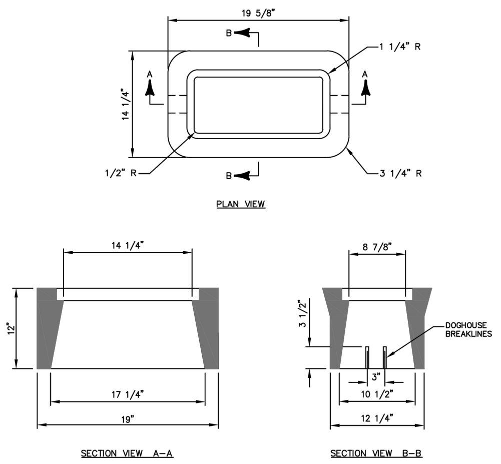
NDS D1200 Meter Boxes (cont.)

Part Number	Description - Marking	Color (Box/Cover)	Pallet Qty	Weight (Ea)	Product Class
~~D1200P-DICIRP~~	~~14"x19"x12" Standard Box, Drop-in Meter Reader Plastic w/ Cast Iron Reader Cover - Reclaimed Water~~	~~Purple/Purple~~	~~72~~	~~10.20~~	~~20ME~~
Overlapping Box & Cover					
~~D1200-OLSB~~	~~14"x19"x12" Standard Box, Overlapping Solid Plastic Cover - Water Meter~~	~~Black/Black~~	~~72~~	~~9.20~~	~~20ME~~
~~D1200-DUOLSB~~	~~14"x19"x12" Standard Dual Pipe Slot Box, Overlapping Solid Plastic Cover - Water Meter~~	~~Black/Black~~	~~72~~	~~9.20~~	~~20ME~~
~~D1200-OLLOCB~~	~~14"x19"x12" Standard Box, Overlapping Locking Solid Plastic Cover - Water Meter~~	~~Black/Black~~	~~72~~	~~9.40~~	~~20ME~~
~~D1200-CI~~	~~14"x19"x12" Standard Box, Overlapping Solid Cast Iron Cover - Water Meter~~	~~Black/Black~~	~~72~~	~~19.00~~	~~20ME~~
~~D1200-OLSP~~	~~14"x19"x12" Standard Box, Overlapping Solid Plastic Cover - Reclaimed Water~~	~~Black/Purple~~	~~72~~	~~9.20~~	~~20DV~~
~~D1200P-OLSP~~	~~14"x19"x12" Standard Box, Overlapping Solid Plastic Cover - Reclaimed Water~~	~~Purple/Purple~~	~~72~~	~~9.20~~	~~20DV~~
~~D1200-OLRB~~	~~14"x19"x12" Standard Box, Overlapping Meter Reader Plastic w/ Plastic Reader Cover - Water Meter~~	~~Black/Black~~	~~72~~	~~9.20~~	~~20ME~~
~~D1200-OLCIR~~	~~14"x19"x12" Standard Box, Overlapping Meter Reader Plastic w/ Cast Iron Reader Cover - Water Meter~~	~~Black/Black~~	~~72~~	~~10.60~~	~~20ME~~
D1200-CICIR	14"x19"x12" Standard Box, Overlapping Meter Reader Cast Iron w/ Cast Iron Reader Cover - Water Meter	Black/Black	72	10.28	20ME
Drop In Cover Only					
~~D1200-DISBL~~	~~14"x19" Drop-in Solid Plastic Cover - Water Meter~~	~~Black~~	~~216~~	~~2.20~~	~~20ME~~
~~D1200-DISBSWRL~~	~~14"x19" Drop-in Solid Plastic Cover - Sewer~~	~~Black~~	~~216~~	~~2.20~~	~~20ME~~
~~D1200-DISGSWRL~~	~~14"x19" Drop-in Solid Plastic Cover - Sewer~~	~~Green~~	~~216~~	~~2.20~~	~~20ME~~
~~D1200-DIBLTRDL~~	~~14"x19" Drop-in Blue Touch Read Cover - Water Meter~~	~~Blue~~	~~216~~	~~2.20~~	~~20ME~~
~~D1200-DISPL~~	~~14"x19" Drop-in Solid Plastic Cover - Reclaimed Water~~	~~Purple~~	~~216~~	~~2.20~~	~~20DV~~
~~D1200-DIRBL~~	~~14"x19" Drop-in Meter Reader w/ Plastic Reader Cover - Water Meter~~	~~Black~~	~~216~~	~~2.20~~	~~20ME~~
~~D1200-DIBLRDL~~	~~14"x19" Drop-in Meter Reader w/ Plastic Reader Cover - Water Meter~~	~~Blue~~	~~216~~	~~2.20~~	~~20ME~~
~~D1200-DIRP LID~~	~~14"x19" Drop-in Meter Reader w/ Plastic Reader Cover - Reclaimed Water~~	~~Purple~~	~~216~~	~~2.20~~	~~20ME~~
~~D1200-DICIRLID~~	~~14"x19" Drop-in Meter Reader w/ Cast Iron Reader Cover - Water Meter~~	~~Black~~	~~216~~	~~3.40~~	~~20ME~~
~~D1200-SGWTRL~~	~~14"x19" Drop-in Solid Plastic Cover - Water Meter~~	~~Green~~	~~216~~	~~2.20~~	~~20ME~~
Overlapping Cover Only					
~~D1200-CICIR LD~~	~~14"x19" Overlapping Cast Iron Lid w/ Cast Iron Reader - Water Meter~~	~~Black~~	~~216~~	~~2.40~~	~~20ME~~
~~D1200-OLSBL~~	~~14"x19" Overlapping Solid Plastic Cover - Water Meter~~	~~Black~~	~~216~~	~~2.40~~	~~20ME~~
~~D1200-OLLOCBLD~~	~~14"x19" Overlapping Locking Solid Plastic Cover - Water Meter~~	~~Black~~	~~216~~	~~2.60~~	~~20ME~~
~~D1200-OLBLL~~	~~14"x19" Overlapping Solid Plastic Cover - Water Meter~~	~~Blue~~	~~216~~	~~2.40~~	~~20ME~~
~~D1200-OLSPL~~	~~14"x19" Overlapping Solid Plastic Cover - Reclaimed Water~~	~~Purple~~	~~216~~	~~2.40~~	~~20DV~~
~~D1200-CIL~~	~~14"x19" Overlapping Meter Reader Solid Cast Iron Cover - Water Meter~~	~~Black~~	~~216~~	~~12.20~~	~~20ME~~
~~D1200-OLRBL~~	~~14"x19" Overlapping Meter Reader Plastic w/ Plastic Reader Cover - Water Meter~~	~~Black~~	~~216~~	~~2.40~~	~~20ME~~
~~D1200-OLRBLUL~~	~~14"x19" Overlapping Meter Reader Plastic w/ Plastic Reader Cover - Water Meter~~	~~Blue~~	~~216~~	~~2.40~~	~~20ME~~
~~D1200-OLCIR LD~~	~~14"x19" Overlapping Meter Reader Plastic w/ Cast Iron Reader Cover - Water Meter~~	~~Black~~	~~216~~	~~3.80~~	~~20ME~~
Box Only					
D1200-B/O	14"x19"x12" Standard Box	Black	72	6.80	20ME
~~D1200-DUB/O~~	~~14"x19"x12" Standard Dual Pipe Slot Box~~	~~Black~~	~~72~~	~~6.80~~	~~20ME~~
~~D1200-BDB/O~~	~~14"x19"x12" Standard Bolt Down Box~~	~~Black~~	~~72~~	~~7.00~~	~~20ME~~
~~D1200P-B/O~~	~~14"x19"x12" Standard Box~~	~~Purple~~	~~72~~	~~6.80~~	~~20DV~~
~~D1200G-B/O~~	~~14"x19"x12" Standard Box~~	~~Green~~	~~72~~	~~6.80~~	~~20DV~~
~~[illegible]~~	~~14"x19"x6" Extension Only~~	~~Black~~	~~42~~	~~4.20~~	~~20DV~~

16 - 1/4"
6 - 3/4"
11"
4"
1 - 1/2"
10 - 1/8"
15 - 3/4"
1 - 5/8"
15 - 3/8"
17"
11 - 3/4"
6 - 3/4"
13 - 1/4"
18 - 1/2"
12"
15 - 1/4"
16 - 1/4"
20 - 1/2"
21 - 1/2"
14 - 1/2"
19 - 3/4"
3x4" Pipe Slot

SINGLE PLASTIC METER BOX

NOT TO SCALE



19 5/8"
B
A
1 1/4" R
14 1/4"
1/2" R
3 1/4" R
14 1/4"
12"
17 1/4"
19"
8 7/8"
3 1/2"
DOGHOUSE BREAKLINES
3"
10 1/2"
12 1/4"

PLAN VIEW

SECTION VIEW A–A

SECTION VIEW B–B

NOTE:

METER BOX SHALL BE COMPLETE WITH POLYMER COVER LID

SINGLE POLYMER METER BOX

NOT TO SCALE

Connelly & Wicker Inc.

Planning · Engineering · Landscape Architecture

10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 256-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
1	:		
2	:		
3	:		
4	:		
5	:		
6	:		
7	:		

WATER AND SEWER
DETAILS

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
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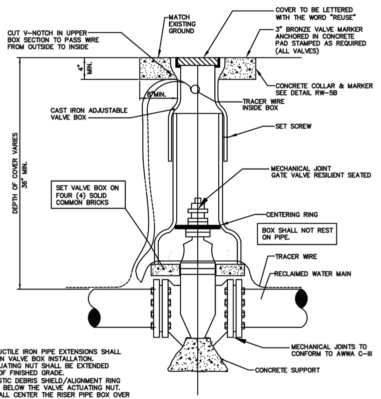
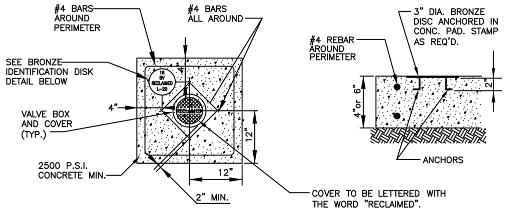

CUT V-NOTCH IN UPPER BOX SECTION TO PASS WIRE FROM OUTSIDE TO INSIDE
MATCH EXISTING GROUND
COVER TO BE LETTERED WITH THE WORD "REUSE"
3" BRONZE VALVE MARKER ANCHORED IN CONCRETE PAD STAMPED AS REQUIRED (ALL VALVES)
4" MIN.
8" MIN.
CONCRETE COLLAR & MARKER SEE DETAIL RW-5B
TRACER WIRE INSIDE BOX
CAST IRON ADJUSTABLE VALVE BOX
SET SCREW
DEPTH OF COVER VARIES 36" MIN.
MECHANICAL JOINT GATE VALVE RESILIENT SEATED
SET VALVE BOX ON FOUR (4) SOLID COMMON BRICKS
CENTERING RING
BOX SHALL NOT REST ON PIPE.
TRACER WIRE
RECLAIMED WATER MAIN
MECHANICAL JOINTS TO CONFORM TO AWWA C-III
CONCRETE SUPPORT

NOTES

1. PVC PIPE OR DUCTILE IRON PIPE EXTENSIONS SHALL NOT BE USED ON VALVE BOX INSTALLATION.
2. THE VALVE ACTUATING NUT SHALL BE EXTENDED WITHIN 2 FEET OF FINISHED GRADE.
3. PROVIDE A PLASTIC DEBRIS SHIELD/ALIGNMENT RING WHICH INSTALLS BELOW THE VALVE ACTUATING NUT. THIS SHIELD SHALL CENTER THE RISER PIPE BOX OVER THE ACTUATING NUT AND MINIMIZE INFILTRATION.
4. FOR NEW CONSTRUCTION, THE VALVE BOX SHALL BE ADJUSTED TO MIDRANGE TO ALLOW FOR FUTURE BOX ADJUSTMENTS.
5. VALVE BOX SHALL BE A TWO PIECE SCREW TYPE.

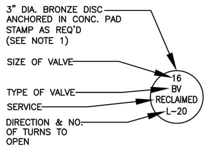
GATE VALVE AND BOX

NOT TO SCALE


#4 BARS AROUND PERIMETER
#4 BARS ALL AROUND
SEE BRONZE IDENTIFICATION DISK DETAIL BELOW
16
BV
RECLAIMED
L-20
4"
4"
VALVE BOX AND COVER (TYP.)
RECLAIMED
12"
12"
2500 P.S.I. CONCRETE MIN.
2" MIN.
COVER TO BE LETTERED WITH THE WORD "RECLAIMED".
#4 REBAR AROUND PERIMETER
3" DIA. BRONZE DISC ANCHORED IN CONC. PAD. STAMP AS REQ'D.
4"or 6"
2"
ANCHORS

NOTE:

1. BRONZE IDENTIFICATION DISC SHALL BE REQUIRED FOR ALL VALVES.
2. 6" THICK CONCRETE PAD IN ROADWAY OR PAVED AREAS, 4" THICK CONCRETE PAD IN OTHER AREAS.


3" DIA. BRONZE DISC ANCHORED IN CONC. PAD STAMP AS REQ'D (SEE NOTE 1)
SIZE OF VALVE
TYPE OF VALVE
SERVICE
DIRECTION & NO. OF TURNS TO OPEN
16
BV
RECLAIMED
L-20

BRONZE IDENTIFICATION DISC DETAIL

VALVE COLLAR

NOT TO SCALE

1. ALL RECLAIMED WATER PIPING TO BE OWNED AND MAINTAINED BY THE TOWN SHALL BE A SOLID PANTONE PURPLE COLOR.
2. RECLAIMED WATER MAINS SHALL BE PVC CONFORMING TO AWWA C-900, DR 18 FOR PIPE SIZES 4"-12". PIPES 14" & LARGER SHALL BE AWWA C-905, DR 25. PRESSURE CLASS 350 DIP IS AN ACCEPTABLE ALTERNATE. ALL COUPLINGS, CLEANING COMPOUNDS, SOLVENTS, LUBRICANTS, AND PIPE PREPARATION FOR LAYING SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURERS LATEST RECOMMENDATIONS.
3. DEPTH OF RECLAIMED WATER LINES TO BE 36" MIN. BELOW FINISHED GRADE.
4. RECLAIMED WATER MAINS TO BE LOCATED 5' FROM BACK OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
5. ALL PIPING CLEARANCES SHALL BE IN ACCORDANCE WITH CHAPTER 62-555.314, F.A.C.
6. ALL RECLAIMED WATER MAINS UNDER PAVEMENT SHALL BE DUCTILE IRON PIPE AND SHALL EXTEND 5' BEYOND THE EDGE OF PAVEMENT OR BACK OF CURB, EXCEPT DIRECTIONAL BORES, WHICH SHALL BE SDR-11 HDPE.
7. ALL IRRIGATION SLEEVING UNDER PAVEMENT SHALL EXTEND 5' BEYOND THE EDGE OF PAVEMENT OR BACK OF CURB.
8. ALL OTHER REQUIREMENTS OF THE TOWN WATER SYSTEM SHALL APPLY TO THE RECLAIMED WATER SYSTEM.
9. PROPER SIGNAGE FOR PUBLIC ACCESS IRRIGATION AREAS TO BE SUPPLIED BY THE DEVELOPER / CONTRACTOR, IN ACCORDANCE WITH CHAPTER 62-610.418, F.A.C.

GENERAL RECLAIMED WATER NOTES

GENERAL WATER NOTES

1. WATER SYSTEM COMPONENTS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND REGULATIONS, CLEANED, DISINFECTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND CHAPTER 62-555 FLORIDA ADMINISTRATIVE CODE.
2. ALL PIPING SHALL BEAR THE “NSF” SEAL FOR POTABLE WATER.
3. WATER MAINS SHALL BE PVC CONFORMING TO AWWA C-900, DR 18 FOR PIPE SIZES 4”-12”. PIPES 14” OR LARGER SHALL BE AWWA C-905, DR 18. ALL COUPLINGS, CLEANING COMPOUNDS, SOLVENTS, LUBRICANTS, AND PIPE PREPARATION, FOR LAYING, SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURER'S LATEST RECOMMENDATIONS.
4. DEPTH OF WATER LINES TO BE 36” MINIMUM COVER FROM FINISH GRADE.
5. WATER MAINS TO BE LOCATED 5' FROM BACK OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
6. ALL WATER MAINS UNDER PAVEMENT SHALL BE DUCTILE IRON.
7. ALL CASINGS UNDER PAVEMENT SHALL EXTEND 5' BEYOND THE BACK OF CURB.
8. DISINFECTING: FOLLOWING THE PRESSURE TESTING, THE CONTRACTOR SHALL DISINFECT ALL SECTIONS OF THE NEW WATER DISTRIBUTION SYSTEM. DISINFECTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF AWWA STANDARD C651 “DISINFECTING WATER MAINS”, AND ALL APPROPRIATE AGENCY APPROVAL.
9. ALL HYDROSTATIC TESTS SHALL BE IN ACCORDANCE WITH AWWA C600 FOR DUCTILE IRON PIPE AND C605/M23 FOR PVC PIPE.
10. ALL WATER MAINS SHALL BE INSTALLED, PRESSURE AND LEAK TESTED IN ACCORDANCE WITH AWWA C600, (62-555.320(21)(B)1 AND 62-555.330, F.A.C. ALL INSTALLATION, TESTING AND FIELD PROCEDURES MUST BE PROVIDED AND MUST CONFORM TO THE APPLICABLE AWWA STANDARDS.
11. ALL PIPING MATERIALS AND SPECIFICATIONS COVERING PIPES, JOINTS AND PACKING MATERIALS, INTERNAL COATING AND LININGS, FITTINGS, SPECIALS AND APPURTENANCES SHALL ALL BE IN ACCORDANCE WITH THE CORRESPONDING AWWA STANDARDS AND BE CONFORMING TO NSF REQUIREMENTS, AS MAY BE APPLICABLE, WITH EXCEPTIONS ALLOWED ONLY IF DOCUMENTATION AND ASSURANCES ARE PROVIDED IN COMPLIANCE WITH PARAGRAPHS 62-555.320(3) (D), 622-555.320 (3) (B), AND 62-555.320 (21) (C), F.A.C. THE LEAD USE PROHIBITION IN RULE 62-555.322, F.A.C. SHALL ALSO APPLY. POLYETHYLENE TUBING SHALL BE PER AWWA C901. UNDERGROUND SERVICE LINES AND VALVES SHALL BE PER AWWA C800.

COLOR CODING

ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT WILL BE COLOR CODED OR MARKED IN ACCORDANCE WITH SUBPARAGRAPH 62-555.320(21)(B)3, F.A.C., USING BLUE AS A PREDOMINANT COLOR. (UNDERGROUND PLASTIC PIPE WILL BE SOLID-WALL BLUE PIPE, WILL HAVE A CO-EXTRUDED BLUE EXTERNAL SKIN, OR WILL BE WHITE OR BLACK PIPE WITH BLUE STRIPES INCORPORATED INTO, OR APPLIED TO, THE PIPE WALL; AND UNDERGROUND METAL OR CONCRETE PIPE WILL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPED DURING MANUFACTURING OF THE PIPE WILL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE, THAT ARE LOCATED AT NO GREATER THAN 90-DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION OF THE PIPE, THE TAPE OR PAINT WILL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE; FOR PIPE WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER, TAPE OR PAINT WILL BE APPLIED IN CONTINUOUS LINES ALONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE. ABOVEGROUND PIPE WILL BE PAINTED BLUE OR WILL BE COLOR CODED OR MARKED LIKE UNDERGROUND PIPE.) [FAC 62\CELL 555.320(21)(B)3]

UNLESS DESCRIBED IN THE CITY CSM ELSEWHERE, ALL WATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH **CHAPTER 62-555.314, F.A.C.,** AND ANY UPDATES TO THE F.A.C., AND IN CONFORMANCE WITH ALL SEPARATION REQUIREMENTS AS FOUND THEREIN.

62-555.314 LOCATION OF PUBLIC WATER SYSTEM MAINS.

FOR THE PURPOSE OF THIS SECTION, THE PHRASE “WATER MAINS” SHALL MEAN MAINS, INCLUDING TREATMENT PLANT PROCESS PIPING, CONVEYING EITHER RAW, PARTIALLY TREATED, OR FINISHED DRINKING WATER; FIRE HYDRANT LEADS; AND SERVICE LINES THAT ARE UNDER THE CONTROL OF A PUBLIC WATER SYSTEM AND THAT HAVE AN INSIDE DIAMETER OF THREE INCHES OR GREATER.

(1) HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS.

(A) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C

(B) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.

(C) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.

GENERAL WATER NOTES

(D) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED “ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM” AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C.

(2) VERTICAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS AND RECLAIMED WATER PIPELINES.

(A) NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

(3) SEPARATION BETWEEN WATER MAINS AND SANITARY OR STORM SEWER MANHOLES:

(A) NO WATER MAIN SHALL PASS THROUGH, OR COME INTO CONTACT WITH, ANY PART OF A SANITARY SEWER MANHOLE.

(B) EFFECTIVE AUGUST 28, 2003, WATER MAINS SHALL NOT BE CONSTRUCTED OR ALTERED TO PASS THROUGH, OR COME INTO CONTACT WITH, ANY PART OF A STORM SEWER MANHOLE OR INLET STRUCTURE. WHERE IT IS NOT TECHNICALLY FEASIBLE OR ECONOMICALLY SENSIBLE TO COMPLY WITH THIS REQUIREMENT (I.E., WHERE THERE IS A CONFLICT IN THE ROUTING OF A WATER MAIN AND A STORM SEWER AND WHERE ALTERNATIVE ROUTING OF THE WATER MAIN OR THE STORM SEWER IS NOT TECHNICALLY FEASIBLE OR IS NOT ECONOMICALLY SENSIBLE), THE DEPARTMENT SHALL ALLOW EXCEPTIONS TO THIS REQUIREMENT (I.E., THE DEPARTMENT SHALL ALLOW CONSTRUCTION OF CONFLICT MANHOLES), BUT SUPPLIERS OF WATER OR PERSONS PROPOSING TO CONSTRUCT CONFLICT MANHOLES MUST FIRST OBTAIN A SPECIFIC PERMIT FROM THE DEPARTMENT AND MUST PROVIDE IN THE PRELIMINARY DESIGN REPORT OR DRAWINGS, SPECIFICATIONS, AND DESIGN DATA ACCOMPANYING THEIR PERMIT APPLICATION THE FOLLOWING INFORMATION:

1. TECHNICAL OR ECONOMIC JUSTIFICATION FOR EACH CONFLICT MANHOLE.
2. A STATEMENT IDENTIFYING THE PARTY RESPONSIBLE FOR MAINTAINING EACH CONFLICT MANHOLE.
3. ASSURANCE OF COMPLIANCE WITH THE DESIGN AND CONSTRUCTION REQUIREMENTS IN SUB-PARAGRAPHS A. THROUGH D. BELOW. - 361
    - A. EACH WATER MAIN PASSING THROUGH A CONFLICT MANHOLE SHALL HAVE A FLEXIBLE, WATERTIGHT JOINT ON EACH SIDE OF THE MANHOLE TO ACCOMMODATE DIFFERENTIAL SETTLING BETWEEN THE MAIN AND THE MANHOLE.
    - B. WITHIN EACH CONFLICT MANHOLE, THE WATER MAIN PASSING THROUGH THE MANHOLE SHALL BE INSTALLED IN A WATERTIGHT CASING PIPE HAVING HIGH IMPACT STRENGTH (I.E., HAVING IMPACT STRENGTH AT LEAST EQUAL TO THAT OF 0.25-INCH-THICK DUCTILE IRON PIPE).
    - C. EACH CONFLICT MANHOLE SHALL HAVE AN ACCESS OPENING, AND SHALL BE SIZED, TO ALLOW FOR EASY CLEANING OF THE MANHOLE.
    - D. GRATINGS SHALL BE INSTALLED AT ALL STORM SEWER INLETS UPSTREAM OF EACH CONFLICT MANHOLE TO PREVENT LARGE OBJECTS FROM ENTERING THE MANHOLE.

(4) SEPARATION BETWEEN FIRE HYDRANT DRAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS.

(A) NEW OR RELOCATED FIRE HYDRANTS WITH UNDERGROUND DRAINS SHALL BE LOCATED SO THAT THE DRAINS ARE AT LEAST THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AT LEAST THREE FEET, AND PREFERABLY TEN FEET, FROM ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER; AT LEAST SIX FEET, AND PREFERABLY TEN FEET, FROM ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND AT LEAST TEN FEET FROM ANY EXISTING OR PROPOSED “ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM” AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C.

GENERAL WATER NOTES

(5) EXCEPTIONS. WHERE IT IS NOT TECHNICALLY FEASIBLE OR ECONOMICALLY SENSIBLE TO COMPLY WITH THE REQUIREMENTS IN SUBSECTION (1) OR (2) ABOVE, THE DEPARTMENT SHALL ALLOW EXCEPTIONS TO THESE REQUIREMENTS IF SUPPLIERS OF WATER OR CONSTRUCTION PERMIT APPLICANTS PROVIDE TECHNICAL OR ECONOMIC JUSTIFICATION FOR EACH EXCEPTION AND PROVIDE ALTERNATIVE CONSTRUCTION FEATURES THAT AFFORD A SIMILAR LEVEL OF RELIABILITY AND PUBLIC HEALTH PROTECTION. ACCEPTABLE ALTERNATIVE CONSTRUCTION FEATURES INCLUDE THE FOLLOWING:

(A) WHERE AN UNDERGROUND WATER MAIN IS BEING LAID LESS THAN THE REQUIRED MINIMUM HORIZONTAL DISTANCE FROM ANOTHER PIPELINE AND WHERE AN UNDERGROUND WATER MAIN IS CROSSING ANOTHER PIPELINE AND JOINTS IN THE WATER MAIN ARE BEING LOCATED LESS THAN THE REQUIRED MINIMUM DISTANCE FROM JOINTS IN THE OTHER PIPELINE:

1. USE OF PRESSURE-RATED PIPE CONFORMING TO THE AMERICAN WATER WORKS ASSOCIATION STANDARDS INCORPORATED INTO RULE 62-555.330, F.A.C., FOR THE OTHER PIPELINE IF IT IS A GRAVITY- OR VACUUM-TYPE PIPELINE;
2. USE OF WELDED, FUSED, OR OTHERWISE RESTRAINED JOINTS FOR EITHER THE WATER MAIN OR THE OTHER PIPELINE; OR
3. USE OF WATERTIGHT CASING PIPE OR CONCRETE ENCASEMENT AT LEAST FOUR INCHES THICK FOR EITHER THE WATER MAIN OR THE OTHER PIPELINE.

(B) WHERE AN UNDERGROUND WATER MAIN IS BEING LAID LESS THAN THREE FEET HORIZONTALLY FROM ANOTHER PIPELINE AND WHERE AN UNDERGROUND WATER MAIN IS CROSSING ANOTHER PIPELINE AND IS BEING LAID LESS THAN THE REQUIRED MINIMUM VERTICAL DISTANCE FROM THE OTHER PIPELINE:

1. USE OF PIPE, OR CASING PIPE, HAVING HIGH IMPACT STRENGTH (I.E., HAVING AN IMPACT STRENGTH AT LEAST EQUAL TO THAT OF 0.25-INCH-THICK DUCTILE IRON PIPE) OR CONCRETE ENCASEMENT AT LEAST FOUR INCHES THICK FOR THE WATER MAIN; AND
2. USE OF PIPE, OR CASING PIPE, HAVING HIGH IMPACT STRENGTH (I.E., HAVING AN IMPACT STRENGTH AT LEAST EQUAL TO THAT OF 0.25-INCH-THICK DUCTILE IRON PIPE) OR CONCRETE ENCASEMENT AT LEAST FOUR INCHES THICK FOR THE OTHER PIPELINE IF IT IS NEW AND IS CONVEYING WASTEWATER OR RECLAIMED WATER.

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 256-3030 FAX: (904) 265-3031 www.cwieng.com
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WATER AND SEWER
DETAILS

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
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O.C.: RCW
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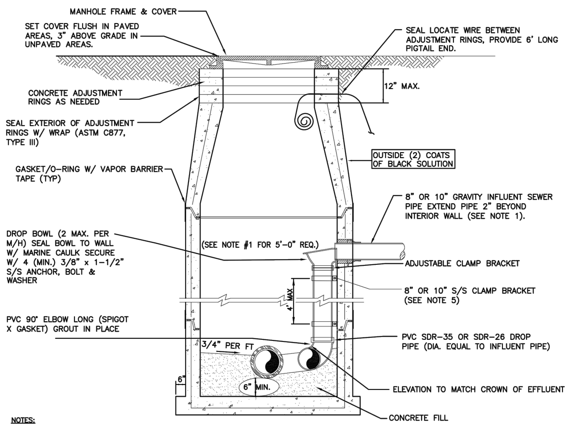
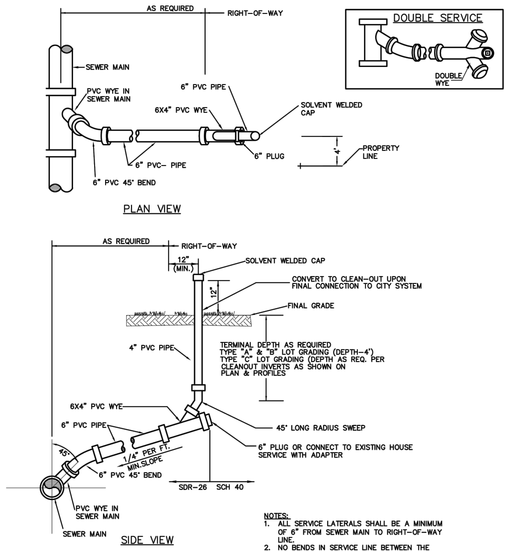

MANHOLE FRAME & COVER
SET COVER FLUSH IN PAVED AREAS, 3" ABOVE GRADE IN UNPAVED AREAS.
SEAL LOCATE WIRE BETWEEN ADJUSTMENT RINGS, PROVIDE 6' LONG PIGTAIL END.
12" MAX.
CONCRETE ADJUSTMENT RINGS AS NEEDED
SEAL EXTERIOR OF ADJUSTMENT RINGS W/ WRAP (ASTM C877, TYPE III)
OUTSIDE (2) COATS OF BLACK SOLUTION
GASKET/O-RING W/ VAPOR BARRIER TAPE (TYP)
8" OR 10" GRAVITY INFLUENT SEWER PIPE EXTEND PIPE 2" BEYOND INTERIOR WALL (SEE NOTE 1).
DROP BOWL (2 MAX. PER M/H) SEAL BOWL TO WALL W/ MARINE CAULK SECURE W/ 4 (MIN.) 3/8" x 1-1/2" S/S ANCHOR, BOLT & WASHER
(SEE NOTE #1 FOR 5'-0" REQ.)
ADJUSTABLE CLAMP BRACKET
4' MAX
8" OR 10" S/S CLAMP BRACKET (SEE NOTE 5)
PVC 90° ELBOW LONG (SPIGOT X GASKET) GROUT IN PLACE
PVC SDR-35 OR SDR-26 DROP PIPE (DIA. EQUAL TO INFLUENT PIPE)
3/4" PER FT
6"
6" MIN.
ELEVATION TO MATCH CROWN OF EFFLUENT
CONCRETE FILL

NOTES:

1. THIS ASSEMBLY IS FOR 8" OR 10" GRAVITY INFLUENT LINES ONLY. NO DROPS ALLOWED FOR FORCE MAINS. MAXIMUM OF 2 INSIDE DROP BOWLS PER MANHOLE. A 5'-0" DIA. MANHOLE (6" THICK WALLS) IS REQUIRED. THE INSIDE DROP FOR 8" HIGH-LINE SHALL BE CONSTRUCTED SIMILAR TO ABOVE.
2. PRECAST MANHOLE SECTIONS TO BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITIONS OF A.S.T.M. C-478 WITH 4000 LB. CONC., TYPE II CEMENT. ALL LIFTING HOLES AND OUTSIDE INSERTS SHALL BE FILLED WITH NON-SHRINK GROUT AND COATED WITH BITUMINOUS WATERPROOFING MATERIAL.
3. THE INTERIOR OF MANHOLE AND THE INTERIOR OF ADJUSTMENT RINGS SHALL BE LINED (150 MILS DFT) AS INDICATED ON THE DRAWINGS AND/OR REQUIRED BY THE CITY.
4. THE DROP BOWL ASSEMBLY SHALL BE INSTALLED PRIOR TO APPLICATION OF SPECIALTY LINING MATERIAL.
5. ADJUSTABLE CLAMPING BRACKET (MIN. 2 PER DROP BOWL ASSY). 1-1/2" WIDE, 11 GA. W/ 3/8" DIA. 18-8 PINCH BOLTS AND NUTS. SECURE TO M/H WALL WITH (2) 3/8" X 1" BOLT, ANCHOR & WASHER PER BRACKET ASSY. ALL 316 STAINLESS STEEL MATERIALS.
6. INSTALL ONE CONTINUOUS PIECE OF RAM-NEK AROUND ENTIRE MATING SURFACE BETWEEN ADJUSTMENT RINGS AND MANHOLE FRAME.
7. MANHOLE LID SHALL BE CENTERED OVER DROP BOWL.

INSIDE DROP STANDARD PRECAST MANHOLE

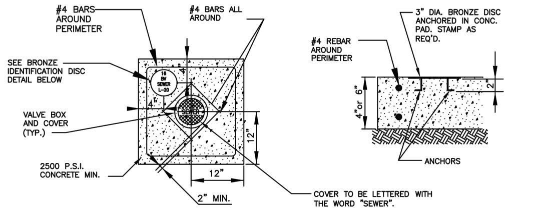
NOT TO SCALE


AS REQUIRED
RIGHT-OF-WAY
DOUBLE SERVICE
DOUBLE WYE
SEWER MAIN
PVC WYE IN SEWER MAIN
6" PVC PIPE
6X4" PVC WYE
SOLVENT WELDED CAP
4'
PROPERTY LINE
6" PLUG
6" PVC- PIPE
6" PVC 45° BEND
PLAN VIEW
AS REQUIRED
RIGHT-OF-WAY
12" (MIN.)
SOLVENT WELDED CAP
12"
CONVERT TO CLEAN-OUT UPON FINAL CONNECTION TO CITY SYSTEM
FINAL GRADE
4" PVC PIPE
TERMINAL DEPTH AS REQUIRED TYPE "A" & "B" LOT GRADING (DEPTH-4') TYPE "C" LOT GRADING (DEPTH AS REQ. PER CLEANOUT INVERTS AS SHOWN ON PLAN & PROFILES
6X4" PVC WYE
6" PVC PIPE
45° LONG RADIUS SWEEP
45°
1/4" PER FT. MIN.SLOPE
6" PLUG OR CONNECT TO EXISTING HOUSE SERVICE WITH ADAPTER
6" PVC 45° BEND
SDR-26
SCH 40
PVC WYE IN SEWER MAIN
SEWER MAIN
SIDE VIEW

NOTES:
1. ALL SERVICE LATERALS SHALL BE A MINIMUM OF 6" FROM SEWER MAIN TO RIGHT-OF-WAY LINE.
2. NO BENDS IN SERVICE LINE BETWEEN THE PROPERTY LINE AND THE WYE CONNECTOR.

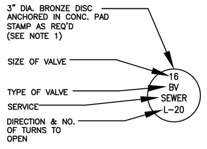
SANITARY SEWER SERVICE

PVC SEWER SERVICE – NOT TO SCALE


#4 BARS AROUND PERIMETER
#4 BARS ALL AROUND
SEE BRONZE IDENTIFICATION DISC DETAIL BELOW
16 BV SEWER L-20
4"
4"
SEWER
VALVE BOX AND COVER (TYP.)
12"
12"
2500 P.S.I. CONCRETE MIN.
2" MIN.
COVER TO BE LETTERED WITH THE WORD "SEWER".
#4 REBAR AROUND PERIMETER
3" DIA. BRONZE DISC ANCHORED IN CONC. PAD. STAMP AS REQ'D.
4"or 6"
2"
ANCHORS

NOTE:

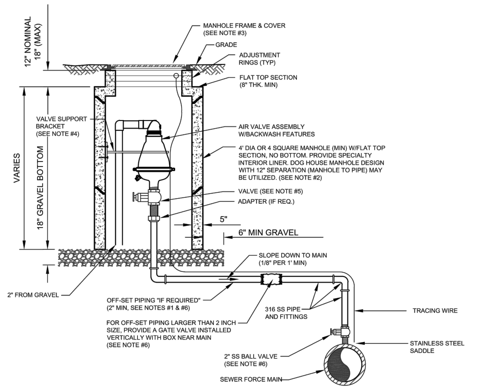
1. BRONZE IDENTIFICATION DISC SHALL BE REQUIRED FOR ALL VALVES.
2. 6" THICK CONCRETE PAD IN ROADWAY OR PAVED AREAS.


3" DIA. BRONZE DISC ANCHORED IN CONC. PAD STAMP AS REQ'D (SEE NOTE 1)
SIZE OF VALVE
TYPE OF VALVE
SERVICE
DIRECTION & NO. OF TURNS TO OPEN
16
BV
SEWER
L-20

BRONZE IDENTIFICATION DISC DETAIL

VALVE COLLAR

NOT TO SCALE

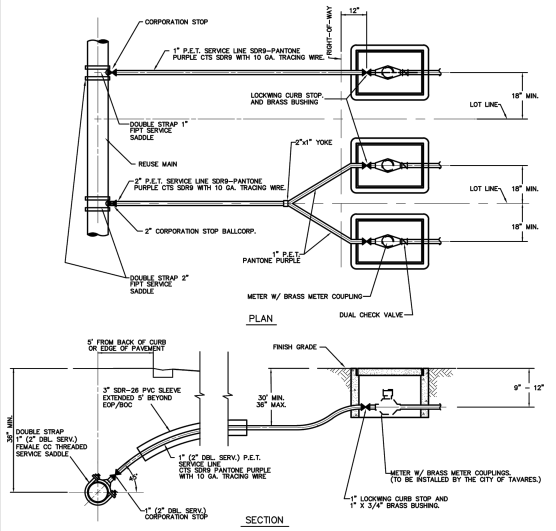

12" NOMINAL 18" (MAX)
MANHOLE FRAME & COVER (SEE NOTE #3)
GRADE
ADJUSTMENT RINGS (TYP)
FLAT TOP SECTION (8" THK. MIN)
VALVE SUPPORT BRACKET (SEE NOTE #4)
AIR VALVE ASSEMBLY W/BACKWASH FEATURES
4' DIA OR 4 SQUARE MANHOLE (MIN) W/FLAT TOP SECTION, NO BOTTOM. PROVIDE SPECIALTY INTERIOR LINER. DOG HOUSE MANHOLE DESIGN WITH 12" SEPARATION (MANHOLE TO PIPE) MAY BE UTILIZED. (SEE NOTE #2)
VARIES
18" GRAVEL BOTTOM
VALVE (SEE NOTE #5)
ADAPTER (IF REQ.)
5"
6" MIN GRAVEL
SLOPE DOWN TO MAIN (1/8" PER 1' MIN)
2" FROM GRAVEL
OFF-SET PIPING "IF REQUIRED" (2" MIN, SEE NOTES #1 & #6)
316 SS PIPE AND FITTINGS
TRACING WIRE
FOR OFF-SET PIPING LARGER THAN 2 INCH SIZE, PROVIDE A GATE VALVE INSTALLED VERTICALLY WITH BOX NEAR MAIN (SEE NOTE #6)
STAINLESS STEEL SADDLE
2" SS BALL VALVE (SEE NOTE #6)
SEWER FORCE MAIN

NOTES:

1. THE AIR ASSEMBLY MANHOLE SHALL BE LOCATED OUTSIDE OF THE ROADWAY PAVEMENT AREA. IF OFF-SET PIPING IS REQUIRED, THE PIPING SHALL BE 2 INCH MINIMUM, (SAME SIZE AS AIR VALVE INLET). FOR PIPE SIZES 3 INCH AND SMALLER: PIPING SHALL BE 316 STAINLESS STEEL SCH.40, STD GRADE, THREADED. FOR PIPE SIZES 4 INCH AND LARGER: PIPING SHALL BE 316 STAINLESS STEEL SCH. 10 (MIN), WELDED.
2. THE CONCRETE MANHOLE SHALL INCLUDE A LINER TO BE INSTALLED ON THE INTERIOR SURFACES INCLUDING THE RISER SECTION TOP AND THE ADJUSTMENT RINGS. A BITUMINOUS WATERPROOFING MATERIAL SHALL BE PROVIDED ON THE OUTSIDE SURFACES OF THE MANHOLE.
3. FRAME AND COVER SHALL BE CITY STANDARD. THE COVER SHALL HAVE NO GASKET TO ALLOW AIR TO EXIT VAULT (REMOVE GASKET IF NECESSARY FROM THE UNDERSIDE OF STANDARD COVER). THE COVER (WHEN FLIPPED OPEN) MUST CLEAR THE AIR VALVE ASSEMBLY AT ALL TIMES OR A SQUARE TOP WITH ALUMINUM DOOR SHALL BE PROVIDED (NON-TRAFFIC LOCATIONS ONLY).
4. A VALVE SUPPORT BRACKET IS ONLY REQUIRED FOR ASSEMBLIES WHICH INCLUDE OFF-SET PIPING. THE BRACKET SHALL BE WELDED AND FABRICATED FROM ALL 316 STAINLESS STEEL MATERIALS AND INCLUDE 6" x 6" x ⅜" THICK END PLATES (CONTOURED TO MATCH ATTACHING SURFACES), 3" ANGLE IRON FOR SUPPORT ARM AND TWO U-BOLTS ⅝" DIA TO ATTACH AROUND AIR VALVE. SECURE TO CONCRETE MANHOLE WITH FOUR ½" DIA X 2" LONG S/S ANCHOR (MIN). MODIFY THE ABOVE AS REQUIRED TO FIT SPECIFIC AIR VALVE AND TO ASSURE A SOLID SUPPORT BRACKET.
5. FOR PIPE SIZES 3 INCH AND SMALLER, PROVIDE A STAINLESS STEEL BALL VALVE (2" MIN). FOR PIPE SIZES 4 INCH AND LARGER, PROVIDE A FLANGED PLUG VALVE. (LEVER ARM OPERATOR) SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
6. FOR A 2" AIR VALVE, PROVIDE 2" STAINLESS STEEL BALL VALVE AT THE MAIN. FOR AIR VALVES LARGER THAN 2" SIZE, PROVIDE A TAPPING SLEEVE OR DUCTILE IRON TEE FITTING. ALSO, FOR OFF-SET PIPING LARGER THAN 2 INCH SIZE, PROVIDE A GATE VALVE (INSTALLED VERTICALLY NEAR MAIN WITH A GEAR ACTUATOR). SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

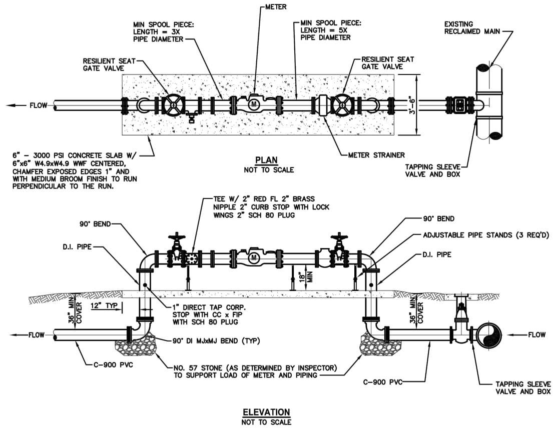
AIR VALVE ASSEMBLY INSIDE MANHOLE

NOT TO SCALE


CORPORATION STOP
RIGHT-OF-WAY
12"
1" P.E.T. SERVICE LINE SDR9-PANTONE PURPLE CTS SDR9 WITH 10 GA. TRACING WIRE.
LOCKWING CURB STOP. AND BRASS BUSHING
18" MIN.
LOT LINE
DOUBLE STRAP 1" FIPT SERVICE SADDLE
2"x1" YOKE
REUSE MAIN
2" P.E.T. SERVICE LINE SDR9-PANTONE PURPLE CTS SDR9 WITH 10 GA. TRACING WIRE.
LOT LINE
18" MIN.
2" CORPORATION STOP BALLCORP.
18" MIN.
1" P.E.T. PANTONE PURPLE
DOUBLE STRAP 2" FIPT SERVICE SADDLE
METER W/ BRASS METER COUPLING
DUAL CHECK VALVE
PLAN
5' FROM BACK OF CURB OR EDGE OF PAVEMENT
FINISH GRADE
3" SDR-26 PVC SLEEVE EXTENDED 5' BEYOND EOP/BOC
30' MIN. 36" MAX.
9" - 12"
36" MIN.
DOUBLE STRAP 1" (2" DBL. SERV.) FEMALE CC THREADED SERVICE SADDLE
1" (2" DBL. SERV.) P.E.T. SERVICE LINE CTS SDR9 PANTONE PURPLE WITH 10 GA. TRACING WIRE
45°
METER W/ BRASS METER COUPLINGS. (TO BE INSTALLED BY THE CITY OF TAVARES.)
1" LOCKWING CURB STOP AND 1" X 3/4" BRASS BUSHING.
1" (2" DBL. SERV.) CORPORATION STOP
SECTION

RECLAIMED WATER SERVICE CONNECTION

NOT TO SCALE
(NOTE: METERS TO BE INSTALLED BY CITY OF TAVARES.)


METER
MIN SPOOL PIECE: LENGTH = 3X PIPE DIAMETER
MIN SPOOL PIECE: LENGTH = 5X PIPE DIAMETER
EXISTING RECLAIMED MAIN
RESILIENT SEAT GATE VALVE
RESILIENT SEAT GATE VALVE
FLOW
3'-6"
6" - 3000 PSI CONCRETE SLAB W/ 6"x6" W4.9xW4.9 WWF CENTERED, CHAMFER EXPOSED EDGES 1" AND WITH MEDIUM BROOM FINISH TO RUN PERPENDICULAR TO THE RUN.
PLAN
NOT TO SCALE
METER STRAINER
TAPPING SLEEVE VALVE AND BOX
TEE W/ 2" RED FL 2" BRASS NIPPLE 2" CURB STOP WITH LOCK WINGS 2" SCH 80 PLUG
90° BEND
90° BEND
ADJUSTABLE PIPE STANDS (3 REQ'D)
D.I. PIPE
D.I. PIPE
18" MIN
36" MIN COVER
12" TYP
1" DIRECT TAP CORP. STOP WITH CC x FIP WITH SCH 80 PLUG
36" MIN COVER
FLOW
FLOW
90° DI MJxMJ BEND (TYP)
C-900 PVC
NO. 57 STONE (AS DETERMINED BY INSPECTOR) TO SUPPORT LOAD OF METER AND PIPING
C-900 PVC
TAPPING SLEEVE VALVE AND BOX
ELEVATION
NOT TO SCALE

NOTES:
1. ALL ABOVE GROUND PIPE TO BE PAINTED WITH 2 COATS OF APPROVED PANTONE PURPLE PAINT.

RECLAIMED WATER METERING

NOT TO SCALE
(NOTE: METERS TO BE INSTALLED BY CITY OF TAVARES.)

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 256-3030 FAX: (904) 265-3031 www.cwieng.com
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WATER AND SEWER
DETAILS

HILLSIDE GROVE

HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
Q.C.: RCW
Date: AUGUST 2022
Scale:
Sheet 14F

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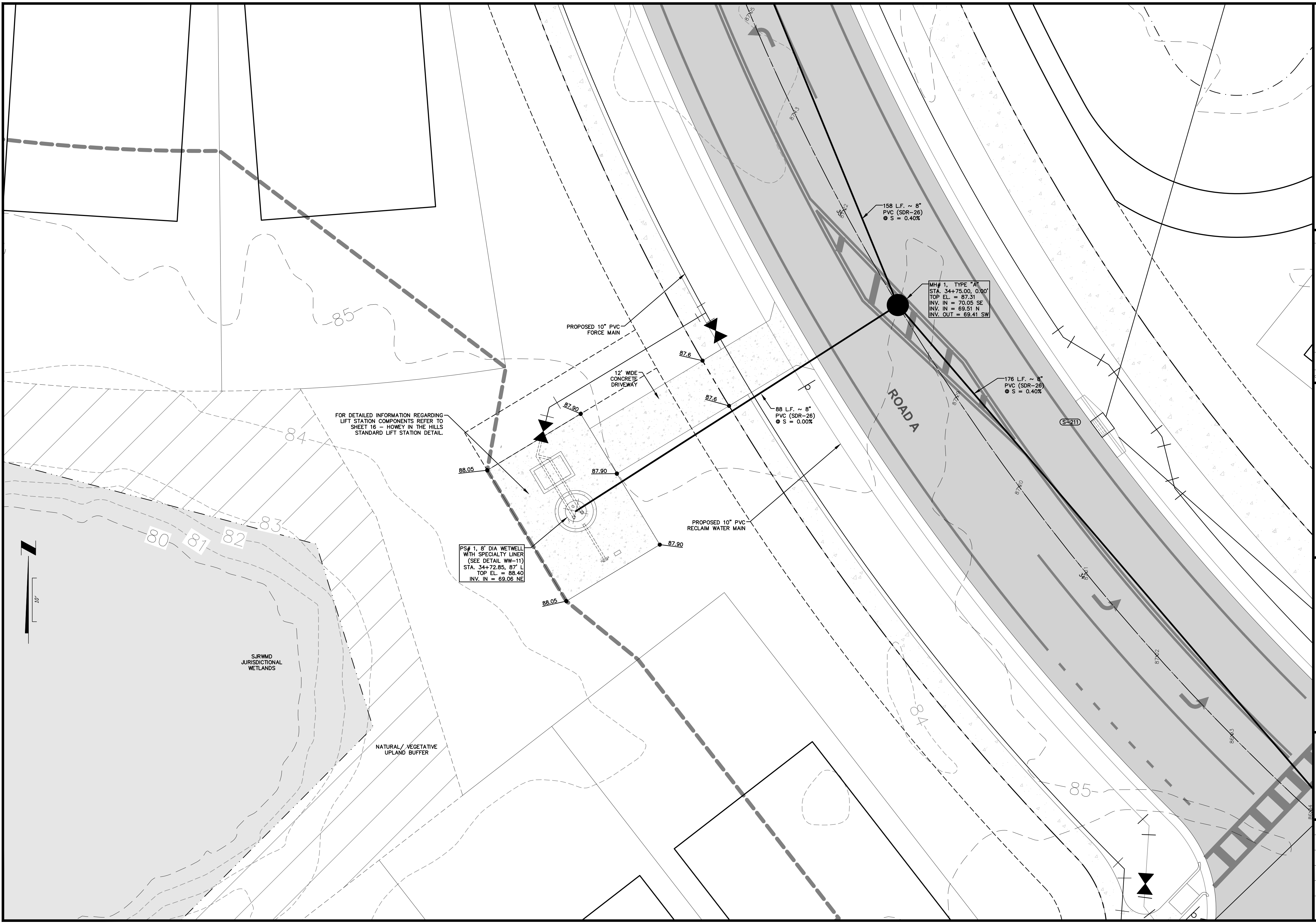

85
84
83
82
81
80
PROPOSED 10" PVC FORCE MAIN
12' WIDE CONCRETE DRIVEWAY
87.6
87.6
87.90
87.90
87.90
88.05
88.05
FOR DETAILED INFORMATION REGARDING LIFT STATION COMPONENTS REFER TO SHEET 16 – HOWEY IN THE HILLS STANDARD LIFT STATION DETAIL.
PS# 1, 8' DIA WETWELL WITH SPECIALTY LINER (SEE DETAIL WW-11) STA. 34+72.85, 87' L TOP EL. = 88.40 INV. IN = 69.06 NE
88 L.F. ~ 8" PVC (SDR-26) @ S = 0.00%
PROPOSED 10" PVC RECLAIM WATER MAIN
158 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
MH# 1, TYPE "A" STA. 34+75.00, 0.00' TOP EL. = 87.31 INV. IN = 70.05 SE INV. IN = 69.51 N INV. OUT = 69.41 SW
176 L.F. ~ 8" PVC (SDR-26) @ S = 0.40%
ROAD A
S-211
SJRWMD JURISDICTIONAL WETLANDS
NATURAL/ VEGETATIVE UPLAND BUFFER
10'

Connelly & Wicker Inc.

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PUMP STATION SITE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
Q.C.: RCW
Date: AUGUST 2022
Scale: 1" = 10'
Sheet 15

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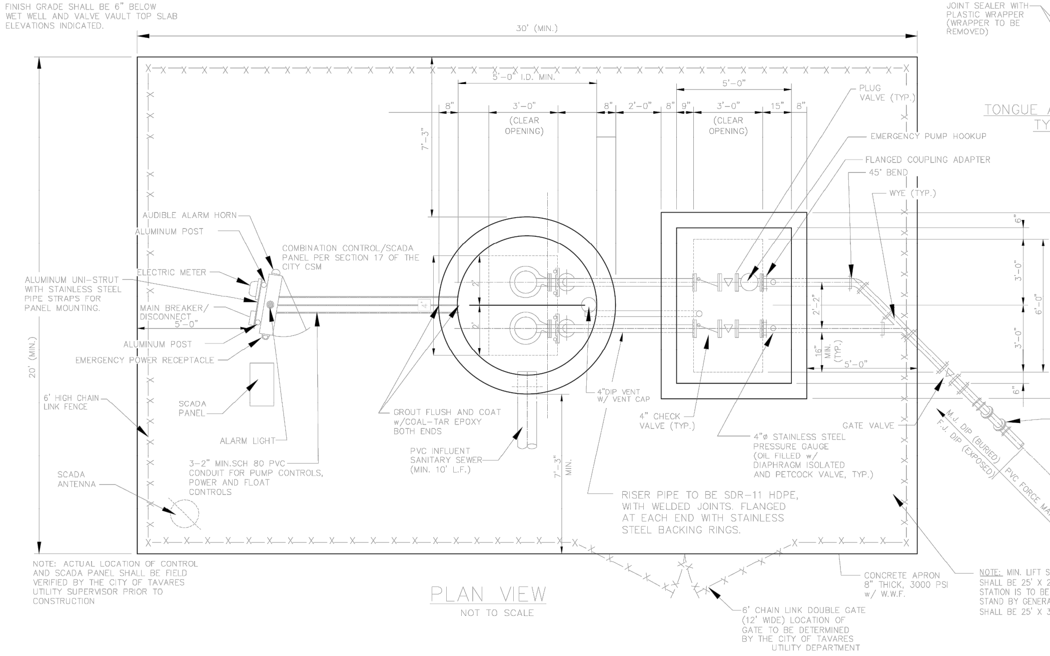
NOTES:

1. FINISH GRADE SHALL BE 6" BELOW WET WELL AND VALVE VAULT TOP SLAB ELEVATIONS INDICATED.

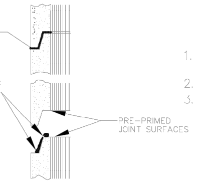

30' (MIN.)
20' (MIN.)
5'-0" I.D. MIN.
8"
3'-0" (CLEAR OPENING)
7'-3"
8"
2'-0"
8"
9"
5'-0"
3'-0" (CLEAR OPENING)
15"
8"
PLUG VALVE (TYP.)
EMERGENCY PUMP HOOKUP
FLANGED COUPLING ADAPTER
45° BEND
WYE (TYP.)
AUDIBLE ALARM HORN
ALUMINUM POST
COMBINATION CONTROL/SCADA PANEL PER SECTION 17 OF THE CITY CSM
ELECTRIC METER
ALUMINUM UNI-STRUT WITH STAINLESS STEEL PIPE STRAPS FOR PANEL MOUNTING.
MAIN BREAKER/ DISCONNECT
5'-0"
ALUMINUM POST
EMERGENCY POWER RECEPTACLE
6' HIGH CHAIN LINK FENCE
SCADA PANEL
ALARM LIGHT
3-2" MIN.SCH 80 PVC CONDUIT FOR PUMP CONTROLS, POWER AND FLOAT CONTROLS
SCADA ANTENNA
GROUT FLUSH AND COAT w/COAL-TAR EPOXY BOTH ENDS
PVC INFLUENT SANITARY SEWER (MIN. 10' L.F.)
4"DIP VENT W/ VENT CAP
4" CHECK VALVE (TYP.)
4"ø STAINLESS STEEL PRESSURE GAUGE (OIL FILLED w/ DIAPHRAGM ISOLATED AND PETCOCK VALVE, TYP.)
GATE VALVE
7'-3" MIN.
2'-2"
16" MIN. (TYP.)
5'-0"
3'-0"
6'-0"
8'-4"
6"
45° BEND (TYP.)
M.J. DIP (BURIED)
F.J. DIP (EXPOSED)
PVC FORCE MAIN
RISER PIPE TO BE SDR-11 HDPE, WITH WELDED JOINTS. FLANGED AT EACH END WITH STAINLESS STEEL BACKING RINGS.
CONCRETE APRON 8" THICK, 3000 PSI w/ W.W.F.
6' CHAIN LINK DOUBLE GATE (12' WIDE) LOCATION OF GATE TO BE DETERMINED BY THE CITY OF TAVARES UTILITY DEPARTMENT

NOTE: ACTUAL LOCATION OF CONTROL AND SCADA PANEL SHALL BE FIELD VERIFIED BY THE CITY OF TAVARES UTILITY SUPERVISOR PRIOR TO CONSTRUCTION

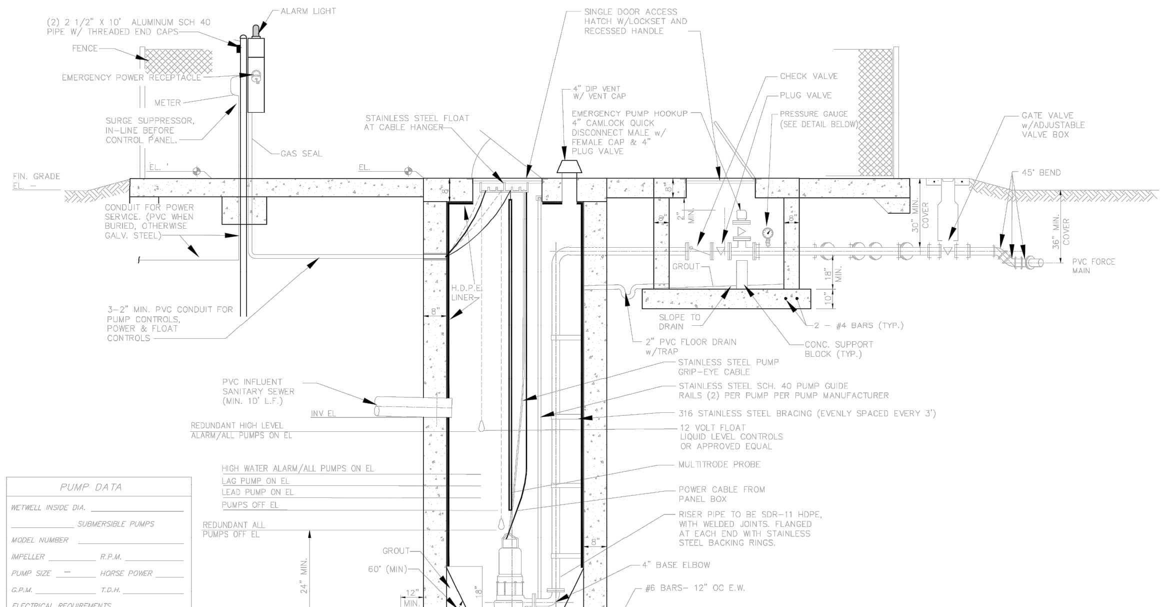
NOTE: MIN. LIFT STATION SITE SHALL BE 25' X 25'. IF LIFT STATION IS TO BE EQUIPPED WITH STAND BY GENERATOR, MIN. SITE SHALL BE 25' X 35'

PLAN VIEW

NOT TO SCALE


COMPLETED JOINT WITH SQUEEZE OUT
PRE-MOLDED PLASTIC JOINT SEALER WITH PLASTIC WRAPPER (WRAPPER TO BE REMOVED)
PRE-PRIMED JOINT SURFACES

TONGUE AND GROOVE JOINT TYPICAL DETAIL


ALARM LIGHT
(2) 2 1/2" X 10' ALUMINUM SCH 40 PIPE W/ THREADED END CAPS
FENCE
EMERGENCY POWER RECEPTACLE
METER
SURGE SUPPRESSOR, IN-LINE BEFORE CONTROL PANEL.
GAS SEAL
FIN. GRADE EL. –
EL. '
EL.
CONDUIT FOR POWER SERVICE. (PVC WHEN BURIED, OTHERWISE GALV. STEEL)
3-2" MIN. PVC CONDUIT FOR PUMP CONTROLS, POWER & FLOAT CONTROLS
PVC INFLUENT SANITARY SEWER (MIN. 10' L.F.)
INV EL
REDUNDANT HIGH LEVEL ALARM/ALL PUMPS ON EL
HIGH WATER ALARM/ALL PUMPS ON EL
LAG PUMP ON EL
LEAD PUMP ON EL
PUMPS OFF EL
REDUNDANT ALL PUMPS OFF EL
24" MIN.
GROUT
60° (MIN)
12" MIN.
18"
3"
8"
H.D.P.E. LINER
STAINLESS STEEL FLOAT AT CABLE HANGER
SINGLE DOOR ACCESS HATCH W/LOCKSET AND RECESSED HANDLE
4" DIP VENT W/ VENT CAP
EMERGENCY PUMP HOOKUP 4" CAMLOCK QUICK DISCONNECT MALE w/ FEMALE CAP & 4" PLUG VALVE
CHECK VALVE
PLUG VALVE
PRESSURE GAUGE (SEE DETAIL BELOW)
GATE VALVE w/ADJUSTABLE VALVE BOX
45° BEND
2" MIN.
30" MIN. COVER
36" MIN. COVER
PVC FORCE MAIN
GROUT
18" MIN.
10"
SLOPE TO DRAIN
2 – #4 BARS (TYP.)
2" PVC FLOOR DRAIN w/TRAP
CONC. SUPPORT BLOCK (TYP.)
STAINLESS STEEL PUMP GRIP-EYE CABLE
STAINLESS STEEL SCH. 40 PUMP GUIDE RAILS (2) PER PUMP PER PUMP MANUFACTURER
316 STAINLESS STEEL BRACING (EVENLY SPACED EVERY 3')
12 VOLT FLOAT LIQUID LEVEL CONTROLS OR APPROVED EQUAL
MULTITRODE PROBE
POWER CABLE FROM PANEL BOX
RISER PIPE TO BE SDR-11 HDPE, WITH WELDED JOINTS. FLANGED AT EACH END WITH STAINLESS STEEL BACKING RINGS.
4" BASE ELBOW
#6 BARS– 12" OC E.W.
#57 STONE
MIN. 3/4" DIA. x 11" STAINLESS STEEL ANCHOR BOLTS TO EXTEND 7" INTO BASE

PUMP DATA

WETWELL INSIDE DIA. ____________

____________ SUBMERSIBLE PUMPS

MODEL NUMBER ____________

IMPELLER ____________ R.P.M. ____________

PUMP SIZE – HORSE POWER ____________

G.P.M. ____________ T.D.H. ____________

ELECTRICAL REQUIREMENTS ____________

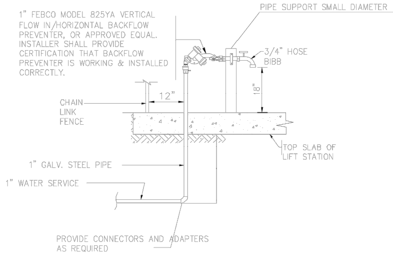
*NOTE: ELECTRICAL REQUIREMENT TO BE VERIFIED BY CONTRACTOR.

SECTION

NOT TO SCALE

DUPLEX LIFT STATION

NOT TO SCALE

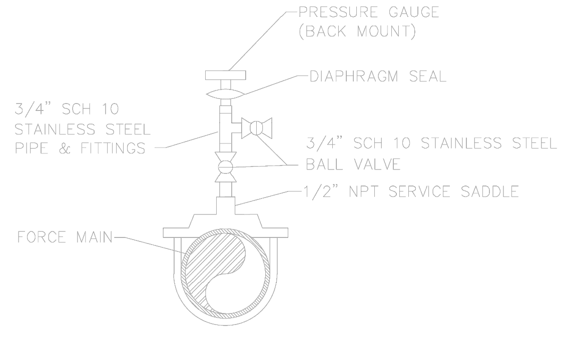

PIPE SUPPORT SMALL DIAMETER
1" FEBCO MODEL 825YA VERTICAL FLOW IN/HORIZONTAL BACKFLOW PREVENTER, OR APPROVED EQUAL. INSTALLER SHALL PROVIDE CERTIFICATION THAT BACKFLOW PREVENTER IS WORKING & INSTALLED CORRECTLY.
3/4" HOSE BIBB
12"
18"
CHAIN LINK FENCE
TOP SLAB OF LIFT STATION
1" GALV. STEEL PIPE
1" WATER SERVICE
PROVIDE CONNECTORS AND ADAPTERS AS REQUIRED

HOSE BIBB DETAIL

NOT TO SCALE

NOTES:

1. PUMPS: SHALL HAVE (2) 2" STAINLESS STEEL GUIDE RAILS PER PUMP AND A BPI FRONT DUPLEX SYSTEM.
2. LEVEL CONTROLS: SHALL BE IN ACCORDANCE WITH SECTION 17 OF THE CITY UTILITY MANUAL.
3. WET WELL ACCESS COVER: SHALL HAVE CLEAR OPENING OF 36"x48". ACCESS FRAME AND COVER SHALL HAVE A 1/4" THICK ONE-PIECE, MILL FINISH, EXTRUDED ALUMINUM FRAME, INCORPORATING A CONTINUOUS CONCRETE ANCHOR. DOOR PANEL(S) SHALL BE 1/4" ALUMINUM DIAMOND PLATE, REINFORCED TO WITHSTAND A LIVE LOAD OF 300 PSF. DOOR(S) SHALL OPEN TO 90° AND AUTOMATICALLY LOCK WITH STAINLESS STEEL HOLD OPEN ARMS WITH ALUMINUM RELEASE HANDLES. DOOR(S) SHALL CLOSE FLUSH WITH THE FRAME. UNIT SHALL LOCK WITH A NONCORROSIVE LOCKING BAR. FRAME SHALL SUPPORT GUIDE RAILS AND CABLE HOLDER FOR ELECTRICAL WIRING. ALL ACCESS FRAME, COVER, AND HARDWARE SHALL BE CONSTRUCTED OF STAINLESS STEEL. ALL SURFACES IN CONTACT WITH CONCRETE SHALL HAVE A SHOP COAT OF ZINC CHROMATIC PRIMER APPROVED ALKALI RESISTANT PAINT OR APPROVED PROTECTIVE COATING. DOUBLE DOOR ACCESS COVERS SHALL HAVE REMOVABLE CENTER BAR SUPPORT. COVER MUST BE COMPATIBLE WITH PUMP.
4. VALVE VAULT ACCESS COVER: SHALL HAVE CLEAR OPENING OF 36"x72" ACCESS AS MANUFACTURED IN ACCORDANCE WITH APPENDIX A, APPROVED MANUFACTURER LIST OF THE CITY CSM. ACCESS FRAME AND COVER SHALL HAVE A 1/4" THICK ONE-PIECE, MILL FINISH, EXTRUDED ALUMINUM FRAME, INCORPORATING A CONTINUOUS CONCRETE ANCHOR. DOOR PANEL(S) SHALL BE 1/4" ALUMINUM DIAMOND PLATE, REINFORCED TO WITHSTAND A LIVE LOAD OF 300 PSF. DOOR(S) SHALL OPEN TO 90° AND AUTOMATICALLY LOCK WITH STAINLESS STEEL HOLD OPEN ARMS WITH ALUMINUM RELEASE HANDLES. DOOR(S) SHALL CLOSE FLUSH WITH THE FRAME. UNIT SHALL LOCK WITH A NONCORROSIVE LOCKING BAR. ALL ACCESS FRAME, COVER, HARDWARE, AND FASTENERS SHALL BE CONSTRUCTED OF 316 STAINLESS STEEL. ALL SURFACES IN CONTACT WITH CONCRETE SHALL HAVE A SHOP COAT OF ZINC CHROMATIC PRIMER, APPROVED ALKALI RESISTANT PAINT OR APPROVED PROTECTIVE COATING. DOUBLE DOOR ACCESS COVERS SHALL HAVE REMOVABLE CENTER BAR SUPPORT. COVER MUST BE COMPATIBLE WITH PUMP.
5. ELECTRICAL SERVICE ENTRANCE: PROVIDE METER SOCKET AND MAIN DISCONNECT MEETING APPLICABLE ELECTRIC CODES AND REQUIREMENTS OF POWER COMPANY. LIGHTNING AND VOLTAGE SURGE PROTECTION TO BE PROVIDED.COST FOR THE ELECTRICAL SERVICE AND COORDINATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
6. CONTROL PANEL: SHALL BE IN ACCORDANCE WITH SECTION 17 OF THE CITY CSM. PANEL SHALL BE EQUIPPED WITH THREE, 2" X 6" ALUMINUM NIPPLES TO THE SEALOFFS, WITH SCH 80 PVC TO WET WELL.
7. PAINT: INSIDE AND OUTSIDE OF VALVE VAULT SHALL BE PAINTED WITH TWO COATS OF MATERIAL IN ACCORDANCE WITH APPENDIX A, APPROVED MANUFACTURER LIST OF THE CITY CSM APPLIED AS PER MANUFACTURER'S RECOMMENDATIONS.
8. VALVE VAULT : PRECAST CONCRETE 60"x 84" (MINIMUM) INSIDE DIMENSIONS.
9. STEEL PLACED IN BOTTOM SLAB IS TO BE IDENTICAL TO THE TOP SLAB EXCEPT THAT DIAGONAL BARS AND OPENINGS ARE ELIMINATED, STEEL IS CONTINUOUS AND SLAB IS SOLID.
10. CONTRACTOR TO CONFIRM SERVICE ARRANGEMENTS WITH POWER COMPANY BEFORE COMMENCING WORK. CONTRACTOR TO RUN UNDERGROUND WIRING TO NEAREST TRANSFORMER OR HAND HOLE.
11. ALL FASTENERS ON FLANGES AND ETC. INSIDE WET WELL WILL BE STAINLESS STEEL.
12. DIMENSIONS BETWEEN CENTERLINE OF PIPES ARE STANDARD FOR PIPE SIZES SPECIFIED.
13. SHOP DRAWINGS OF ENTIRE INSTALLATION MUST BE APPROVED BY CITY PRIOR TO PLACEMENT OF ORDER.
14. PLUG VALVES SHALL BE CONSTRUCTED WITH RESILIENT FACED PLUGS. ON BY-PASS LINES, VALVES SHALL BE BURIED WITH ACCESS THROUGH CAST IRON VALVE BOXES. VALVES SHALL HAVE A 2" OPERATION NUT. ONE(1) 5' LONG VALVE WRENCH SHALL BE PROVIDED TO THE CITY OF TAVARES PER LIFT STATION. ALL PLUG VALVES 8" AND SMALLER SHALL BE 1/4 TURN TYPE.
15. ALL EXPOSED AND EMBEDDED CONDUITS TO BE SCHEDULE 80 PVC.
16. ALL EXPOSED METAL SHALL BE PAINTED WITH TWO (2) COATS OF EXTERIOR BLACK ENAMEL PAINT.
17. ALL EXTERNAL PIPING SHALL BE DUCTILE IRON CLASS 50 (FLANGED JOINT FOR EXPOSED PIPE & MECHANICAL JOINT FOR BURIED PIPE). ALL INTERNAL WET WELL PIPING FROM THE PUMP DISCHARGE ELBOW TO THE VALVE BOX SHALL BE MINIMUM SDR-11 HDPE.
18. ALL DIMENSIONS AND LOCATIONS OF UTILITIES TO BE FIELD VERIFIED BY CONTRACTOR.
19. PRESSURE GAUGES SHALL BE STAINLESS STEEL WITH STAINLESS STEEL DIAPHRAGM, LIQUID FILLED, 4" DIAMETER DIAL WITH 0-100 PSI RANGE. CHECK VALVES SHALL OUTSIDE LEVER AND WEIGHT.
20. PADLOCKS FOR ACCESS COVERS AND CONTROL PANEL SHALL BE KEYED ALIKE, FURNISH TWO (2) KEYS PER LOCK. BOLTS IN LOCKING DEVICE SHALL BE STAINLESS STEEL.
21. WET WELL TO BE H.D.P.E. LINED WITH A MINIMUM THICKNESS OF 2 MM, MECHANICALLY ANCHORED TO THE CONCRETE. ALL JOINTS SHALL BE EXTRUSION WELDED BY CERTIFIED WELDERS.
22. SOD ALL AREAS DISTURBED BY CONSTRUCTION.
23. ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE WILL REQUIRE SHOP COATING OF SUITABLE PROTECTIVE COATING TO RESIST CORROSION.
24. BYPASS PUMPING: CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BYPASS PUMPING. A BYPASS PUMPING PLAN SHALL BE SUBMITTED AT THE TIME OR PERMIT APPLICATION TO THE ENVIRONMENTAL SERVICES DIRECTOR. CITIZEN CONSIDERATION WILL BE REVIEWED WHEN BYPASS PUMPING EQUIPMENT IS REQUIRED. SOUND ATTENUATING ENCLOSURES MAY BE REQUIRED, AT THE DISCRETION OF THE ENVIRONMENTAL SERVICES DIRECTOR.
25. FIELD TESTING: THE CONTRACTOR SHALL FURNISH THE SERVICES OF THE SYSTEM SUPPLIER'S SERVICEMAN, ALL SPECIAL TOOLS, CALIBRATION EQUIPMENT, AND LABOR TO PERFORM THE TESTS. CERTIFIED COPIES OF THE TESTS SHALL BE FURNISHED IN DUPLICATE TO THE CITY ENGINEER PRIOR TO FINAL APPROVAL.
26. DRIVEWAY SHALL HAVE A MINIMUM WIDTH OF 12 FEET.


PRESSURE GAUGE (BACK MOUNT)
DIAPHRAGM SEAL
3/4" SCH 10 STAINLESS STEEL PIPE & FITTINGS
3/4" SCH 10 STAINLESS STEEL BALL VALVE
1/2" NPT SERVICE SADDLE
FORCE MAIN

PRESSURE GAUGE DETAIL

NOT TO SCALE

DATE: FEB 2022

DETAIL WW-11

Howey-in-the-Hills

Standard Details

Beautiful

HOWEY-IN-THE-HILLS

1'

Connelly & Wicker Inc.

Planning · Engineering · Landscape Architecture

10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 256-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry 3650 L.A. Number: LC26000311

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6	. .		
5	. .		
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PUMP STATION DETAIL

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

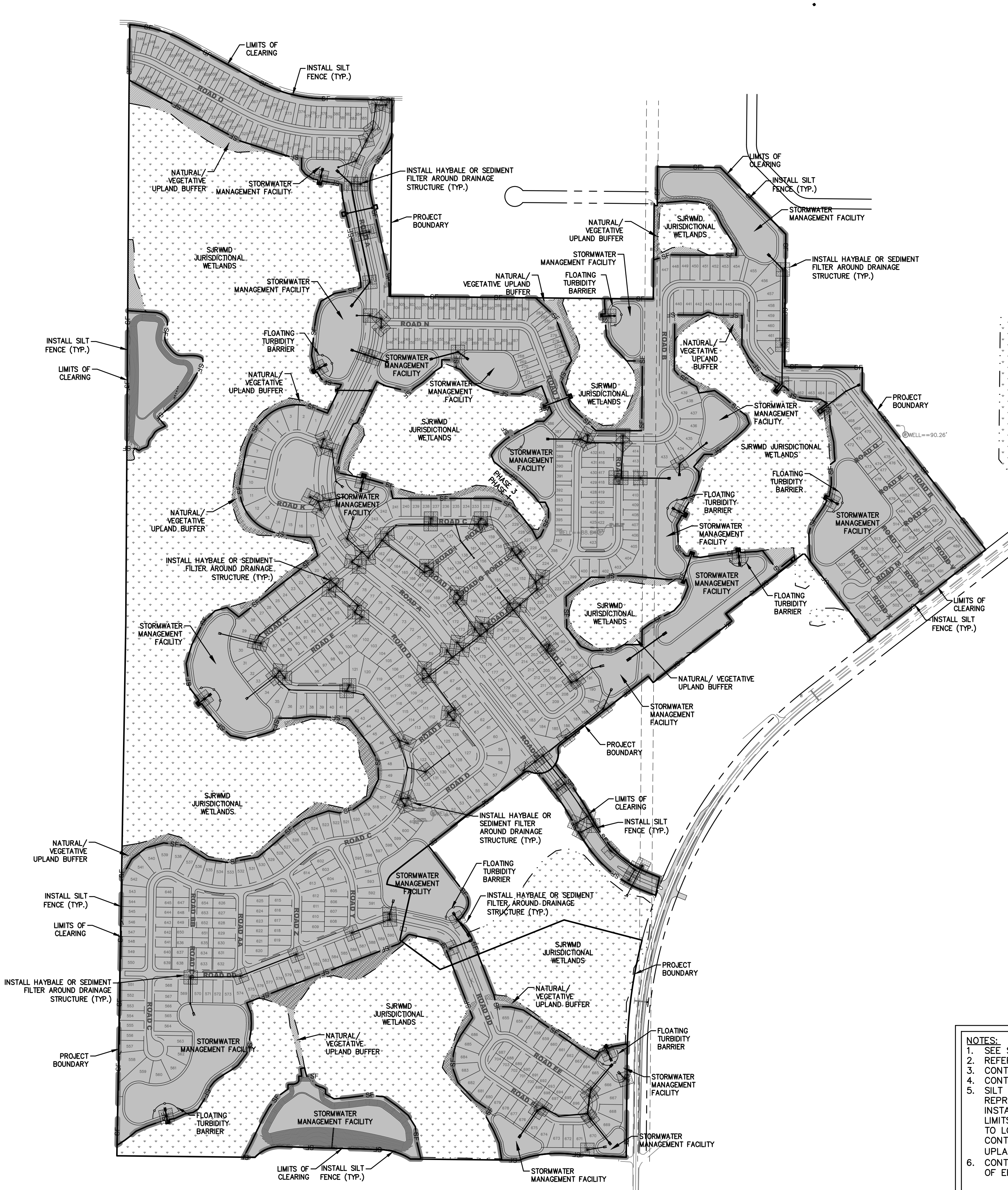
LENNAR HOMES - ORLANDO

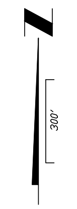
JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
O.C.: RCW
Date: AUGUST 2022
Scale:
Sheet 16

Printed: Sep 28, 2022 - 4:26pm   Printed By: Garrett

J:\21\21-04-0008 Preserve at Howey\Design\Dwgs\Plots\21-04-0008 Sec.dwg


LIMITS OF CLEARING
INSTALL SILT FENCE (TYP.)
ROAD D
NATURAL/ VEGETATIVE UPLAND BUFFER
STORMWATER MANAGEMENT FACILITY
INSTALL HAYBALE OR SEDIMENT FILTER AROUND DRAINAGE STRUCTURE (TYP.)
PROJECT BOUNDARY
SJRWMD JURISDICTIONAL WETLANDS
INSTALL SILT FENCE (TYP.)
LIMITS OF CLEARING
FLOATING TURBIDITY BARRIER
ROAD N
ROAD K
ROAD B
ROAD C
ROAD E
ROAD H
ROAD G
ROAD Z
ROAD ZA
PHASE 1
PHASE 2
WELL=90.26'
SF
PROJECT BOUNDARY
LIMITS OF CLEARING
INSTALL SILT FENCE (TYP.)



LEGEND

▬ ▬	CLEARING LIMITS
—SF—	SILT FENCE
—○—	FLOATING TURBIDITY BARRIER
▩	CLEARING AREA
☐	WETLAND (CONSERVATION AREA)
▨	UPLAND BUFFER
▦	HAYBALE

NOTES:
1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. REFER TO SHEET NUMBER 17 FOR EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.
3. CONTRACTOR SHALL PROVIDE COIR BALES AT ALL DEWATERING SUMPS.
4. CONTRACTOR SHALL INSTALL COIR BALES OR SEDIMENT FILTER AROUND EACH INLET.
5. SILT FENCE, COIR BALES AND OTHER ELEMENTS SHOWN HEREON ARE GRAPHICAL REPRESENTATIONS AND ARE NOT MEANT TO BE EXACT. GENERALLY, THESE OBJECTS ARE INSTALLED OUTSIDE LIMITS OF UPLAND BUFFERS, WITHIN PROJECT BOUNDARY AND OUTSIDE LIMITS OF CONSERVATION AREAS AND JURISDICTIONAL WETLANDS. IT IS UP TO THE CONTRACTOR TO LOCATE ALL UPLAND BUDFFERS AND WETLANDS PRIOR TO CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL PLACE THESE ELEMENTS AS CLOSE AS PRACTICAL WITHOUT DISTURBING UPLAND BUFFERS, ADJACENT PROPERTIES AND/OR WETLAND / CONSERVATION AREAS.
6. CONTRACTOR SHALL SEED AND MULCH / STABILIZE ALL DISTURBED AREAS PRIOR TO REMOVAL OF EROSION CONTROL MEASURES.

Connelly & Wicker Inc.
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10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
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SEDIMENT AND EROSION CONTROL PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

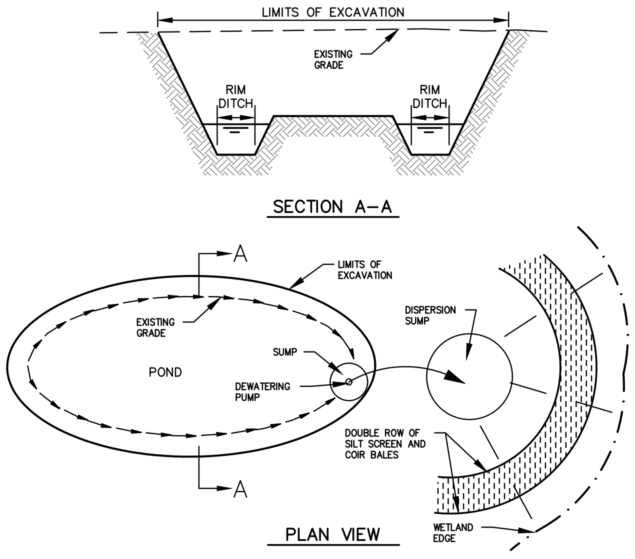
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	O.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 300'	
Sheet 17	

SEDIMENT AND EROSION CONTROL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AND SWALES AT COMPLETION OF CONSTRUCTION.
2. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
3. ADDITIONAL PROTECTION – ON-SITE PROTECTION IN ADDITION TO THE ABOVE MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNSEEN CONDITIONS OR ACCIDENTS.
4. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
5. WIRE MESH SHALL BE LAID OVER THE DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED. IF MORE THAN ONE STRIP OF MESH IS REQUIRED, THE STRIPS SHALL BE OVERLAPPED.
6. FDOT NO. 1 COARSE AGGREGATE SHALL BE PLACED OVER THE WIRE MESH AS INDICATED ON SEDIMENT FILTER DETAIL (SEE DETAIL THIS SHEET). THE DEPTH OF STONE SHALL BE AT LEAST 12 INCHES OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18 INCHES ON ALL SIDES.
7. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.
8. BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED WITH THE BINDINGS ORIENTED AROUND THE SIDES RATHER THAN OVER AND UNDER THE BALES.
9. BALES SHALL BE PLACED LENGTHWISE IN A SINGLE ROW SURROUNDING THE INLET, WITH THE ENDS OF ADJACENT BALES PRESSED TOGETHER.
10. THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 4 INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER.
11. EACH BALE SHALL BE SECURELY ANCHORED AND HELD IN PLACE BY AT LEAST TWO STAKES OR REBARS DRIVEN THROUGH THE BALE.
12. LOOSE COIR SHOULD BE WEDGED BETWEEN BALES TO PREVENT WATER FROM ENTERING BETWEEN BALES.
13. COIR BALE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
14. CLOSE ATTENTION SHALL BE GIVEN TO THE REPAIR OF DAMAGED BALES, END RUNS AND UNDERCUTTING BENEATH BALES.
15. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BALES SHALL BE ACCOMPLISHED PROMPTLY.
16. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. IT MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
17. ANY SEDIMENT DEPOSITS REMAINING IN PLACE, AFTER THE COIR BALE OR FILTER BARRIERS, AND OR SILT FENCES ARE NO LONGER REQUIRED, SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.
18. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
19. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
20. STRUCTURES SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS REQUIRED.
21. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
22. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS, SPECIFICATIONS AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT RULES AND REGULATIONS.
23. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL – A GUIDE TO SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (F.D.E.P.) CHAPTER 6.
24. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. SEE DETAILS (THIS SHEET) FOR TYPICAL CONSTRUCTION.
25. SOD SHALL BE PLACED IN AREAS WHICH MAY REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITY STANDARDS ARE MAINTAINED.
26. ANY DISCHARGE FROM DEWATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE OUTFALL IN A MANNER WHICH PREVENTS EROSION AND TRANSPORTATION OF SUSPENDED SOLIDS TO THE RECEIVING OUTFALL.
27. DEWATERING PUMPS SHALL NOT EXCEED THE CAPACITY OF THAT WHICH REQUIRES A CONSUMPTIVE USE PERMIT FROM THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT.
28. ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED AND MULCHED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED. CONTRACTOR SHALL USE ADDITIONAL MEASURES TO STABILIZE DISTURBED AREAS THROUGH COMPACTION, SILT SCREENS, COIR BALES, AND GRASSING. ALL FILL SLOPES 3:1 OR STEEPER TO RECEIVE STAKED SOLID SOD.
29. ALL DEWATERING, EROSION, AND SEDIMENT CONTROL SHALL REMAIN IN PLACE UNTIL AFTER COMPLETION OF CONSTRUCTION, AND REMOVED ONLY WHEN AREAS HAVE BEEN STABILIZED.
30. THIS PLAN INDICATES THE MINIMUM EROSION AND SEDIMENT MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.
31. THE CONTRACTOR SHALL BE REQUIRED TO RESPOND TO ALL WATER MANAGEMENT DISTRICT INQUIRIES, RELATIVE TO COMPLIANCE OF SJRWMD FOR EROSION AND SEDIMENTATION CONTROL. THE COST OF THIS COMPLIANCE SHALL BE PART OF THE CONTRACT.
32. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS AND PRESERVATION EASEMENTS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION.
33. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A PERMANENT STAND OF SOD AND/OR GRASS PER THE CONTRACT DOCUMENTS AND MEETING THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT, **XXXXXXXX** AND NPDES FINAL STABILIZATION REQUIREMENTS.
34. THESE PLANS INCLUDING THE POLLUTION PREVENTION PLAN INDICATE THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES REQUIRED FOR THIS PROJECT. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL – A GUIDE TO SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (F.D.E.P.) CHAPTER 6. CONTRACTOR SHALL PROVIDE EROSION PROTECTION AND TURBIDITY CONTROL AS REQUIRED TO INSURE CONFORMANCE TO STATE AND FEDERAL WATER QUALITY STANDARDS AND MAY NEED TO INSTALL ADDITIONAL CONTROLS TO CONFORM TO AGENCIES REQUIREMENTS. IF A WATER QUALITY VIOLATION OCCURS, THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ALL DAMAGE AND ALL COSTS WHICH MAY RESULT INCLUDING LEGAL FEES, CONSULTANT FEES, CONSTRUCTION COSTS, AND FINES.
35. 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR WILL SUBMIT A "NOTICE OF INTENT" TO THE EPA IN ACCORDANCE WITH NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM RULES AND REGULATIONS. (FOR ANY CONSTRUCTION NOT COVERED BY THE OWNER'S "NOTICE OF INTENT" PERMIT)

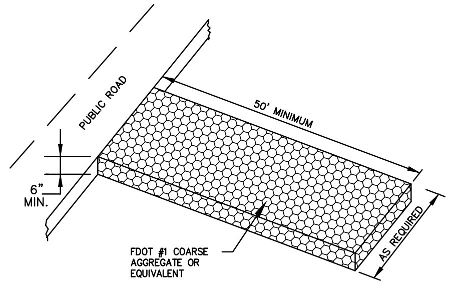

LIMITS OF EXCAVATION
EXISTING GRADE
RIM DITCH
RIM DITCH
A
A
LIMITS OF EXCAVATION
EXISTING GRADE
POND
SUMP
DEWATERING PUMP
DISPERSION SUMP
DOUBLE ROW OF SILT SCREEN AND COIR BALES
WETLAND EDGE

SECTION A–A

PLAN VIEW

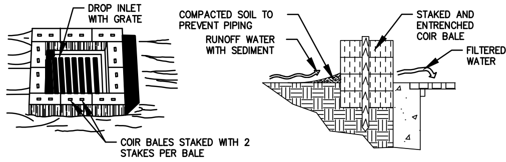
TEMPORARY DEWATERING DETAIL

N.T.S.


PUBLIC ROAD
50' MINIMUM
6" MIN.
FDOT #1 COARSE AGGREGATE OR EQUIVALENT
AS REQUIRED

STABILIZED CONSTRUCTION ENTRANCE

N.T.S.

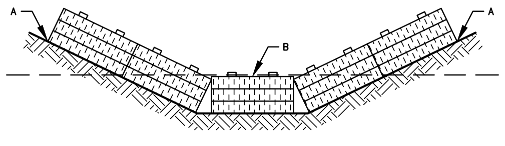

DROP INLET WITH GRATE
COIR BALES STAKED WITH 2 STAKES PER BALE
COMPACTED SOIL TO PREVENT PIPING
RUNOFF WATER WITH SEDIMENT
STAKED AND ENTRENCHED COIR BALE
FILTERED WATER

SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5 PERCENT) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 cfs) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

COIR BALE DROP INLET SEDIMENT FILTER

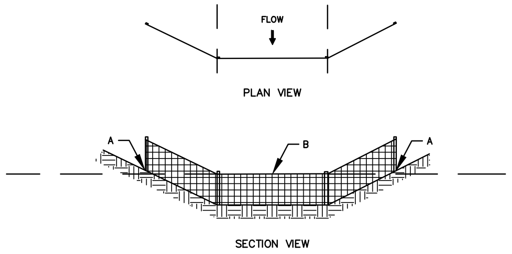
N.T.S.



POINTS A SHOULD BE HIGHER THAN POINT B

PROPER PLACEMENT OF COIR BALE IN A DRAINAGE WAY

N.T.S.



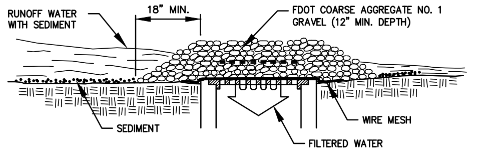
PLAN VIEW

SECTION VIEW

POINTS A SHOULD BE HIGHER THAN POINT B

PROPER PLACEMENT OF A FILTER BARRIER IN DRAINAGE WAY

N.T.S.

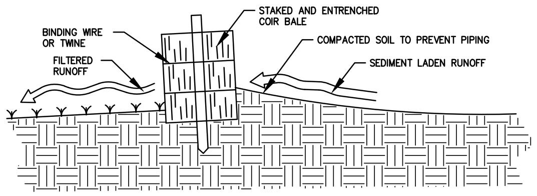

RUNOFF WATER WITH SEDIMENT
18" MIN.
FDOT COARSE AGGREGATE NO. 1 GRAVEL (12" MIN. DEPTH)
SEDIMENT
WIRE MESH
FILTERED WATER

SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

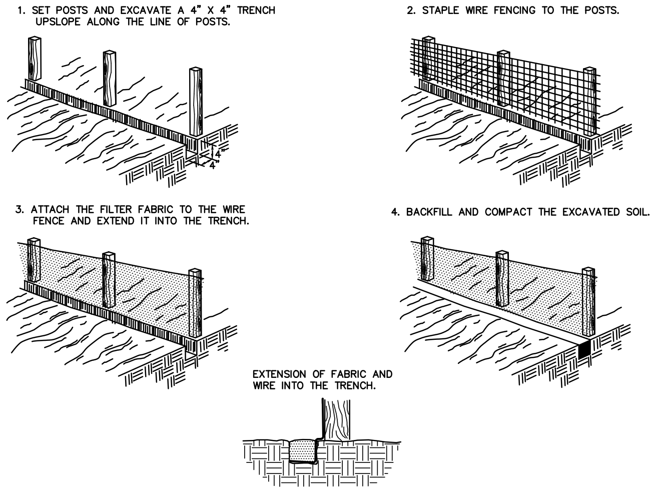
GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER

N.T.S.


BINDING WIRE OR TWINE
FILTERED RUNOFF
STAKED AND ENTRENCHED COIR BALE
COMPACTED SOIL TO PREVENT PIPING
SEDIMENT LADEN RUNOFF

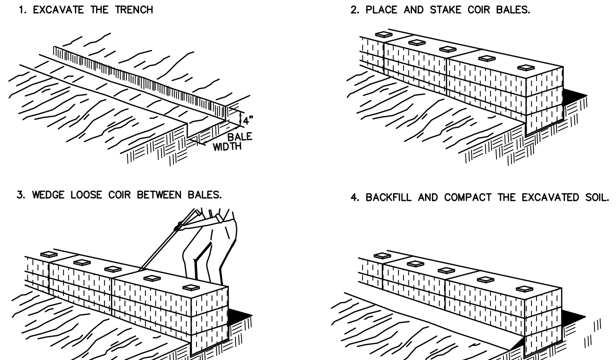
CROSS-SECTION OF A PROPERLY INSTALLED COIR BALE

N.T.S.


1. SET POSTS AND EXCAVATE A 4" X 4" TRENCH UPSLOPE ALONG THE LINE OF POSTS.
2. STAPLE WIRE FENCING TO THE POSTS.
3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.
EXTENSION OF FABRIC AND WIRE INTO THE TRENCH.

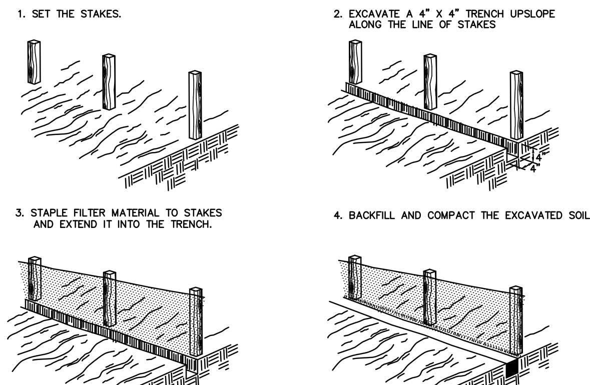
CONSTRUCTION OF SILT FENCE

N.T.S.


1. EXCAVATE THE TRENCH
2. PLACE AND STAKE COIR BALES.
4"
BALE WIDTH
3. WEDGE LOOSE COIR BETWEEN BALES.
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.

CONSTRUCTION OF A COIR BALE BARRIER

N.T.S.


1. SET THE STAKES.
2. EXCAVATE A 4" X 4" TRENCH UPSLOPE ALONG THE LINE OF STAKES
3. STAPLE FILTER MATERIAL TO STAKES AND EXTEND IT INTO THE TRENCH.
4. BACKFILL AND COMPACT THE EXCAVATED SOIL

CONSTRUCTION OF A FILTER BARRIER

N.T.S.

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry 3650 L.A. Number: LC26000311

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2	:		
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SEDIMENT AND EROSION CONTROL DETAILS

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
O.C.: RCW
Date: AUGUST 2022
Scale:
Sheet 18A

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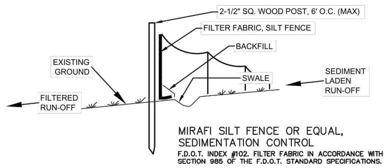


MIRAFI SILT FENCE OR EQUAL,
SEDIMENTATION CONTROL

F.D.O.T. INDEX #102. FILTER FABRIC IN ACCORDANCE WITH SECTION 985 OF THE F.D.O.T. STANDARD SPECIFICATIONS.

NOTES:

1. TEMPORARY EROSION CONTROL STRUCTURE TO BE UTILIZED DURING CONSTRUCTION AT AREAS DESIGNATED BY ENGINEER OR AREAS ON-SITE WHERE UNSTABILIZED GRADES MAY CAUSE EROSION PROBLEMS. EROSION CONTROL STRUCTURE MAY BE REMOVED AFTER UPSLOPE AREA HAS BEEN STABILIZED BY SOD, OR COMPACTED AS DETERMINED BY CONTRACTOR.
2. CONSTRUCT STORMWATER SYSTEMS BEFORE ANY BUILDING OR ROAD CONSTRUCTION IS STARTED.
   a.) PROTECT SYSTEM FROM SILTING AND DEBRIS BY METHODS PROVIDED IN DETAILS.
   b.) PROTECT SWALE BOTTOM FROM SEALING BY EXCAVATING ALL SILT DEPOSITS DURING CONSTRUCTION. THIS SHALL BE DONE BEFORE SOD & SEEDING & MULCHING IS FINISHED

THE FOLLOWING LIST REPRESENTS A BASIC EROSION AND SEDIMENT CONTROL PROGRAM WHICH IS TO BE IMPLEMENTED TO HELP PREVENT OFF-SITE SEDIMENTATION DURING AND AFTER CONSTRUCTION OF THE PROJECT.

PERMANENT EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AT THE EARLIEST PRACTICAL TIME CONSISTENT WITH GOOD CONSTRUCTION PRACTICES. ONE OF THE FIRST CONSTRUCTION ACTIVITIES SHOULD BE THE PLACEMENT OF PERMANENT AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AROUND THE PERIMETER OF THE PROJECT OR THE INITIAL WORK AREA TO PROTECT THE PROJECT, ADJACENT PROPERTIES AND WATER RESOURCES.

TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE COORDINATED WITH PERMANENT MEASURES TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL THROUGHOUT THE CONSTRUCTION PHASE. TEMPORARY MEASURES SHALL NOT BE CONSTRUCTED FOR EXPEDIENCY IN LIEU OF PERMANENT MEASURES.

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ADEQUATELY MAINTAINED TO PERFORM THEIR INTENDED FUNCTION DURING CONSTRUCTION OF THE PROJECT.

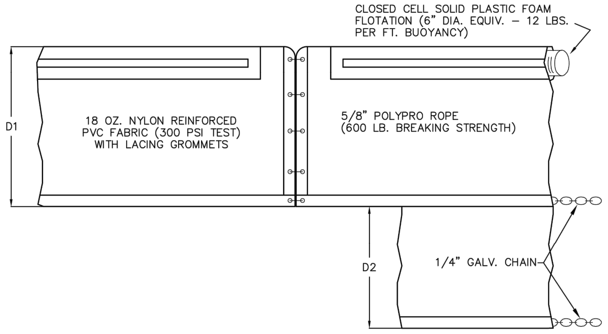
NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BARRIERS SHALL BE ACCOMPLISHED PROMPTLY.

SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

MATERIAL FROM SEDIMENT TRAPS SHALL NOT BE STOCKPILED OR DISPOSED OF IN A MANNER WHICH MAKES THEM READILY SUSCEPTIBLE TO BEING WASHED INTO ANY WATERCOURSE BY RUNOFF OR HIGH WATER.

ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE BARRIERS ARE NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

EROSION & SEDIMENT CONTROL
(N.T.S.)

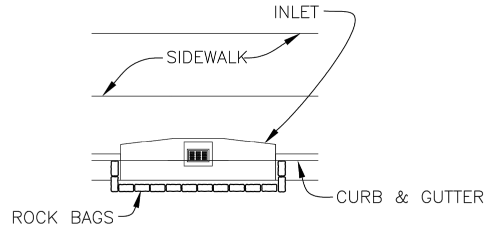

CLOSED CELL SOLID PLASTIC FOAM FLOTATION (6" DIA. EQUIV. – 12 LBS. PER FT. BUOYANCY)
18 OZ. NYLON REINFORCED PVC FABRIC (300 PSI TEST) WITH LACING GROMMETS
5/8" POLYPRO ROPE (600 LB. BREAKING STRENGTH)
D1
D2
1/4" GALV. CHAIN

D1 - 5 FT. STANDARD, SINGLE PANEL FOR DEPTHS 5 FT. OR LESS

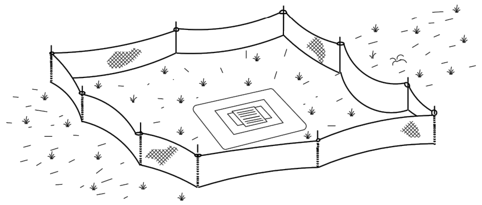
D2 - 5 FT. STANDARD, ADDITIONAL PANEL FOR DEPTHS GREATER THAN 5 FT.

CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FT. TWO PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FT., UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN PLANS OR DESIGNATED BY ENGINEER.

FLOATING TURBIDITY BARRIER (N.T.S.)



CURB INLET



TYPE III SILT FENCE PROTECTION
AROUND DITCH BOTTOM INLETS

ALTERNATE DESIGNS MAY BE PROPOSED BY ENGINEER

INLET PROTECTION (N.T.S.)

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
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SEDIMENT AND
EROSION CONTROL
DETAILS

HILLSIDE GROVE

HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
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O.C.: RCW
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Sheet 18B

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OWNER'S REQUIREMENTS

SITE DESCRIPTION

PROJECT NAME AND LOCATION:
HILLSIDE GROVE
HOWEY IN THE HILLS

OWNER/DEVELOPER NAME AND ADDRESS:
LENNAR HOMES – ORLANDO
6750 FORUM DRIVE, SUITE 310
ORLANDO, FL 32821

DESCRIPTION:

THIS PROJECT WILL CONSIST OF:
CONSTRUCTION OF A 245 LOT SINGLE–FAMILY DEVELOPMENT AND ALSO MASTER DRAINAGE AND EARTHWORK FOR FUTURE DEVELOPMENT. CONSTRUCTION WILL CONSIST OF CLEARING, CONSTRUCTION OF STORMWATER MANAGMENT FACILITIES AND STORMWATER CONVEYANCE, GRADING, CONSTRUCTION OF UNDERGROUND UTILITIES, ROADWAYS, PARKING AREAS, ASSOCIATED CONSTRUCTION.

SOIL DISTURBING ACTIVITIES WILL INCLUDE:
CLEARING AND GRUBBING; INSTALLING A STABILIZED CONSTRUCTION ENTRANCE, PERIMETER, AND OTHER EROSION AND SEDIMENT CONTROLS; GRADING; EXCAVATION FOR THE SEDIMENTATION POND, STORM SEWER, UTILITIES, AND BUILDING FOUNDATION; CONSTRUCTION OF CURB AND GUTTER, ROAD, AND PARKING AREAS; AND PREPARATION FOR FINAL PLANTING AND SEEDING.

GENERALIZED RUNOFF CURVE NUMBERS (REFER TO DRAINAGE CALCULATIONS FOR ACTUAL CURVE NUMBER FOR EACH BASIN)

1. PRE–CONSTRUCTION = 63±
2. DURING CONSTRUCTION = 77±
3. POST–CONSTRUCTION = 70±

SOILS:
* SEE ATTACHED FOR SOILS DATA

SITE MAPS:
* SEE ATTACHED DWG. GRADING PLAN FOR POST DEVELOPMENT GRADES, AREAS OF SOILS, DISTURBANCE, LOCATION OF SURFACE WATERS, WETLANDS, PROTECTED AREAS, MAJOR STRUCTURAL AND NONSTRUCTURAL CONTROLS AND STORM WATER DISCHARGE POINTS.
* SEE ATTACHED EROSION AND SEDIMENT CONTROL PLAN FOR LOCATION OF TEMPORARY STABILIZATION PRACTICES, AND TURBIDITY BARRIERS

SITE AREA:
1. TOTAL AREA OF SITE = 320 AC±
2. TOTAL AREA TO BE DISTURBED = 190.3 AC±

NAME OF RECEIVING WATERS: UNNAMED CLOSED BASIN AND LAKE ILLINOIS

CONTROLS

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

AREAS WHICH ARE NOT DEVELOPED BUT WILL BE REGRADED SHALL BE STABILIZED IMMEDIATELY AFTER GRADING IS COMPLETE.

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

CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS

IN AN EFFORT TO ENSURE COMPLIANCE WITH FEDERAL, STATE AND LOCAL LAWS REGARDING EROSION AND TURBIDITY CONTROLS, THE FOLLOWING PERMITS HAVE BEEN OBTAINED.

D.E.P. DREDGE/FILL PERMIT #__________
C.O.E. DREDGE/FILL PERMIT #__________
S.J.R.W.M.D. M.S.S.W. PERMIT #__________

POLLUTION PREVENTION PLAN CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNED: ____________________

TITLE: ____________________
CORPORATE OFFICER, GENERAL PARTNER, PROPRIETOR, EXECUTIVE OFFICER, OR RANKING ELECTED OFFICIAL

DATE:____________________

GENERAL

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

SEQUENCE OF MAJOR ACTIVITIES:

THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:

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

NOTE: VERTICAL CONSTRUCTION OF THE BUILDING WILL BE TAKING PLACE DURING ALL THE SEQUENCE STEPS LISTED ABOVE

TIMING OF CONTROLS/MEASURES

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

CONTROLS

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

EROSION AND SEDIMENT CONTROLS
STABILIZATION PRACTICES

1. STRAW BALE BARRIER: STRAW BALE BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS:
   A. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.
   B. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.
   C. WHERE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS.
   D. EVERY EFFORT SHOULD BE MADE TO LIMIT THE USE OF STRAW BALE BARRIERS CONSTRUCTED IN LIVE STREAMS OR IN SWALES WHERE THERE IS THE POSSIBILITY OF A WASHOUT. IF NECESSARY, MEASURES SHALL BE TAKEN TO PROPERLY ANCHOR BALES TO INSURE AGAINST WASHOUT.
2. FILTER FABRIC BARRIER: FILTER FABRIC BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS:
   A. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.
   B. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.
3. BRUSH BARRIER WITH FILTER FABRIC: BRUSH BARRIER MAY BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WHERE ENOUGH RESIDUE MATERIAL IS AVAILABLE ON SITE.
4. LEVEL SPREADER: A LEVEL SPREADER MAY BE USED WHERE SEDIMENT–FREE STORM RUNOFF IS INTERCEPTED AND DIVERTED AWAY FROM THE GRADED AREAS ONTO UNDISTURBED STABILIZED AREAS. THIS PRACTICE APPLIES ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE CONSTRUCTED ON UNDISTURBED SOIL AND THE AREA BELOW THE LEVEL LIP IS STABILIZED. THE WATER SHOULD NOT BE ALLOWED TO RECONCENTRATE AFTER RELEASE.
5. STOCKPILING MATERIAL: NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE INTO ANY ADJACENT WATER BODY OR STORM WATER COLLECTION FACILITY.
6. EXPOSED AREA LIMITATION: THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL NOT EXCEED 10 ACRES. THIS REQUIREMENT MAY BE WAIVED FOR LARGE PROJECTS WITH AN EROSION CONTROL PLAN WHICH DEMONSTRATES THAT OPENING OF ADDITIONAL AREAS WILL NOT SIGNIFICANTLY AFFECT OFF–SITE DEPOSIT OF SEDIMENTS.

CONTRACTOR'S REQUIREMENTS

7. INLET PROTECTION: INLETS AND CATCH BASINS WHICH DISCHARGE DIRECTLY OFF–SITE SHALL BE PROTECTED FROM SEDIMENT –LADEN STORM RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET.
8. TEMPORARY SEEDING: AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE RE–EXCAVATED OR DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN 7 DAYS SHALL BE SEEDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING.
9. TEMPORARY SEEDING AND MULCHING: SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN PARAGRAPH 8 ABOVE SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA ADEQUATE TO PREVENT MOVEMENT OF SEED AND MULCH.
10. TEMPORARY GRASSING: THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED OR HYDROMULCHED OR OTHER SUITABLE METHODS IF REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER.
11. TEMPORARY REGRASSING : IF, AFTER 14 DAYS FROM SEEDING, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75 PERCENT GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATIVE COVER.
12. MAINTENANCE: ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED.
13. PERMANENT EROSION CONTROL: THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON THE OFFSITE FACILITIES.
14. PERMANENT SEEDING: ALL AREAS WHICH HAVE BEEN DISTURBED BY CONSTRUCTION WILL, AS A MINIMUM, BE SEEDED. THE SEEDING MIX MUST PROVIDE BOTH LONG–TERM VEGETATION AND RAPID GROWTH SEASONAL VEGETATION. SLOPES STEEPER THAN 4:1 SHALL BE SEEDED AND MULCHED OR SODDED.

STRUCTURAL PRACTICES

1. TEMPORARY DIVERSION DIKE: TEMPORARY DIVERSION DIKES MAY BE USED TO DIVERT RUNOFF THROUGH A SEDIMENT–TRAPPING FACILITY.
2. TEMPORARY SEDIMENT TRAP: A SEDIMENT TRAP IS USUALLY INSTALLED IN AN DRAINAGEWAY AT A STORM DRAIN INLET OR AT OTHER POINTS OF DISCHARGE FROM A DISTURBED AREA WITH THE FOLLOWING LIMITATIONS:
   A. THE SEDIMENT TRAP MAY BE CONSTRUCTED EITHER INDEPENDENTLY OR IN CONJUNCTION WITH A TEMPORARY DIVERSION DIKE.
3. OUTLET PROTECTION: APPLICABLE TO THE OUTLETS OF ALL PIPES AND PAVED CHANNEL SECTIONS WHERE THE VELOCITY OF FLOW AT DESIGN CAPACITY OF THE OUTLET WILL EXCEED THE PERMISSIBLE VELOCITY OF THE RECEIVING CHANNEL OR AREA.
4. SEDIMENT BASIN: WILL BE CONSTRUCTED AT THE COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH 10 OR MORE DISTURBED ACRES AT ONE TIME, THE PROPOSED STORM WATER PONDS (OR TEMPORARY PONDS) WILL BE CONSTRUCTED FOR USE AS SEDIMENT BASINS. THESE SEDIMENT BASINS MUST PROVIDE A MINIMUM OF 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED UNTIL FINAL STABILIZATION OF THE SITE. THE 3,600 CUBIC FEET OF STORAGE AREA PER ACRE DRAINED DOES NOT APPLY TO FLOWS FROM OFFSITE AREAS AND FLOWS FROM ONSITE AREAS THAT ARE EITHER UNDISTURBED OR HAVE UNDERGONE FINAL STABILIZATION WHERE SUCH FLOWS ARE DIVERTED AROUND BOTH THE DISTURBED AREA AND THE SEDIMENT BASIN. ANY TEMPORARY SEDIMENT BASINS CONSTRUCTED MUST BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR STRUCTURAL FILL. ALL SEDIMENT COLLECTED IN PERMANENT OR TEMPORARY SEDIMENT TRAPS MUST BE REMOVED UPON FINAL STABILIZATION.

OTHER CONTROLS

WASTE DISPOSAL

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

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

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

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

INVENTORY FOR POLLUTION PREVENTION PLAN

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

Concrete
Asphalt
Tar
Detergents

Fertilizers
Petroleum Based Products
Cleaning Solvents
Paints

Wood
Masonry Blocks
Roofing Materials
Metal Studs

SPILL PREVENTION

MATERIAL MANAGEMENT PRACTICES

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

GOOD HOUSEKEEPING

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

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

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

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

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

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

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

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

HAZARDOUS PRODUCTS

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

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

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

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

PRODUCT SPECIFIC PRACTICES

THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ONSITE:

PETROLEUM PRODUCTS

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

FERTILIZERS

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

PAINTS

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

CONCRETE TRUCKS

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

SPILL CONTROL PRACTICES

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

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

MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL

INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, LIQUID ABSORBENT (i.e. KITTY LITTER OR EQUAL), SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.

ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

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

THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.

THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY–TO–DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE/SHE WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IF APPLICABLE, IN THE OFFICE TRAILER ONSITE.

MAINTENANCE/INSPECTION PROCEDURES

EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES

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

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

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

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

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

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

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

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

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

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

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

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

NON–STORM WATER DISCHARGES

* IT IS EXPECTED THAT THE FOLLOWING NON–STORM WATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:

* WATER FROM WATER LINE FLUSHING

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

* UNCONTAMINATED GROUNDWATER (FROM DEWATERING EXCAVATION).

ALL NON–STORM WATER DISCHARGES WILL BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE.

CONTRACTOR'S CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

DEWATERING

PRIOR TO ANY DISCHARGE OF GROUND WATER (DEWATERING) FROM CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT TO WATERS OF THE STATE (INCLUDING, BUT NOT LIMITED TO, WETLANDS, SWALES AND MUNICIPAL STORM SEWERS), THE CONTRACTOR SHALL TEST THE EFFLUENT (WATER TO BE DISCHARGED) IN ACCORDANCE WITH RULE 62–621.300(2), F.A.C. IF THE TEST RESULTS ON THE EFFLUENT ARE BELOW THE SCREENING VALUES OF RULE 62–621.300(2), F.A.C., THE CONTRACTOR SHALL SUBMIT A SUMMARY OF THE PROPOSED CONSTRUCTION ACTIVITY AND THE TEST RESULTS TO THE DEPARTMENT OF ENVIRONMENTAL PROTECTION DISTRICT OFFICE, WITHIN ONE (1) WEEK AFTER DISCHARGE BEGINS. THE CONTRACTOR SHALL CONTINUE TO SAMPLE THE EFFLUENT AS REQUIRED THROUGHOUT THE PROJECT AND COMPLY WITH ALL CONDITIONS OF RULE 62–621.300(2), F.A.C. IF THE GROUND WATER EXCEEDS THE SCREENING VALUES OF RULE 62–621.300(2), F.A.C., THE CONTRACTOR SHALL COMPLY WITH OTHER APPLICABLE RULES AND REGULATIONS PRIOR TO DISCHARGE OF THE EFFLUENT (GROUND WATER) TO SURFACE WATERS OF THE STATE.

SIGNATURE	BUSINESS NAME AND ADDRESS OF CONTRACTOR & ALL SUBS	RESPONSIBLE FOR/DUTIES
		GENERAL CONTRACTOR
		SUB–CONTRACTOR
		SUB–CONTRACTOR
		SUB–CONTRACTOR
		SUB–CONTRACTOR

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
(904) 265-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
1			
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7			

STORMWATER
POLLUTION
PREVENTION PLAN

HILLSIDE GROVE
HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
O.C.: RCW
Date: AUGUST 2022
Scale:
Sheet 19

Printed: Sep 28, 2022 - 4:27pm Printed By: Garrett

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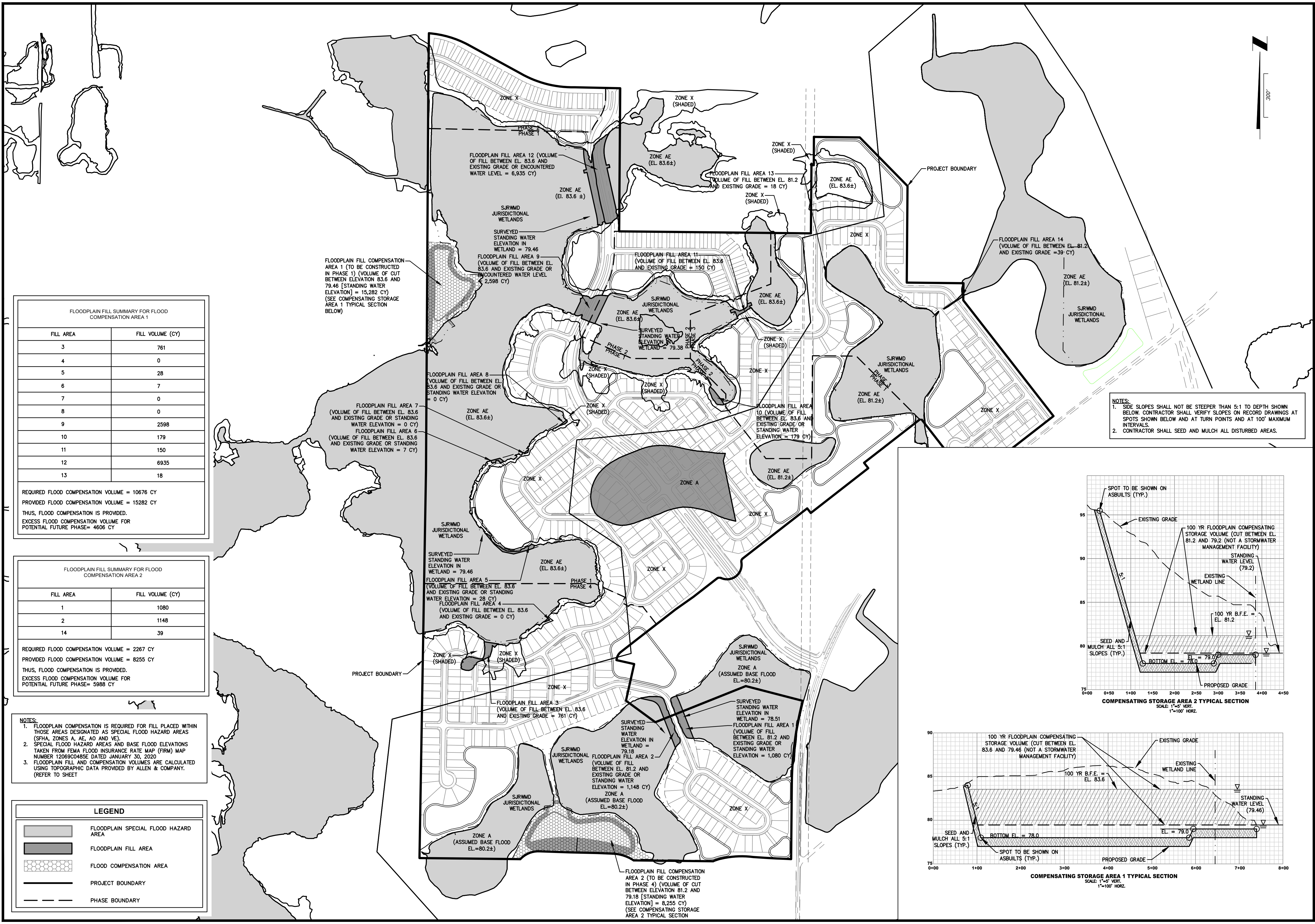
300'
ZONE X
PHASE 2
PHASE 1
FLOODPLAIN FILL AREA 12 (VOLUME OF FILL BETWEEN EL. 83.6 AND EXISTING GRADE OR ENCOUNTERED WATER LEVEL = 6,935 CY)
ZONE AE (El. 83.6 ±)
SJRWMD JURISDICTIONAL WETLANDS
SURVEYED STANDING WATER ELEVATION IN WETLAND = 79.46
FLOODPLAIN FILL AREA 9 (VOLUME OF FILL BETWEEN EL. 83.6 AND EXISTING GRADE OR ENCOUNTERED WATER LEVEL = 2,598 CY)
FLOODPLAIN FILL COMPENSATION AREA 1 (TO BE CONSTRUCTED IN PHASE 1) (VOLUME OF CUT BETWEEN ELEVATION 83.6 AND 79.46 [STANDING WATER ELEVATION] = 15,282 CY) (SEE COMPENSATING STORAGE AREA 1 TYPICAL SECTION BELOW)
ZONE X (SHADED)
ZONE AE (EL. 83.6±)
ZONE X (SHADED)
FLOODPLAIN FILL AREA 13 (VOLUME OF FILL BETWEEN EL. 81.2 AND EXISTING GRADE = 18 CY)
ZONE X (SHADED)
ZONE AE (EL. 83.6±)
PROJECT BOUNDARY
ZONE X
FLOODPLAIN FILL AREA 11 (VOLUME OF FILL BETWEEN EL. 83.6 AND EXISTING GRADE = 150 CY)
ZONE AE (EL. 83.6±)
FLOODPLAIN FILL AREA 14 (VOLUME OF FILL BETWEEN EL. 81.2 AND EXISTING GRADE =39 CY)
ZONE AE (EL. 81.2±)
SJRWMD JURISDICTIONAL WETLANDS
ZONE AE (EL. 83.6±)
SJRWMD JURISDICTIONAL WETLANDS
SURVEYED STANDING WATER ELEVATION IN WETLAND = 79.38
PHASE 2
PHASE 1
PHASE 2
PHASE 3
ZONE X (SHADED)
PHASE 2
PHASE 1
ZONE X
SJRWMD JURISDICTIONAL WETLANDS
PHASE 3
PHASE 1
ZONE AE (EL. 81.2±)
ZONE X
ZONE X (SHADED)
ZONE X (SHADED)
ZONE X (SHADED)
FLOODPLAIN FILL AREA 8 (VOLUME OF FILL BETWEEN EL. 83.6 AND EXISTING GRADE OR STANDING WATER ELEVATION = 0 CY)
FLOODPLAIN FILL AREA 7 (VOLUME OF FILL BETWEEN EL. 83.6 AND EXISTING GRADE OR STANDING WATER ELEVATION = 0 CY)
FLOODPLAIN FILL AREA 6 (VOLUME OF FILL BETWEEN EL. 83.6 AND EXISTING GRADE OR STANDING WATER ELEVATION = 7 CY)
ZONE AE (EL. 83.6±)
FLOODPLAIN FILL AREA 10 (VOLUME OF FILL BETWEEN EL. 83.6 AND EXISTING GRADE OR STANDING WATER ELEVATION = 179 CY)
ZONE AE (EL. 81.2±)
ZONE X
ZONE A
ZONE X
SJRWMD JURISDICTIONAL WETLANDS
SURVEYED STANDING WATER ELEVATION IN WETLAND = 79.46
ZONE AE (EL. 83.6±)
ZONE X
FLOODPLAIN FILL AREA 5 (VOLUME OF FILL BETWEEN EL. 83.6 AND EXISTING GRADE OR STANDING WATER ELEVATION = 28 CY)
PHASE 1
PHASE 4
FLOODPLAIN FILL AREA 4 (VOLUME OF FILL BETWEEN EL. 83.6 AND EXISTING GRADE = 0 CY)
SJRWMD JURISDICTIONAL WETLANDS
ZONE A (ASSUMED BASE FLOOD EL.=80.2±)
PROJECT BOUNDARY
ZONE X (SHADED)
ZONE X (SHADED)
ZONE X
FLOODPLAIN FILL AREA 3 (VOLUME OF FILL BETWEEN EL. 83.6 AND EXISTING GRADE = 761 CY)
SURVEYED STANDING WATER ELEVATION IN WETLAND = 78.51
FLOODPLAIN FILL AREA 1 (VOLUME OF FILL BETWEEN EL. 81.2 AND EXISTING GRADE OR STANDING WATER ELEVATION = 1,080 CY)
SURVEYED STANDING WATER ELEVATION IN WETLAND = 79.18
FLOODPLAIN FILL AREA 2 (VOLUME OF FILL BETWEEN EL. 81.2 AND EXISTING GRADE OR STANDING WATER ELEVATION = 1,148 CY)
SJRWMD JURISDICTIONAL WETLANDS
ZONE A (ASSUMED BASE FLOOD EL.=80.2±)
SJRWMD JURISDICTIONAL WETLANDS
ZONE A (ASSUMED BASE FLOOD EL.=80.2±)
ZONE X
FLOODPLAIN FILL COMPENSATION AREA 2 (TO BE CONSTRUCTED IN PHASE 4) (VOLUME OF CUT BETWEEN ELEVATION 81.2 AND 79.18 [STANDING WATER ELEVATION] = 8,255 CY) (SEE COMPENSATING STORAGE AREA 2 TYPICAL SECTION
SPOT TO BE SHOWN ON ASBUILTS (TYP.)
EXISTING GRADE
100 YR FLOODPLAIN COMPENSATING STORAGE VOLUME (CUT BETWEEN EL. 81.2 AND 79.2 (NOT A STORMWATER MANAGEMENT FACILITY)
STANDING WATER LEVEL (79.2)
EXISTING WETLAND LINE
5:1
100 YR B.F.E. = EL. 81.2
SEED AND MULCH ALL 5:1 SLOPES (TYP.)
EL. = 79.0
BOTTOM EL. = 78.0
PROPOSED GRADE
95
90
85
80
75
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
100 YR FLOODPLAIN COMPENSATING STORAGE VOLUME (CUT BETWEEN EL. 83.6 AND 79.46 (NOT A STORMWATER MANAGEMENT FACILITY)
EXISTING GRADE
EXISTING WETLAND LINE
100 YR B.F.E. = EL. 83.6
5:1
STANDING WATER LEVEL (79.46)
SEED AND MULCH ALL 5:1 SLOPES (TYP.)
BOTTOM EL. = 78.0
EL. = 79.0
SPOT TO BE SHOWN ON ASBUILTS (TYP.)
PROPOSED GRADE
90
85
80
75
0+00
1+00
2+00
3+00
4+00
5+00
6+00
7+00
8+00

COMPENSATING STORAGE AREA 2 TYPICAL SECTION
SCALE: 1"=5' VERT.
1"=100' HORZ.

COMPENSATING STORAGE AREA 1 TYPICAL SECTION
SCALE: 1"=5' VERT.
1"=100' HORZ.

FLOODPLAIN FILL SUMMARY FOR FLOOD COMPENSATION AREA 1

FILL AREA	FILL VOLUME (CY)
3	761
4	0
5	28
6	7
7	0
8	0
9	2598
10	179
11	150
12	6935
13	18

REQUIRED FLOOD COMPENSATION VOLUME = 10676 CY

PROVIDED FLOOD COMPENSATION VOLUME = 15282 CY

THUS, FLOOD COMPENSATION IS PROVIDED.

EXCESS FLOOD COMPENSATION VOLUME FOR POTENTIAL FUTURE PHASE= 4606 CY

FLOODPLAIN FILL SUMMARY FOR FLOOD COMPENSATION AREA 2

FILL AREA	FILL VOLUME (CY)
1	1080
2	1148
14	39

REQUIRED FLOOD COMPENSATION VOLUME = 2267 CY

PROVIDED FLOOD COMPENSATION VOLUME = 8255 CY

THUS, FLOOD COMPENSATION IS PROVIDED.

EXCESS FLOOD COMPENSATION VOLUME FOR POTENTIAL FUTURE PHASE= 5988 CY

NOTES:
1. FLOODPLAIN COMPENSATION IS REQUIRED FOR FILL PLACED WITHIN THOSE AREAS DESIGNATED AS SPECIAL FLOOD HAZARD AREAS (SFHA, ZONES A, AE, AO AND VE).
2. SPECIAL FLOOD HAZARD AREAS AND BASE FLOOD ELEVATIONS TAKEN FROM FEMA FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 12069C0485E DATED JANUARY 30, 2020
3. FLOODPLAIN FILL AND COMPENSATION VOLUMES ARE CALCULATED USING TOPOGRAPHIC DATA PROVIDED BY ALLEN & COMPANY. (REFER TO SHEET

LEGEND

░	FLOODPLAIN SPECIAL FLOOD HAZARD AREA
▓	FLOODPLAIN FILL AREA
▨	FLOOD COMPENSATION AREA
━━━	PROJECT BOUNDARY
— — —	PHASE BOUNDARY

NOTES:
1. SIDE SLOPES SHALL NOT BE STEEPER THAN 5:1 TO DEPTH SHOWN BELOW. CONTRACTOR SHALL VERIFY SLOPES ON RECORD DRAWINGS AT SPOTS SHOWN BELOW AND AT TURN POINTS AND AT 100' MAXIMUM INTERVALS.
2. CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS.

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No.	Date	Revision	By
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2	:		
3	:		
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5	:		
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7	:		

FLOOD COMPENSATION MAP

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 300'	
Sheet 20	

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J:\21\21-04-0008 Preserve at Howey\Design\Dwgs\Plots\21-04-0008 IMPACTS A.dwg

SECONDARY WETLAND IMPACT OFFSITE

WETLAND IMPACT	
#1	0.83 AC.
#2	0.01 AC.
TOTAL	0.84 AC.

DIRECT WETLAND IMPACT OFFSITE

WETLAND IMPACT	
#1	0.44 AC.
#2	0.01 AC.
#3	0.20 AC.
TOTAL	0.65 AC.

100% WETLAND IMPACT

SJRWMD WETLAND	
#11	0.18 AC.
#12	1.66 AC.
#13	0.17 AC.
#14	0.18 AC.
#15	0.20 AC.
TOTAL	2.39 AC.

SECONDARY WETLAND IMPACT ONSITE

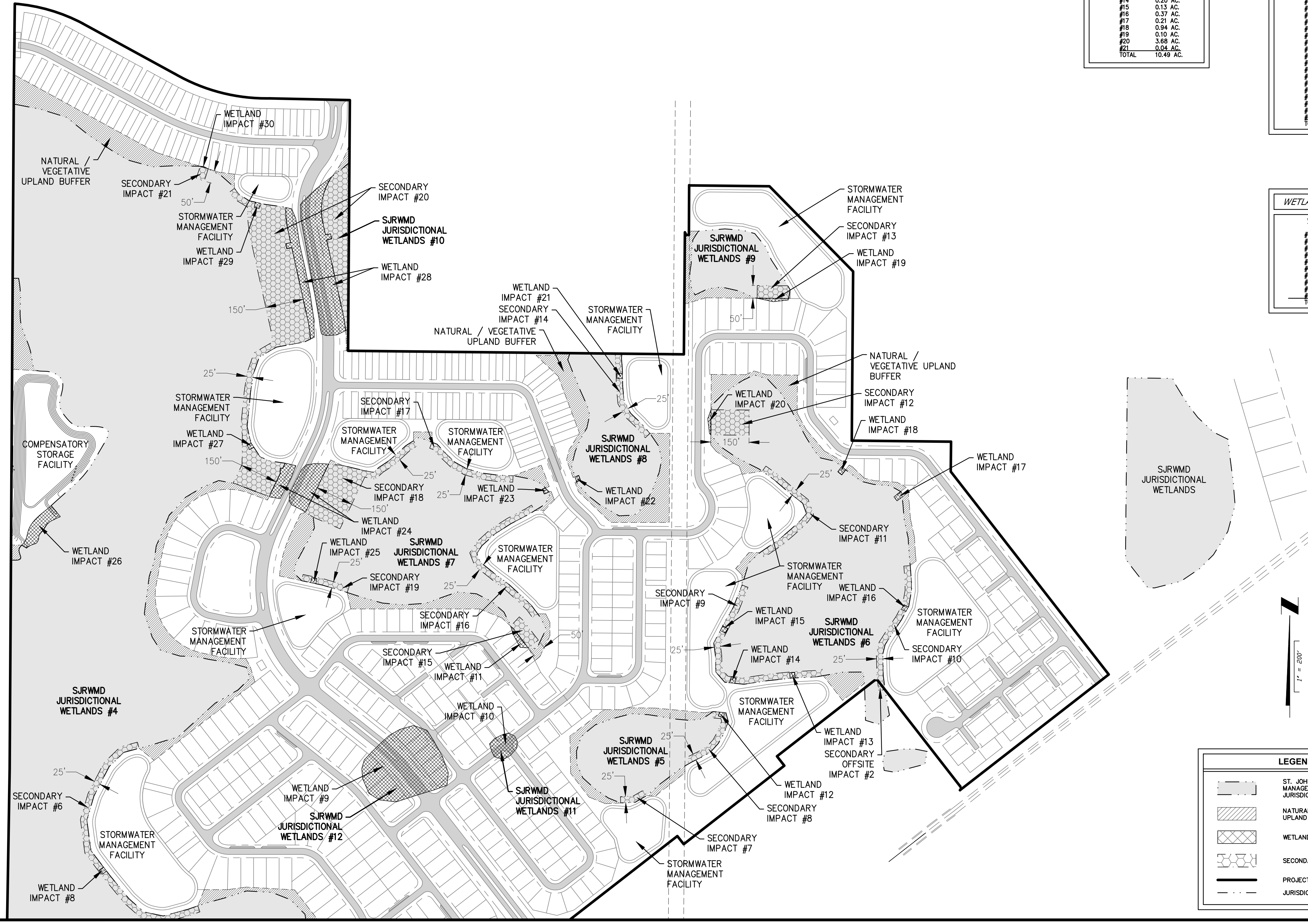
WETLAND IMPACT	
#1	0.59 AC.
#2	0.03 AC.
#3	0.13 AC.
#4	0.07 AC.
#5	1.72 AC.
#6	0.60 AC.
#7	0.06 AC.
#8	0.15 AC.
#9	0.42 AC.
#10	0.28 AC.
#11	0.29 AC.
#12	0.34 AC.
#13	0.14 AC.
#14	0.20 AC.
#15	0.13 AC.
#16	0.37 AC.
#17	0.21 AC.
#18	0.94 AC.
#19	0.10 AC.
#20	3.68 AC.
#21	0.04 AC.
TOTAL	10.49 AC.

DIRECT WETLAND IMPACT ONSITE

WETLAND IMPACT	
#1	0.01 AC.
#2	0.09 AC.
#3	0.01 AC.
#4	1.00 AC.
#5	0.01 AC.
#6	0.18 AC.
#7	0.17 AC.
#8	0.01 AC.
#9	1.66 AC.
#10	0.18 AC.
#11	0.04 AC.
#12	0.01 AC.
#13	0.01 AC.
#14	0.01 AC.
#15	0.01 AC.
#16	0.01 AC.
#17	0.01 AC.
#18	0.01 AC.
#19	0.02 AC.
#20	0.02 AC.
#21	0.01 AC.
#22	0.01 AC.
#23	0.01 AC..
#24	0.15 AC.
#25	0.01 AC.
#26	0.20 AC.
#27	0.01 AC.
#28	1.53 AC.
#29	0.01 AC.
#30	0.01 AC.
TOTAL	5.42 AC.

WETLANDS REMAINING

WETLAND REMAINING	
#1	6.54 AC.
#2	14.15 AC.
#3	7.82 AC.
#4	62.02 AC.
#5	3.15 AC.
#6	13.15 AC.
#7	10.09 AC.
#8	3.37 AC.
#9	1.18 AC.
#10	0.97 AC.
TOTAL	122.44 AC.


WETLAND IMPACT #30
NATURAL VEGETATIVE UPLAND BUFFER
SECONDARY IMPACT #21
50'
SECONDARY IMPACT #20
STORMWATER MANAGEMENT FACILITY
SJRWMD JURISDICTIONAL WETLANDS #10
WETLAND IMPACT #29
WETLAND IMPACT #28
150'
25'
STORMWATER MANAGEMENT FACILITY
WETLAND IMPACT #27
150'
COMPENSATORY STORAGE FACILITY
WETLAND IMPACT #26
SECONDARY IMPACT #17
STORMWATER MANAGEMENT FACILITY
STORMWATER MANAGEMENT FACILITY
25'
SECONDARY IMPACT #18
25'
WETLAND IMPACT #23
150'
WETLAND IMPACT #24
WETLAND IMPACT #25
25'
SJRWMD JURISDICTIONAL WETLANDS #7
SECONDARY IMPACT #19
STORMWATER MANAGEMENT FACILITY
25'
SECONDARY IMPACT #16
STORMWATER MANAGEMENT FACILITY
50'
SECONDARY IMPACT #15
WETLAND IMPACT #11
WETLAND IMPACT #10
SJRWMD JURISDICTIONAL WETLANDS #4
25'
SECONDARY IMPACT #6
STORMWATER MANAGEMENT FACILITY
WETLAND IMPACT #8
WETLAND IMPACT #9
SJRWMD JURISDICTIONAL WETLANDS #12
SJRWMD JURISDICTIONAL WETLANDS #11
WETLAND IMPACT #21
SECONDARY IMPACT #14
NATURAL / VEGETATIVE UPLAND BUFFER
STORMWATER MANAGEMENT FACILITY
25'
SJRWMD JURISDICTIONAL WETLANDS #8
WETLAND IMPACT #22
STORMWATER MANAGEMENT FACILITY
SECONDARY IMPACT #13
SJRWMD JURISDICTIONAL WETLANDS #9
WETLAND IMPACT #19
50'
NATURAL / VEGETATIVE UPLAND BUFFER
WETLAND IMPACT #20
SECONDARY IMPACT #12
150'
WETLAND IMPACT #18
WETLAND IMPACT #17
25'
SECONDARY IMPACT #11
STORMWATER MANAGEMENT FACILITY
SECONDARY IMPACT #9
WETLAND IMPACT #15
WETLAND IMPACT #16
SJRWMD JURISDICTIONAL WETLANDS #6
STORMWATER MANAGEMENT FACILITY
25'
WETLAND IMPACT #14
25'
SECONDARY IMPACT #10
STORMWATER MANAGEMENT FACILITY
25'
SJRWMD JURISDICTIONAL WETLANDS #5
25'
WETLAND IMPACT #13
SECONDARY OFFSITE IMPACT #2
WETLAND IMPACT #12
SECONDARY IMPACT #8
SECONDARY IMPACT #7
STORMWATER MANAGEMENT FACILITY
SJRWMD JURISDICTIONAL WETLANDS
1" = 200'

LEGEND	
▭	ST. JOHNS RIVER WATER MANAGEMENT DISTRICT JURISDICTIONAL WETLANDS
▨	NATURAL / VEGETATIVE UPLAND BUFFER
▩	WETLAND IMPACT
⬡	SECONDARY WETLAND IMPACT
━	PROJECT BOUNDARY
— · · —	JURISDICTIONAL WETLAND LINE

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No.	Date	Revision	By
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6	:		
5	:		
4	:		
3	:		
2	:		
1	:		

WETLAND IMPACT MAP

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 200'	
Sheet 21A	

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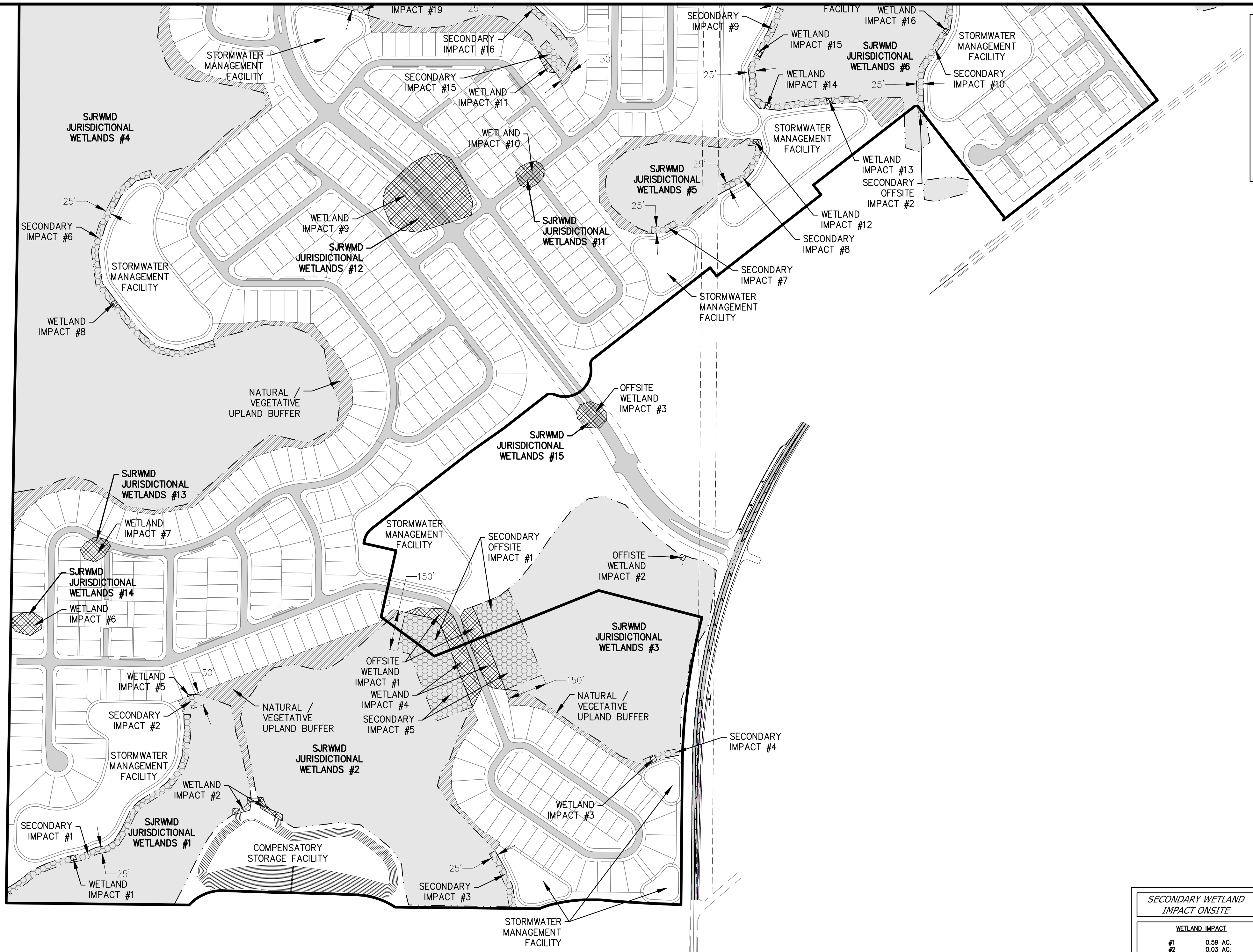
WETLAND IMPACT #19
25'
SECONDARY IMPACT #16
STORMWATER MANAGEMENT FACILITY
SECONDARY IMPACT #15
WETLAND IMPACT #11
50'
SJRWMD JURISDICTIONAL WETLANDS #4
WETLAND IMPACT #10
25'
SECONDARY IMPACT #6
STORMWATER MANAGEMENT FACILITY
WETLAND IMPACT #9
SJRWMD JURISDICTIONAL WETLANDS #12
SJRWMD JURISDICTIONAL WETLANDS #11
WETLAND IMPACT #8
NATURAL / VEGETATIVE UPLAND BUFFER
SECONDARY IMPACT #9
FACILITY
WETLAND IMPACT #16
WETLAND IMPACT #15
SJRWMD JURISDICTIONAL WETLANDS #6
STORMWATER MANAGEMENT FACILITY
25'
WETLAND IMPACT #14
25'
SECONDARY IMPACT #10
STORMWATER MANAGEMENT FACILITY
SJRWMD JURISDICTIONAL WETLANDS #5
25'
WETLAND IMPACT #13
SECONDARY OFFSITE IMPACT #2
25'
WETLAND IMPACT #12
SECONDARY IMPACT #8
SECONDARY IMPACT #7
STORMWATER MANAGEMENT FACILITY
OFFSITE WETLAND IMPACT #3
SJRWMD JURISDICTIONAL WETLANDS #15
SJRWMD JURISDICTIONAL WETLANDS #13
WETLAND IMPACT #7
STORMWATER MANAGEMENT FACILITY
SECONDARY OFFSITE IMPACT #1
OFFSITE WETLAND IMPACT #2
150'
SJRWMD JURISDICTIONAL WETLANDS #14
WETLAND IMPACT #6
SJRWMD JURISDICTIONAL WETLANDS #3
WETLAND IMPACT #5
50'
SECONDARY IMPACT #2
NATURAL / VEGETATIVE UPLAND BUFFER
OFFSITE WETLAND IMPACT #1
WETLAND IMPACT #4
SECONDARY IMPACT #5
150'
NATURAL / VEGETATIVE UPLAND BUFFER
SJRWMD JURISDICTIONAL WETLANDS #2
STORMWATER MANAGEMENT FACILITY
SECONDARY IMPACT #4
WETLAND IMPACT #2
WETLAND IMPACT #3
SECONDARY IMPACT #1
SJRWMD JURISDICTIONAL WETLANDS #1
COMPENSATORY STORAGE FACILITY
25'
25'
WETLAND IMPACT #1
SECONDARY IMPACT #3
STORMWATER MANAGEMENT FACILITY

1" = 200'

LEGEND

▨	ST. JOHNS RIVER WATER MANAGEMENT DISTRICT JURISDICTIONAL WETLANDS
▨	NATURAL / VEGETATIVE UPLAND BUFFER
▩	WETLAND IMPACT
⬡	SECONDARY WETLAND IMPACT
━	PROJECT BOUNDARY
— · · —	JURISDICTIONAL WETLAND LINE

WETLANDS REMAINING

WETLAND REMAINING	
#1	6.54 AC.
#2	14.15 AC.
#3	7.82 AC.
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#5	3.15 AC.
#6	13.15 AC.
#7	10.09 AC.
#8	3.37 AC.
#9	1.18 AC.
#10	0.97 AC.
TOTAL	122.44 AC.

DIRECT WETLAND IMPACT ONSITE

WETLAND IMPACT	
#1	0.01 AC.
#2	0.09 AC.
#3	0.01 AC.
#4	1.00 AC.
#5	0.01 AC.
#6	0.18 AC.
#7	0.17 AC.
#8	0.01 AC.
#9	1.66 AC.
#10	0.18 AC.
#11	0.04 AC.
#12	0.01 AC.
#13	0.01 AC.
#14	0.01 AC.
#15	0.01 AC.
#16	0.01 AC.
#17	0.01 AC.
#18	0.01 AC.
#19	0.02 AC.
#20	0.02 AC.
#21	0.01 AC.
#22	0.01 AC.
#23	0.01 AC..
#24	0.15 AC.
#25	0.01 AC.
#26	0.20 AC.
#27	0.01 AC.
#28	1.53 AC.
#29	0.01 AC.
#30	0.01 AC.
TOTAL	5.42 AC.

SECONDARY WETLAND IMPACT ONSITE

WETLAND IMPACT	
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#20	3.68 AC.
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WETLAND IMPACT	
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DIRECT WETLAND IMPACT OFFSITE

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100% WETLAND IMPACT

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No.	Date	Revision	By
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WETLAND IMPACT MAP

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	O.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 200'	
Sheet 21B	

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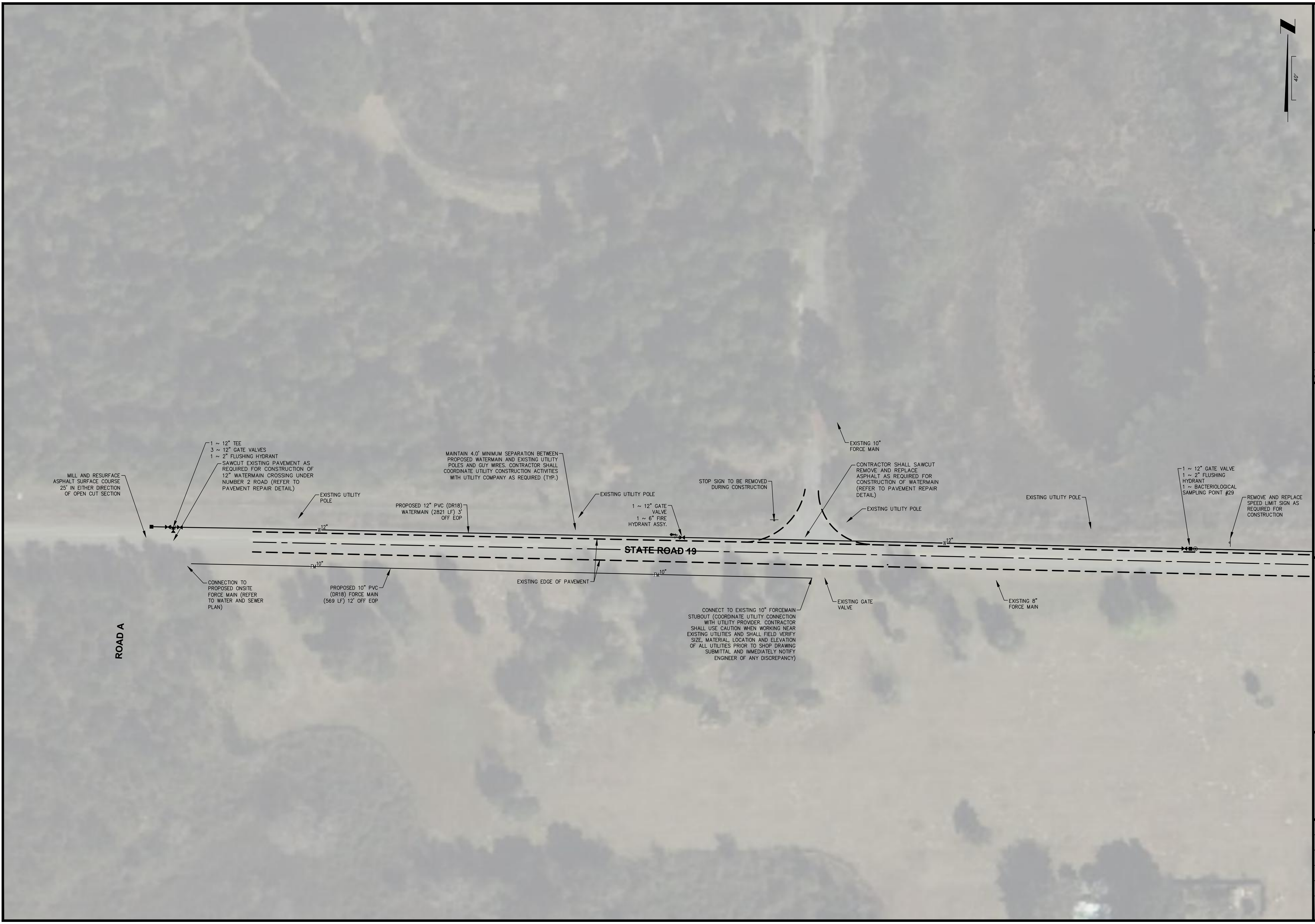

N
40'
MILL AND RESURFACE ASPHALT SURFACE COURSE 25' IN EITHER DIRECTION OF OPEN CUT SECTION
1 ~ 12" TEE
3 ~ 12" GATE VALVES
1 ~ 2" FLUSHING HYDRANT
SAWCUT EXISTING PAVEMENT AS REQUIRED FOR CONSTRUCTION OF 12" WATERMAIN CROSSING UNDER NUMBER 2 ROAD (REFER TO PAVEMENT REPAIR DETAIL)
EXISTING UTILITY POLE
PROPOSED 12" PVC (DR18) WATERMAIN (2821 LF) 3' OFF EOP
MAINTAIN 4.0' MINIMUM SEPARATION BETWEEN PROPOSED WATERMAIN AND EXISTING UTILITY POLES AND GUY WIRES. CONTRACTOR SHALL COORDINATE UTILITY CONSTRUCTION ACTIVITIES WITH UTILITY COMPANY AS REQUIRED (TYP.)
EXISTING UTILITY POLE
1 ~ 12" GATE VALVE
1 ~ 6" FIRE HYDRANT ASSY.
STOP SIGN TO BE REMOVED DURING CONSTRUCTION
EXISTING 10" FORCE MAIN
CONTRACTOR SHALL SAWCUT REMOVE AND REPLACE ASPHALT AS REQUIRED FOR CONSTRUCTION OF WATERMAIN (REFER TO PAVEMENT REPAIR DETAIL)
EXISTING UTILITY POLE
EXISTING UTILITY POLE
1 ~ 12" GATE VALVE
1 ~ 2" FLUSHING HYDRANT
1 ~ BACTERIOLOGICAL SAMPLING POINT #29
REMOVE AND REPLACE SPEED LIMIT SIGN AS REQUIRED FOR CONSTRUCTION
W 12"
W 12"
STATE ROAD 19
FM 10"
FM 10"
CONNECTION TO PROPOSED ONSITE FORCE MAIN (REFER TO WATER AND SEWER PLAN)
PROPOSED 10" PVC (DR18) FORCE MAIN (569 LF) 12' OFF EOP
EXISTING EDGE OF PAVEMENT
CONNECT TO EXISTING 10" FORCEMAIN STUBOUT (COORDINATE UTILITY CONNECTION WITH UTILITY PROVIDER. CONTRACTOR SHALL USE CAUTION WHEN WORKING NEAR EXISTING UTILITIES AND SHALL FIELD VERIFY SIZE, MATERIAL, LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO SHOP DRAWING SUBMITTAL AND IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCY)
EXISTING GATE VALVE
EXISTING 8" FORCE MAIN
ROAD A

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No.	Date	Revision	By
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6	..		
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NUMBER 2 ROAD - UTILITY IMPROVEMENTS

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	Q.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 22A	

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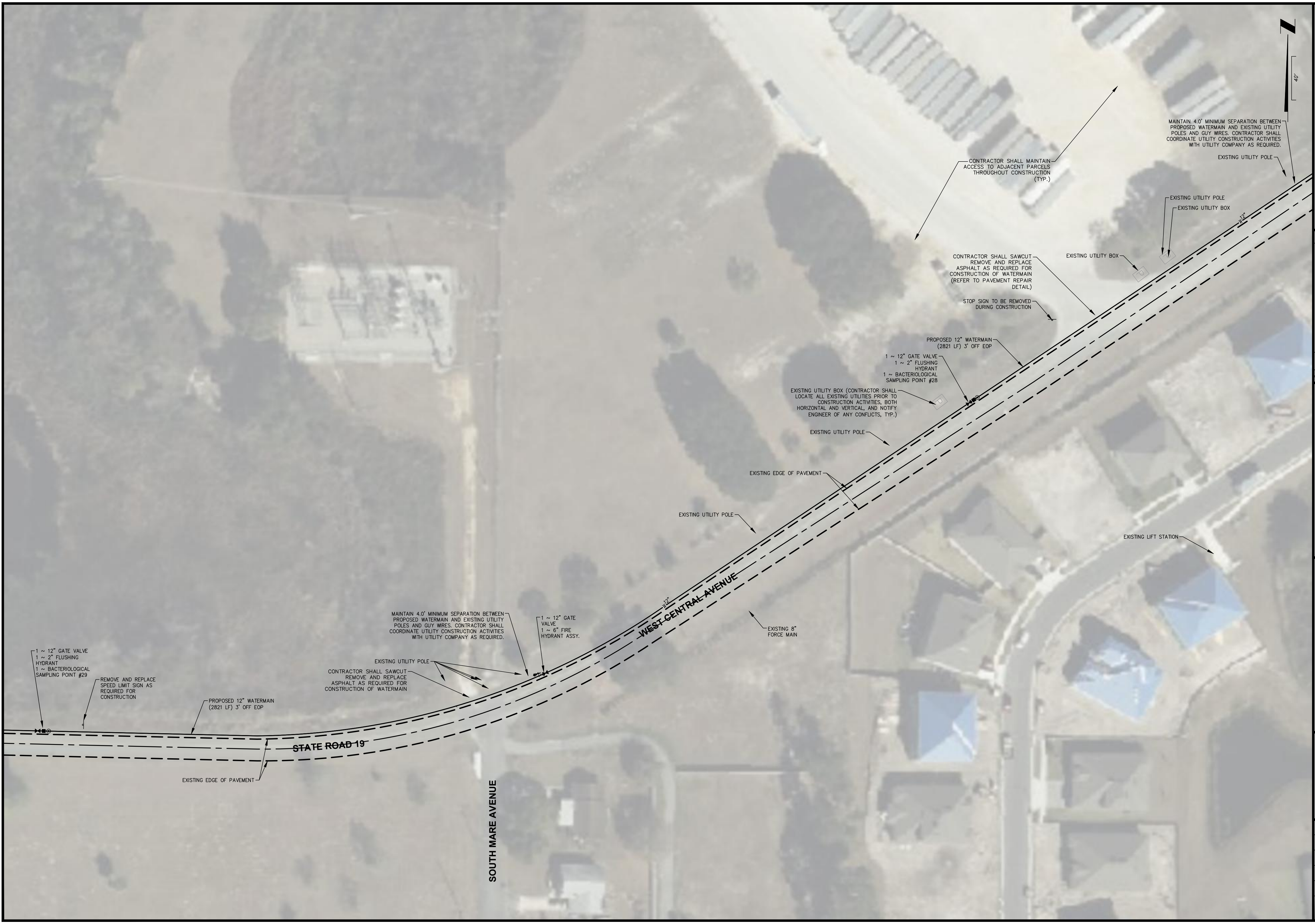
40'
MAINTAIN 4.0' MINIMUM SEPARATION BETWEEN PROPOSED WATERMAIN AND EXISTING UTILITY POLES AND GUY WIRES. CONTRACTOR SHALL COORDINATE UTILITY CONSTRUCTION ACTIVITIES WITH UTILITY COMPANY AS REQUIRED.
EXISTING UTILITY POLE
CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT PARCELS THROUGHOUT CONSTRUCTION (TYP.)
EXISTING UTILITY POLE
EXISTING UTILITY BOX
W 12"
EXISTING UTILITY BOX
CONTRACTOR SHALL SAWCUT REMOVE AND REPLACE ASPHALT AS REQUIRED FOR CONSTRUCTION OF WATERMAIN (REFER TO PAVEMENT REPAIR DETAIL)
STOP SIGN TO BE REMOVED DURING CONSTRUCTION
PROPOSED 12" WATERMAIN (2821 LF) 3' OFF EOP
1 ~ 12" GATE VALVE
1 ~ 2" FLUSHING HYDRANT
1 ~ BACTERIOLOGICAL SAMPLING POINT #28
EXISTING UTILITY BOX (CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION ACTIVITIES, BOTH HORIZONTAL AND VERTICAL, AND NOTIFY ENGINEER OF ANY CONFLICTS, TYP.)
EXISTING UTILITY POLE
EXISTING EDGE OF PAVEMENT
EXISTING UTILITY POLE
EXISTING LIFT STATION
W 12"
WEST CENTRAL AVENUE
EXISTING 8" FORCE MAIN
MAINTAIN 4.0' MINIMUM SEPARATION BETWEEN PROPOSED WATERMAIN AND EXISTING UTILITY POLES AND GUY WIRES. CONTRACTOR SHALL COORDINATE UTILITY CONSTRUCTION ACTIVITIES WITH UTILITY COMPANY AS REQUIRED.
1 ~ 12" GATE VALVE
1 ~ 6" FIRE HYDRANT ASSY.
EXISTING UTILITY POLE
CONTRACTOR SHALL SAWCUT REMOVE AND REPLACE ASPHALT AS REQUIRED FOR CONSTRUCTION OF WATERMAIN
1 ~ 12" GATE VALVE
1 ~ 2" FLUSHING HYDRANT
1 ~ BACTERIOLOGICAL SAMPLING POINT #29
REMOVE AND REPLACE SPEED LIMIT SIGN AS REQUIRED FOR CONSTRUCTION
PROPOSED 12" WATERMAIN (2821 LF) 3' OFF EOP
STATE ROAD 19
EXISTING EDGE OF PAVEMENT
SOUTH MARE AVENUE

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NUMBER 2 ROAD - UTILITY IMPROVEMENTS

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
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Scale: 1" = 40'	
Sheet 22B	

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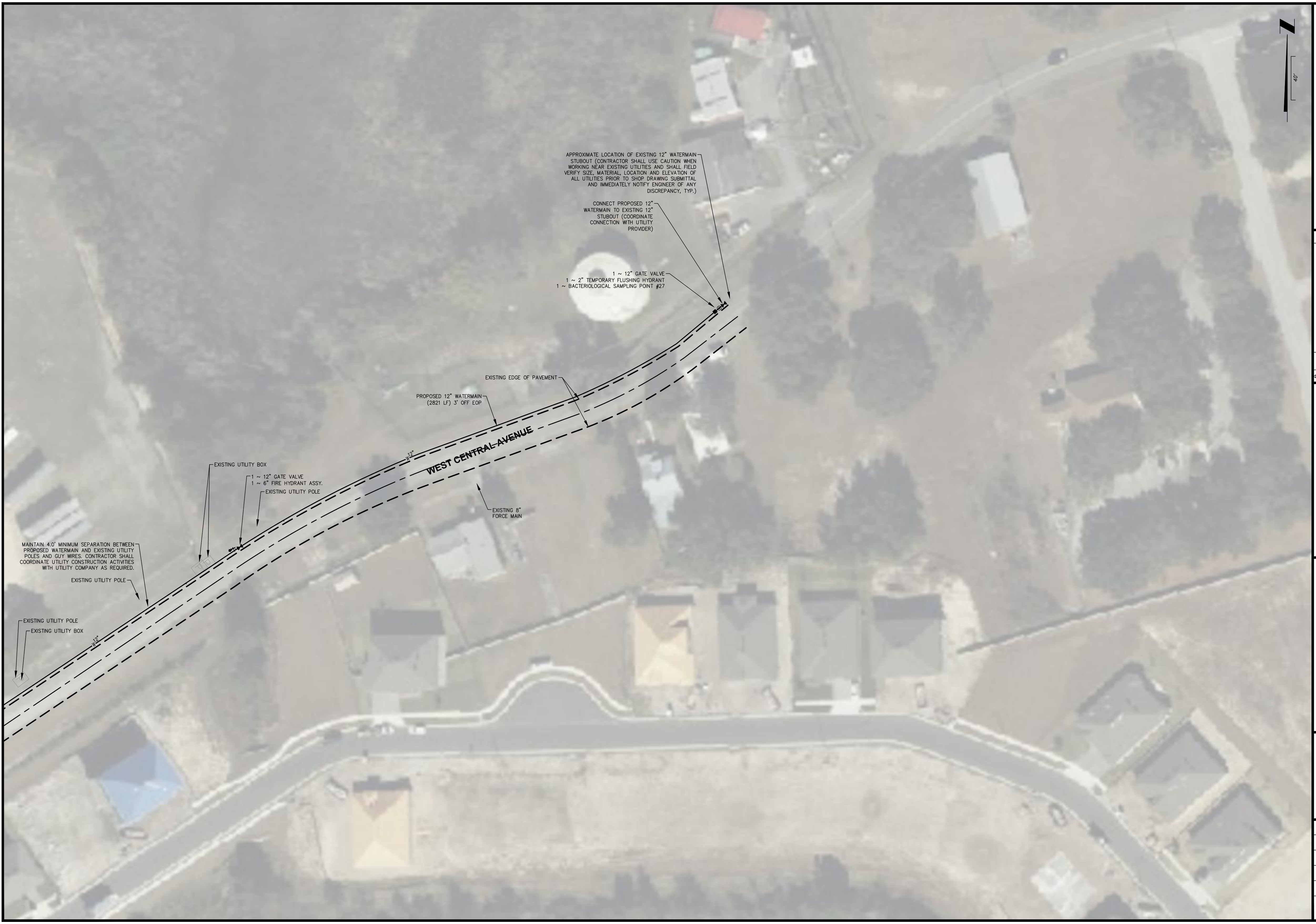
APPROXIMATE LOCATION OF EXISTING 12" WATERMAIN STUBOUT (CONTRACTOR SHALL USE CAUTION WHEN WORKING NEAR EXISTING UTILITIES AND SHALL FIELD VERIFY SIZE, MATERIAL, LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO SHOP DRAWING SUBMITTAL AND IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCY, TYP.)
CONNECT PROPOSED 12" WATERMAIN TO EXISTING 12" STUBOUT (COORDINATE CONNECTION WITH UTILITY PROVIDER)
1 ~ 12" GATE VALVE
1 ~ 2" TEMPORARY FLUSHING HYDRANT
1 ~ BACTERIOLOGICAL SAMPLING POINT #27
EXISTING EDGE OF PAVEMENT
PROPOSED 12" WATERMAIN (2821 LF) 3' OFF EOP
W12"
WEST CENTRAL AVENUE
EXISTING 8" FORCE MAIN
EXISTING UTILITY BOX
1 ~ 12" GATE VALVE
1 ~ 6" FIRE HYDRANT ASSY.
EXISTING UTILITY POLE
MAINTAIN 4.0' MINIMUM SEPARATION BETWEEN PROPOSED WATERMAIN AND EXISTING UTILITY POLES AND GUY WIRES. CONTRACTOR SHALL COORDINATE UTILITY CONSTRUCTION ACTIVITIES WITH UTILITY COMPANY AS REQUIRED.
EXISTING UTILITY POLE
EXISTING UTILITY POLE
EXISTING UTILITY BOX
W12"
N
40'

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5	..		
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2	..		
1	..		

NUMBER 2 ROAD - UTILITY IMPROVEMENTS

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

Project No.: 21-04-0008	
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Scale: 1" = 40'	
Sheet 22C	

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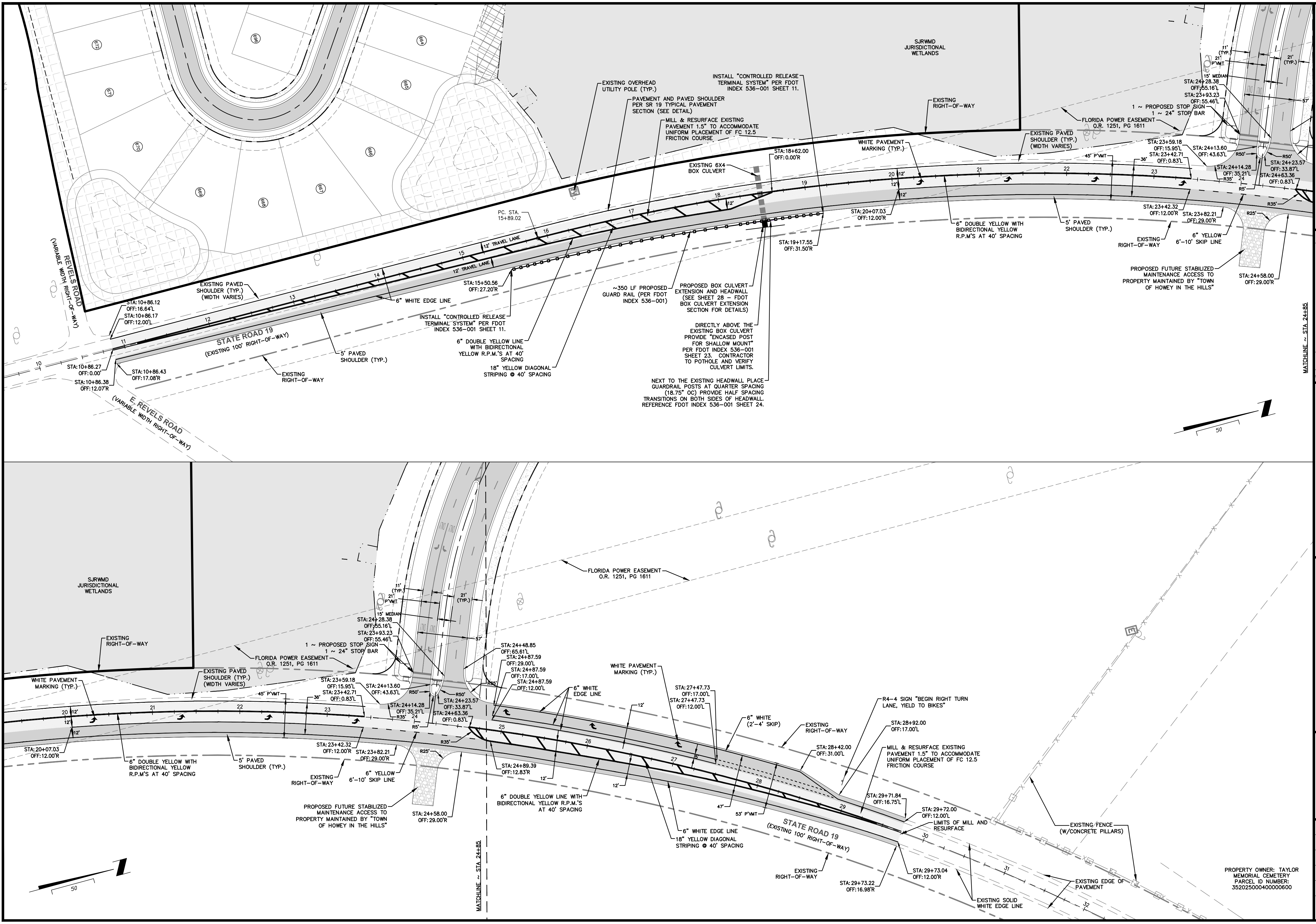

SJRWMD JURISDICTIONAL WETLANDS
EXISTING OVERHEAD UTILITY POLE (TYP.)
PAVEMENT AND PAVED SHOULDER PER SR 19 TYPICAL PAVEMENT SECTION (SEE DETAIL)
MILL & RESURFACE EXISTING PAVEMENT 1.5" TO ACCOMMODATE UNIFORM PLACEMENT OF FC 12.5 FRICTION COURSE
INSTALL "CONTROLLED RELEASE TERMINAL SYSTEM" PER FDOT INDEX 536-001 SHEET 11.
EXISTING RIGHT-OF-WAY
EXISTING 6X4 BOX CULVERT
STA:18+62.00 OFF:0.00'R
WHITE PAVEMENT MARKING (TYP.)
EXISTING PAVED SHOULDER (TYP.) (WIDTH VARIES)
FLORIDA POWER EASEMENT O.R. 1251, PG 1611
1 ~ PROPOSED STOP SIGN 1 ~ 24" STOP BAR
11' (TYP.)
21' P'VMT
21' (TYP.)
15' MEDIAN
57'
STA: 24+28.38 OFF:55.16'L
STA: 23+93.23 OFF:55.46'L
STA: 23+59.18 OFF:15.95'L
STA: 23+42.71 OFF: 0.83'L
STA: 24+13.60 OFF: 43.63'L
STA:24+14.28 OFF: 35.21'L
STA: 24+23.57 OFF: 33.87'L
STA: 24+63.36 OFF: 0.83'L
R50' R50' R35' R5' R35' R25'
45' P'VMT
36'
PC. STA. 15+89.02
12' TRAVEL LANE
12' TRAVEL LANE
EXISTING PAVED SHOULDER (TYP.) (WIDTH VARIES)
STA:10+86.12 OFF:16.64'L
STA:10+86.17 OFF:12.00'L
STA:10+86.27 OFF: 0.00'
STA:10+86.43 OFF:17.08'R
STA:10+86.38 OFF:12.07'R
STA:15+50.56 OFF:27.20'R
6" WHITE EDGE LINE
INSTALL "CONTROLLED RELEASE TERMINAL SYSTEM" PER FDOT INDEX 536-001 SHEET 11.
6" DOUBLE YELLOW LINE WITH BIDIRECTIONAL YELLOW R.P.M.'S AT 40' SPACING
18" YELLOW DIAGONAL STRIPING @ 40' SPACING
5' PAVED SHOULDER (TYP.)
EXISTING RIGHT-OF-WAY
~350 LF PROPOSED GUARD RAIL (PER FDOT INDEX 536-001)
PROPOSED BOX CULVERT EXTENSION AND HEADWALL (SEE SHEET 28 - FDOT BOX CULVERT EXTENSION SECTION FOR DETAILS)
DIRECTLY ABOVE THE EXISTING BOX CULVERT PROVIDE "ENCASED POST FOR SHALLOW MOUNT" PER FDOT INDEX 536-001 SHEET 23. CONTRACTOR TO POTHOLE AND VERIFY CULVERT LIMITS.
NEXT TO THE EXISTING HEADWALL PLACE GUARDRAIL POSTS AT QUARTER SPACING (18.75' OC) PROVIDE HALF SPACING TRANSITIONS ON BOTH SIDES OF HEADWALL. REFERENCE FDOT INDEX 536-001 SHEET 24.
STA:19+17.55 OFF:31.50'R
STA:20+07.03 OFF:12.00'R
6" DOUBLE YELLOW WITH BIDIRECTIONAL YELLOW R.P.M'S AT 40' SPACING
5' PAVED SHOULDER (TYP.)
STA: 23+42.32 OFF:12.00'R
STA: 23+82.21 OFF: 29.00'R
EXISTING RIGHT-OF-WAY
6" YELLOW 6'-10' SKIP LINE
PROPOSED FUTURE STABILIZED MAINTENANCE ACCESS TO PROPERTY MAINTAINED BY "TOWN OF HOWEY IN THE HILLS"
STA: 24+58.00 OFF: 29.00'R
REVELS ROAD (VARIABLE WIDTH RIGHT-OF-WAY)
E. REVELS ROAD (VARIABLE WIDTH RIGHT-OF-WAY)
STATE ROAD 19 (EXISTING 100' RIGHT-OF-WAY)
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
MATCHLINE ~ STA 24+85
50
EXISTING RIGHT-OF-WAY
STA: 24+48.85 OFF: 65.61'L
STA: 24+87.59 OFF: 29.00'L
STA: 24+87.59 OFF: 17.00'L
STA: 24+87.59 OFF: 12.00'L
6" WHITE EDGE LINE
WHITE PAVEMENT MARKING (TYP.)
STA: 27+47.73 OFF: 17.00'L
STA: 27+47.73 OFF: 12.00'L
6" WHITE (2'-4' SKIP)
R4-4 SIGN "BEGIN RIGHT TURN LANE, YIELD TO BIKES"
STA: 28+92.00 OFF: 17.00'L
STA: 28+42.00 OFF: 31.00'L
MILL & RESURFACE EXISTING PAVEMENT 1.5" TO ACCOMMODATE UNIFORM PLACEMENT OF FC 12.5 FRICTION COURSE
STA: 29+71.84 OFF: 16.75'L
STA: 29+72.00 OFF: 12.00'L
LIMITS OF MILL AND RESURFACE
EXISTING FENCE (W/CONCRETE PILLARS)
STA: 24+89.39 OFF: 12.83'R
6" DOUBLE YELLOW LINE WITH BIDIRECTIONAL YELLOW R.P.M.'S AT 40' SPACING
12' 12' 47' 53' P'VMT
6" WHITE EDGE LINE
18" YELLOW DIAGONAL STRIPING @ 40' SPACING
EXISTING RIGHT-OF-WAY
STA: 29+73.04 OFF: 12.00'R
STA: 29+73.22 OFF: 16.98'R
EXISTING EDGE OF PAVEMENT
EXISTING SOLID WHITE EDGE LINE
PROPERTY OWNER: TAYLOR MEMORIAL CEMETERY PARCEL ID NUMBER: 352025000400000600
25 26 27 28 29 30 31 32

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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
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SR-19 SIGNING AND STRIPING PLAN

HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA
PREPARED FOR
LENNAR - ORLANDO

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

Project No.: 21-04-0008	
Designed: E.D.E.	Drawn: G.R.Q.
Checked: J.E.W.	Q.C.: R.C.W
Date: JUNE, 2022	
Scale: 1" = 50'	
Sheet 23	

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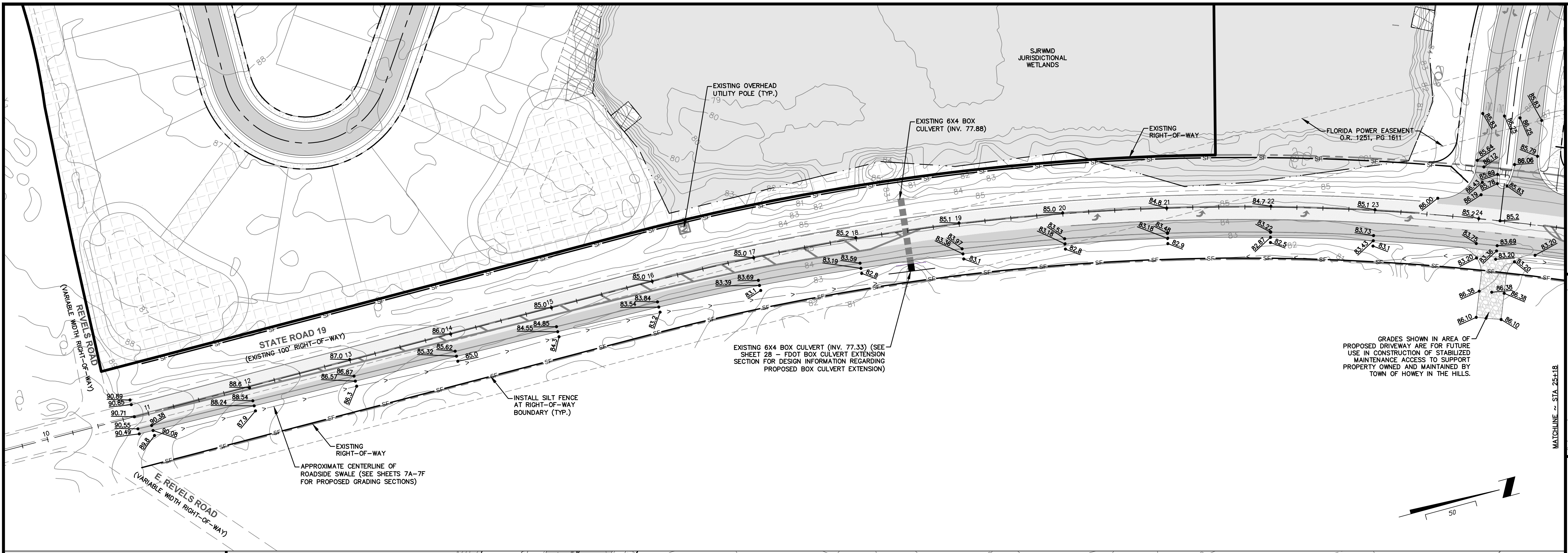
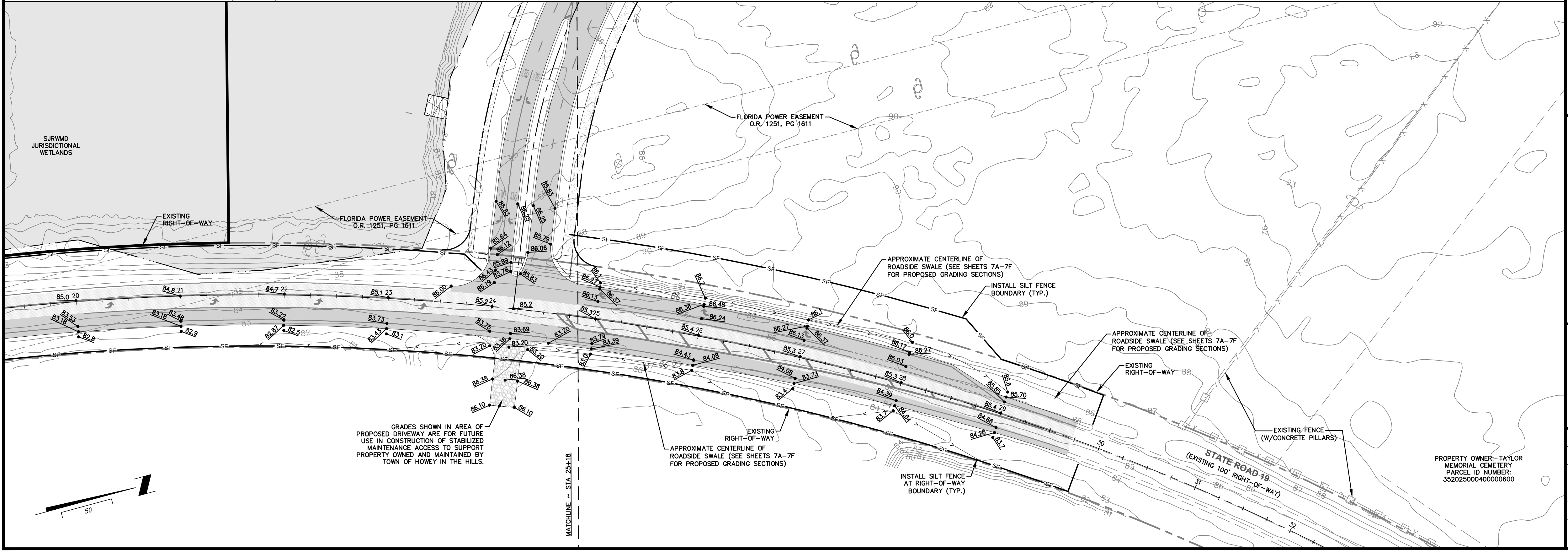

STATE ROAD 19
(EXISTING 100' RIGHT-OF-WAY)
REVELS ROAD
(VARIABLE WIDTH RIGHT-OF-WAY)
E. REVELS ROAD
(VARIABLE WIDTH RIGHT-OF-WAY)
SJRWMD JURISDICTIONAL WETLANDS
EXISTING OVERHEAD UTILITY POLE (TYP.)
EXISTING 6X4 BOX CULVERT (INV. 77.88)
EXISTING RIGHT-OF-WAY
FLORIDA POWER EASEMENT O.R. 1251, PG 1611
EXISTING 6X4 BOX CULVERT (INV. 77.33) (SEE SHEET 28 – FDOT BOX CULVERT EXTENSION SECTION FOR DESIGN INFORMATION REGARDING PROPOSED BOX CULVERT EXTENSION)
INSTALL SILT FENCE AT RIGHT-OF-WAY BOUNDARY (TYP.)
EXISTING RIGHT-OF-WAY
APPROXIMATE CENTERLINE OF ROADSIDE SWALE (SEE SHEETS 7A-7F FOR PROPOSED GRADING SECTIONS)
GRADES SHOWN IN AREA OF PROPOSED DRIVEWAY ARE FOR FUTURE USE IN CONSTRUCTION OF STABILIZED MAINTENANCE ACCESS TO SUPPORT PROPERTY OWNED AND MAINTAINED BY TOWN OF HOWEY IN THE HILLS.
MATCHLINE ~ STA 25+18
50


SJRWMD JURISDICTIONAL WETLANDS
EXISTING RIGHT-OF-WAY
FLORIDA POWER EASEMENT O.R. 1251, PG 1611
APPROXIMATE CENTERLINE OF ROADSIDE SWALE (SEE SHEETS 7A-7F FOR PROPOSED GRADING SECTIONS)
INSTALL SILT FENCE BOUNDARY (TYP.)
EXISTING RIGHT-OF-WAY
EXISTING FENCE (W/CONCRETE PILLARS)
PROPERTY OWNER: TAYLOR MEMORIAL CEMETERY PARCEL ID NUMBER: 3520250004000000600
STATE ROAD 19
(EXISTING 100' RIGHT-OF-WAY)
INSTALL SILT FENCE AT RIGHT-OF-WAY BOUNDARY (TYP.)
EXISTING RIGHT-OF-WAY
GRADES SHOWN IN AREA OF PROPOSED DRIVEWAY ARE FOR FUTURE USE IN CONSTRUCTION OF STABILIZED MAINTENANCE ACCESS TO SUPPORT PROPERTY OWNED AND MAINTAINED BY TOWN OF HOWEY IN THE HILLS.
MATCHLINE ~ STA 25+18
50

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1			

SR-19 PAVING AND DRAINAGE PLAN

HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA
PREPARED FOR
LENNAR - ORLANDO

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

Project No.: 21-04-0008
Designed: E.D.E.
Drawn: G.R.Q.
Checked: J.E.W.
Q.C.: R.C.W
Date: JUNE, 2022
Scale: 1" = 50'
Sheet 24

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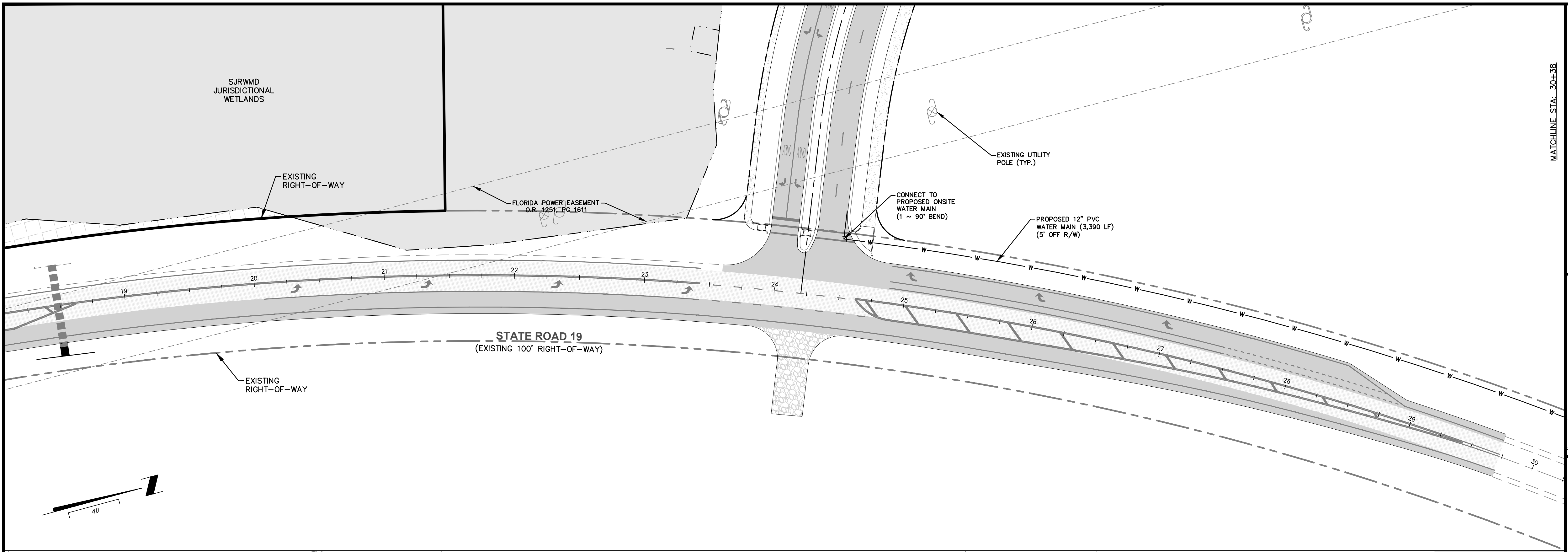
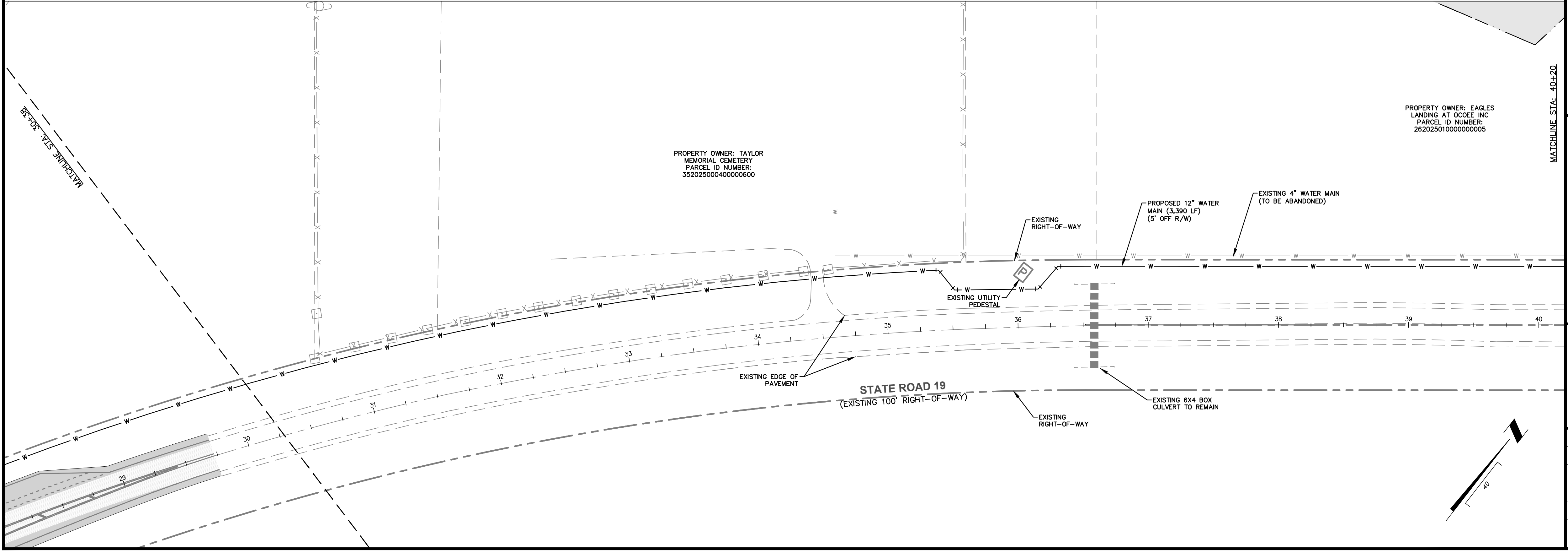

SJRWMD
JURISDICTIONAL
WETLANDS
EXISTING
RIGHT-OF-WAY
FLORIDA POWER EASEMENT
O.R. 1251, PG 1611
CONNECT TO
PROPOSED ONSITE
WATER MAIN
(1 ~ 90° BEND)
EXISTING UTILITY
POLE (TYP.)
PROPOSED 12" PVC
WATER MAIN (3,390 LF)
(5' OFF R/W)
STATE ROAD 19
(EXISTING 100' RIGHT-OF-WAY)
EXISTING
RIGHT-OF-WAY
MATCHLINE STA: 30+38
19
20
21
22
23
24
25
26
27
28
29
30
40


MATCHLINE STA: 30+38
PROPERTY OWNER: TAYLOR
MEMORIAL CEMETERY
PARCEL ID NUMBER:
352025000400000600
PROPERTY OWNER: EAGLES
LANDING AT OCOEE INC
PARCEL ID NUMBER:
262025010000000005
MATCHLINE STA: 40+20
EXISTING
RIGHT-OF-WAY
PROPOSED 12" WATER
MAIN (3,390 LF)
(5' OFF R/W)
EXISTING 4" WATER MAIN
(TO BE ABANDONED)
EXISTING UTILITY
PEDESTAL
EXISTING EDGE OF
PAVEMENT
STATE ROAD 19
(EXISTING 100' RIGHT-OF-WAY)
EXISTING
RIGHT-OF-WAY
EXISTING 6X4 BOX
CULVERT TO REMAIN
29
30
31
32
33
34
35
36
37
38
39
40
40

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SR-19 WATER AND SEWER PLAN

HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA
PREPARED FOR
LENNAR - ORLANDO

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

Project No.: 21-04-0008	
Designed: E.D.E.	Drawn: G.R.Q.
Checked: J.E.W.	O.C.: R.C.W
Date: JUNE, 2022	
Scale: 1" = 40'	
Sheet 25A	

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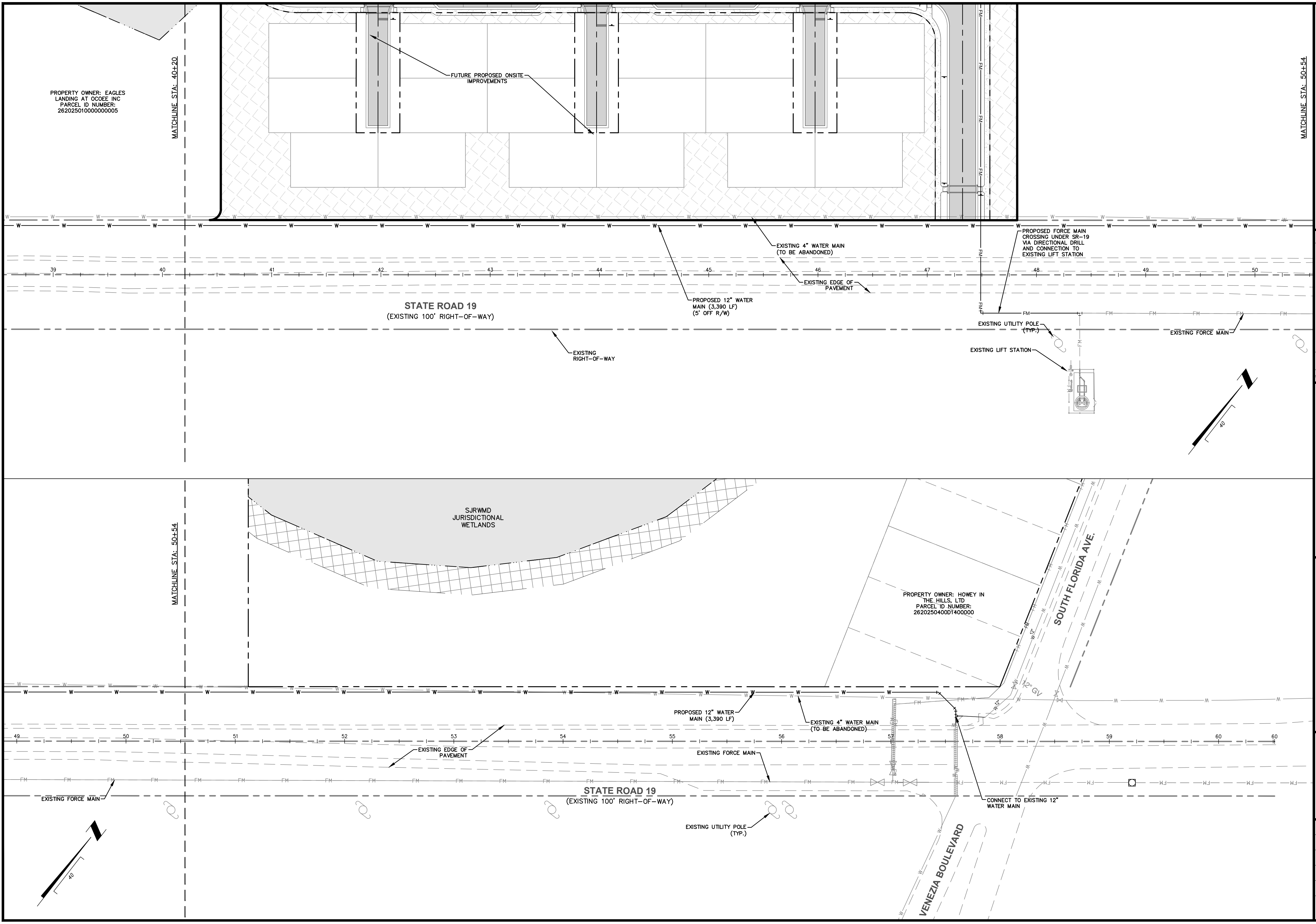
PROPERTY OWNER: EAGLES LANDING AT OCOEE INC PARCEL ID NUMBER: 262025010000000005
MATCHLINE STA: 40+20
FUTURE PROPOSED ONSITE IMPROVEMENTS
MATCHLINE STA: 50+54
W
FM
39
40
41
42
43
44
45
46
47
48
49
50
EXISTING 4" WATER MAIN (TO BE ABANDONED)
PROPOSED FORCE MAIN CROSSING UNDER SR-19 VIA DIRECTIONAL DRILL AND CONNECTION TO EXISTING LIFT STATION
EXISTING EDGE OF PAVEMENT
PROPOSED 12" WATER MAIN (3,390 LF) (5' OFF R/W)
STATE ROAD 19
(EXISTING 100' RIGHT-OF-WAY)
EXISTING UTILITY POLE (TYP.)
EXISTING FORCE MAIN
EXISTING RIGHT-OF-WAY
EXISTING LIFT STATION
40
SJRWMD JURISDICTIONAL WETLANDS
MATCHLINE STA: 50+54
PROPERTY OWNER: HOWEY IN THE HILLS, LTD PARCEL ID NUMBER: 2620250400D1400000
SOUTH FLORIDA AVE.
W 12"
12" GV
PROPOSED 12" WATER MAIN (3,390 LF)
EXISTING 4" WATER MAIN (TO BE ABANDONED)
51
52
53
54
55
56
57
58
59
60
EXISTING EDGE OF PAVEMENT
EXISTING FORCE MAIN
STATE ROAD 19
(EXISTING 100' RIGHT-OF-WAY)
EXISTING FORCE MAIN
CONNECT TO EXISTING 12" WATER MAIN
EXISTING UTILITY POLE (TYP.)
VENEZIA BOULEVARD
40

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SR-19 WATER AND SEWER PLAN

HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA
PREPARED FOR
LENNAR - ORLANDO

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

Project No.: 21-04-0008
Designed: E.D.E.
Drawn: G.R.Q.
Checked: J.E.W.
Q.C.: R.C.W
Date: JUNE, 2022
Scale: 1"=40'
Sheet 25B

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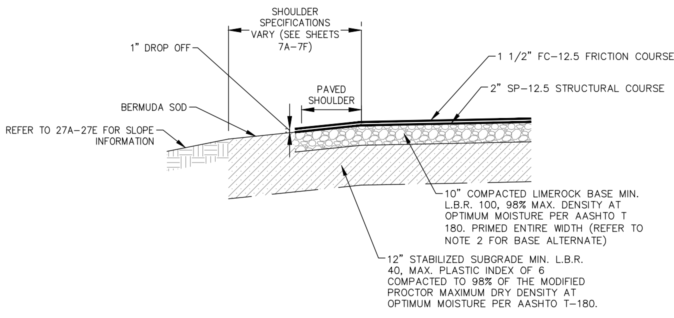
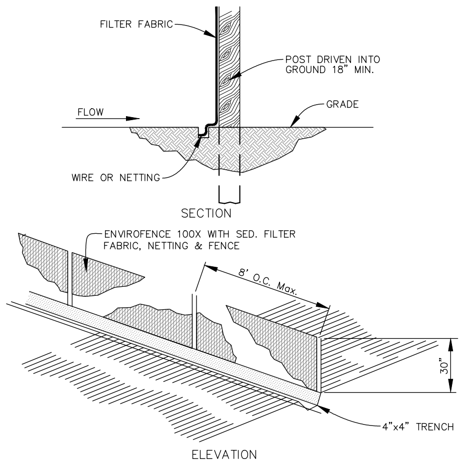

SHOULDER SPECIFICATIONS VARY (SEE SHEETS 7A–7F)
1" DROP OFF
1 1/2" FC–12.5 FRICTION COURSE
2" SP–12.5 STRUCTURAL COURSE
PAVED SHOULDER
BERMUDA SOD
REFER TO 27A–27E FOR SLOPE INFORMATION
10" COMPACTED LIMEROCK BASE MIN. L.B.R. 100, 98% MAX. DENSITY AT OPTIMUM MOISTURE PER AASHTO T 180. PRIMED ENTIRE WIDTH (REFER TO NOTE 2 FOR BASE ALTERNATE)
12" STABILIZED SUBGRADE MIN. L.B.R. 40, MAX. PLASTIC INDEX OF 6 COMPACTED TO 98% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE PER AASHTO T–180.

NOTES:
1. ALL DISTURBED AREA SHALL BE SEEDED AND MULCHED.
2. ALL ASPHALTIC CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 331 AND 333, F.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
*ALTERNATE BASE OPTION = BASE GROUP #9.

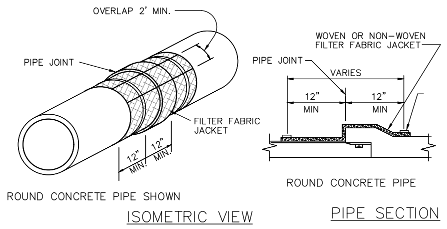
SR-19 TYPICAL PAVEMENT SECTION

N.T.S.


FILTER FABRIC
POST DRIVEN INTO GROUND 18" MIN.
FLOW
GRADE
WIRE OR NETTING
SECTION
ENVIROFENCE 100X WITH SED. FILTER FABRIC, NETTING & FENCE
8' O.C. Max.
30"
4"x4" TRENCH
ELEVATION

SILT FENCE DETAIL

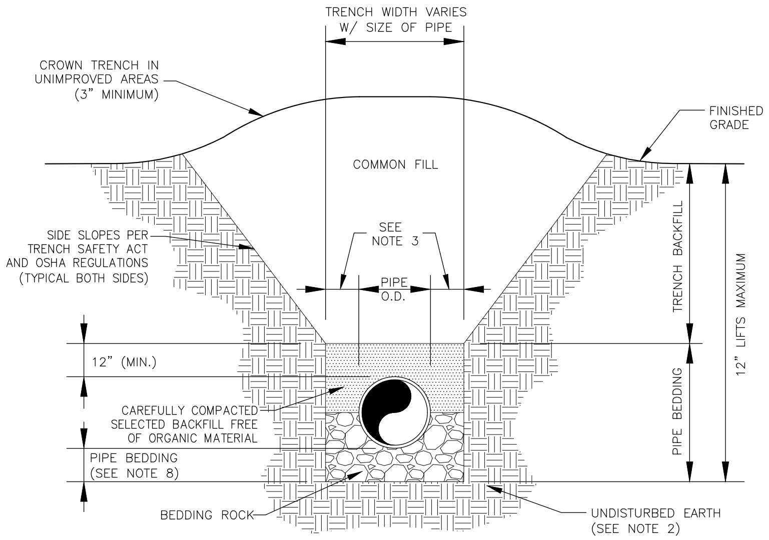
N.T.S.


OVERLAP 2' MIN.
PIPE JOINT
FILTER FABRIC JACKET
12" MIN.
12" MIN.
ROUND CONCRETE PIPE SHOWN
ISOMETRIC VIEW
WOVEN OR NON–WOVEN FILTER FABRIC JACKET
PIPE JOINT
VARIES
12" MIN
12" MIN
ROUND CONCRETE PIPE
PIPE SECTION

COST OF FILTER FABRIC TO BE INCLUDED IN COST OF PIPE.

FILTER FABRIC JACKET DETAIL

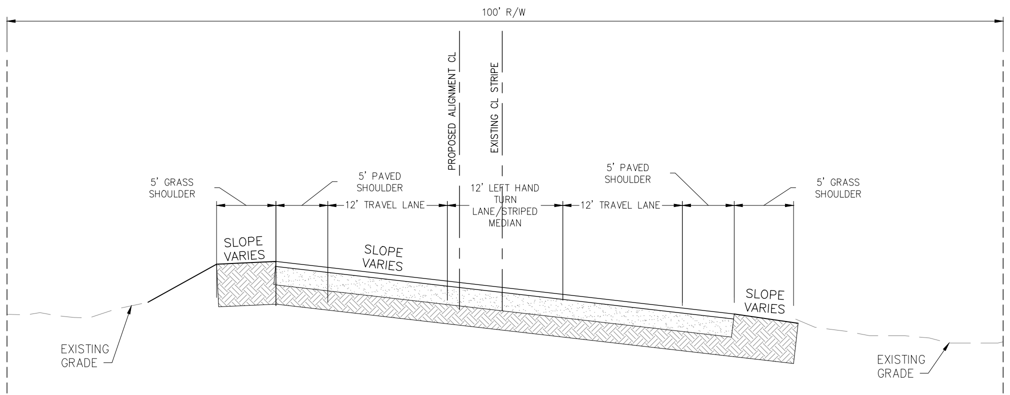
N.T.S.


TRENCH WIDTH VARIES W/ SIZE OF PIPE
CROWN TRENCH IN UNIMPROVED AREAS (3" MINIMUM)
FINISHED GRADE
COMMON FILL
SIDE SLOPES PER TRENCH SAFETY ACT AND OSHA REGULATIONS (TYPICAL BOTH SIDES)
SEE NOTE 3
PIPE O.D.
TRENCH BACKFILL
12" LIFTS MAXIMUM
12" (MIN.)
CAREFULLY COMPACTED SELECTED BACKFILL FREE OF ORGANIC MATERIAL
PIPE BEDDING
PIPE BEDDING (SEE NOTE 8)
BEDDING ROCK
UNDISTURBED EARTH (SEE NOTE 2)

NOTES:
1. TRENCH AND PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% MAX DENSITY (AASHTO T–180).
2. USE TYPE A BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE COUNTY.
3. 15" MAX FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX FOR PIPE DIAMETER 24" AND LARGER.
4. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
5. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
6. REFER TO MANUAL FOR SHEETING AND BRACING IN EXCAVATIONS.
7. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES SURFACE RESTORATION WITHIN COUNTY RIGHT–OF–WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT–OF–WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.
8. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. THE COUNTY SHALL DETERMINE IN THE FIELD REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION.

TYPE 'A' BEDDING & TRENCH DETAIL

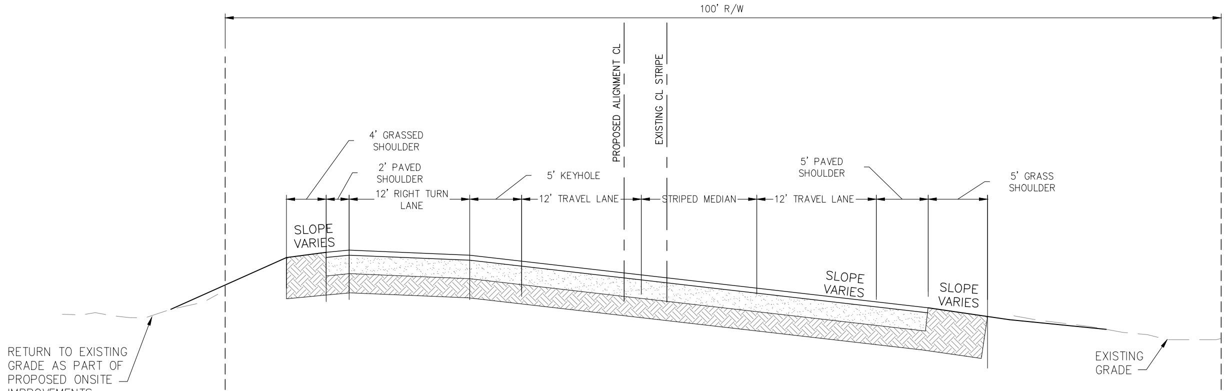
N.T.S.


100' R/W
PROPOSED ALIGNMENT CL
EXISTING CL STRIPE
5' GRASS SHOULDER
5' PAVED SHOULDER
12' TRAVEL LANE
12' LEFT HAND TURN LANE/STRIPED MEDIAN
5' PAVED SHOULDER
12' TRAVEL LANE
5' GRASS SHOULDER
SLOPE VARIES
SLOPE VARIES
SLOPE VARIES
EXISTING GRADE
EXISTING GRADE

NOTES:
1. CONTRACTOR SHALL GRADE AND DRESS ALL R/W AREAS TO 0.1± FEET AND REMOVE ALL DEBRIS AND ROOTS 3/8" DIAMETER AND LARGER.

TYPICAL ROADWAY CROSS SECTION OF 100' RIGHT-OF-WAY (STA 11+00 - 23+50)

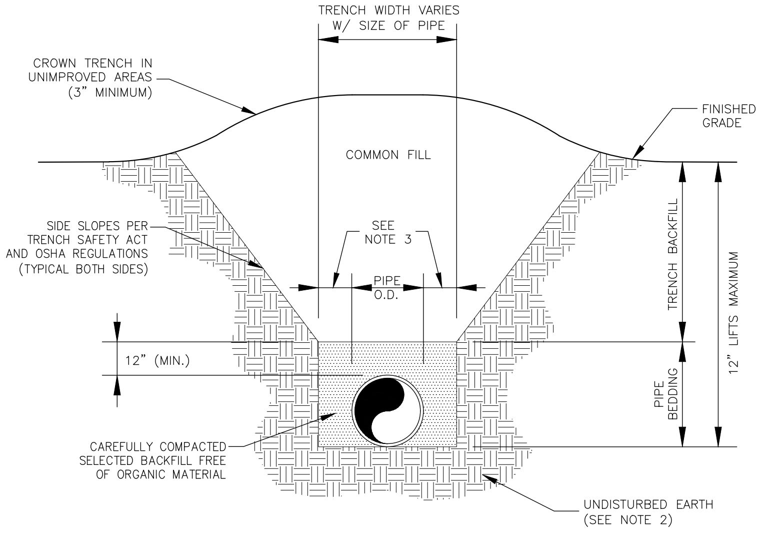
N.T.S.


100' R/W
PROPOSED ALIGNMENT CL
EXISTING CL STRIPE
4' GRASSED SHOULDER
2' PAVED SHOULDER
12' RIGHT TURN LANE
5' KEYHOLE
12' TRAVEL LANE
STRIPED MEDIAN
12' TRAVEL LANE
5' PAVED SHOULDER
5' GRASS SHOULDER
SLOPE VARIES
SLOPE VARIES
SLOPE VARIES
RETURN TO EXISTING GRADE AS PART OF PROPOSED ONSITE IMPROVEMENTS
EXISTING GRADE

NOTES:
1. CONTRACTOR SHALL GRADE AND DRESS ALL R/W AREAS TO 0.1± FEET AND REMOVE ALL DEBRIS AND ROOTS 3/8" DIAMETER AND LARGER.

TYPICAL ROADWAY CROSS SECTION OF 100' RIGHT-OF-WAY (STA 25+00 - 29+00)

N.T.S.


TRENCH WIDTH VARIES W/ SIZE OF PIPE
CROWN TRENCH IN UNIMPROVED AREAS (3" MINIMUM)
FINISHED GRADE
COMMON FILL
SIDE SLOPES PER TRENCH SAFETY ACT AND OSHA REGULATIONS (TYPICAL BOTH SIDES)
SEE NOTE 3
PIPE O.D.
TRENCH BACKFILL
12" LIFTS MAXIMUM
12" (MIN.)
PIPE BEDDING
CAREFULLY COMPACTED SELECTED BACKFILL FREE OF ORGANIC MATERIAL
UNDISTURBED EARTH (SEE NOTE 2)

NOTES:
1. TRENCH AND PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% MAX DENSITY (AASHTO T–180).
2. USE TYPE A BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE COUNTY.
3. 15" MAX FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX FOR PIPE DIAMETER 24" AND LARGER.
4. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
5. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
6. REFER TO MANUAL FOR SHEETING AND BRACING IN EXCAVATIONS.
7. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES SURFACE RESTORATION WITHIN COUNTY RIGHT–OF–WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT–OF–WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.

TYPE 'B' BEDDING & TRENCH DETAIL

N.T.S.

Connelly & Wicker Inc.
Planning · Engineering · Landscape Architecture
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(904) 256-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry 3650 L.A. Number: LC26000311

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5	:		
4	:		
3	:		
2	:		
1	:		

SR-19 PAVING AND
DRAINAGE DETAILS

HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA
PREPARED FOR
LENNAR - ORLANDO

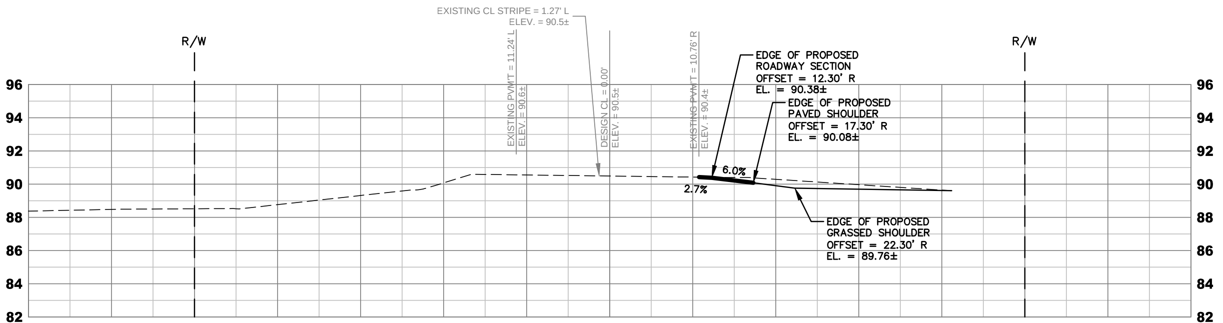
ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

Project No.: 21-04-0008
Designed: E.D.E.
Drawn: G.R.Q.
Checked: J.E.W.
Q.C.: R.C.W
Date: JUNE, 2022
Scale: N/A
Sheet 26

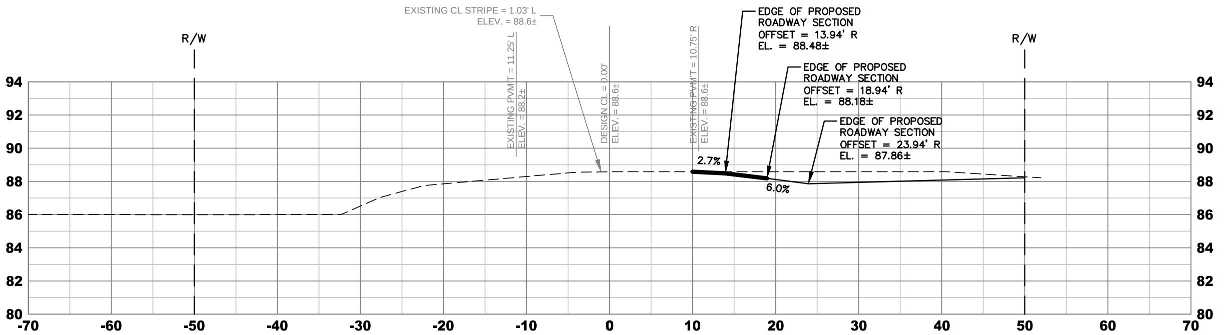
Printed By: Garrett

Printed: Sep 28, 2022 - 8:05am

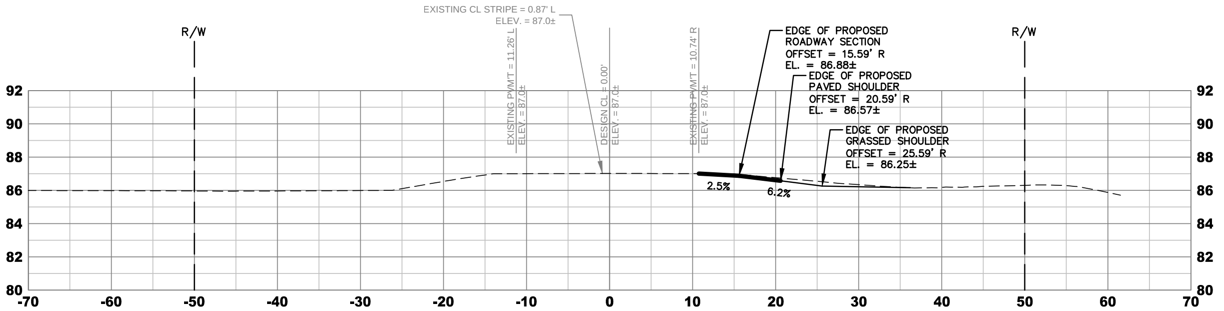
J:\21\21-04-0008 Preserve at Howey\Design\Dwgs\Plots\Offsite\21-04-0008 Sections Offsite.dwg


EXISTING CL STRIPE = 1.27' L
ELEV. = 90.5±
R/W
R/W
EXISTING PVM'T = 11.24' L
ELEV. = 90.6±
DESIGN CL = 0.00'
ELEV. = 90.5±
EXISTING PVM'T = 10.76' R
ELEV. = 90.4±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 12.30' R EL. = 90.38±
EDGE OF PROPOSED PAVED SHOULDER OFFSET = 17.30' R EL. = 90.08±
6.0%
2.7%
EDGE OF PROPOSED GRASSED SHOULDER OFFSET = 22.30' R EL. = 89.76±
96
94
92
90
88
86
84
82
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70

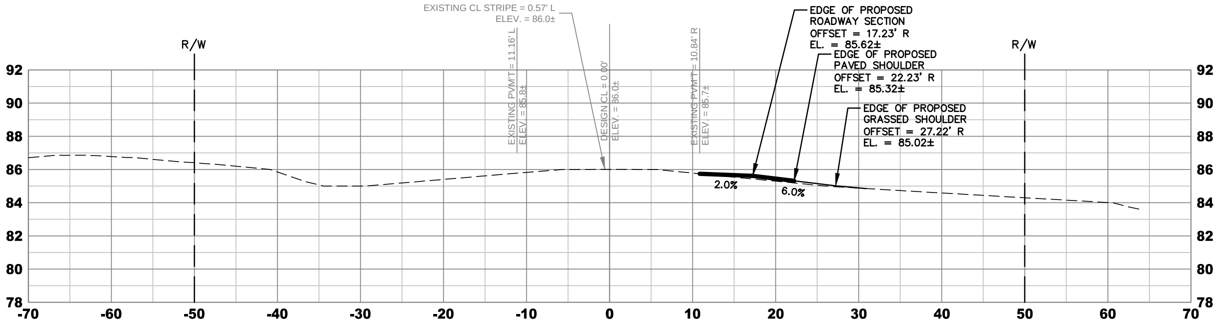
CROSS-SECTION OF SR 19
AT STATION: 11+00.00


EXISTING CL STRIPE = 1.03' L
ELEV. = 88.6±
R/W
R/W
EXISTING PVMT = 11.25' L
ELEV. = 88.2±
DESIGN CL = 0.00'
ELEV. = 88.6±
EXISTING PVM'T = 10.75' R
ELEV. = 88.6±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 13.94' R EL. = 88.48±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 18.94' R EL. = 88.18±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 23.94' R EL. = 87.86±
2.7%
6.0%
94
92
90
88
86
84
82
80
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70

CROSS-SECTION OF SR 19
AT STATION: 12+00.00


EXISTING CL STRIPE = 0.87' L
ELEV. = 87.0±
R/W
R/W
EXISTING PVM'T = 11.26' L
ELEV. = 87.0±
DESIGN CL = 0.00'
ELEV. = 87.0±
EXISTING PVM'T = 10.74' R
ELEV. = 87.0±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 15.59' R EL. = 86.88±
EDGE OF PROPOSED PAVED SHOULDER OFFSET = 20.59' R EL. = 86.57±
EDGE OF PROPOSED GRASSED SHOULDER OFFSET = 25.59' R EL. = 86.25±
2.5%
6.2%
92
90
88
86
84
82
80
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70

CROSS-SECTION OF SR 19
AT STATION: 13+00.00


EXISTING CL STRIPE = 0.57' L
ELEV. = 86.0±
R/W
R/W
EXISTING PVM'T = 11.16' L
ELEV. = 85.8±
DESIGN CL = 0.00'
ELEV. = 86.0±
EXISTING PVM'T = 10.84' R
ELEV. = 85.7±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 17.23' R EL. = 85.62±
EDGE OF PROPOSED PAVED SHOULDER OFFSET = 22.23' R EL. = 85.32±
EDGE OF PROPOSED GRASSED SHOULDER OFFSET = 27.22' R EL. = 85.02±
2.0%
6.0%
92
90
88
86
84
82
80
78
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70

CROSS-SECTION OF SR 19
AT STATION: 14+00.00

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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
1	..		
2	..		
3	..		
4	..		
5	..		
6	..		
7	..		

SR-19 CROSS SECTIONS

HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA
PREPARED FOR
LENNAR - ORLANDO

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

Project No.: 21-04-0008	
Designed: E.D.E.	Drawn: G.R.Q.
Checked: J.E.W.	Q.C.: R.C.W
Date: JUNE, 2022	
Scale:	
Sheet 27A	

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Printed: Sep 28, 2022 - 8:06am

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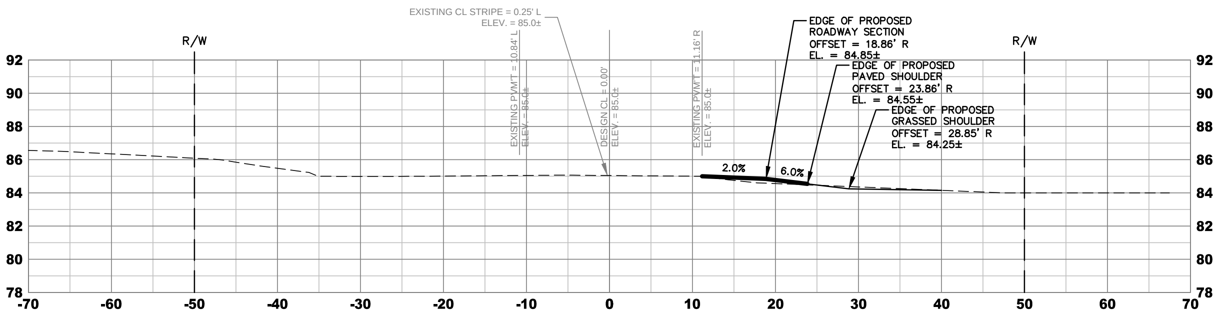
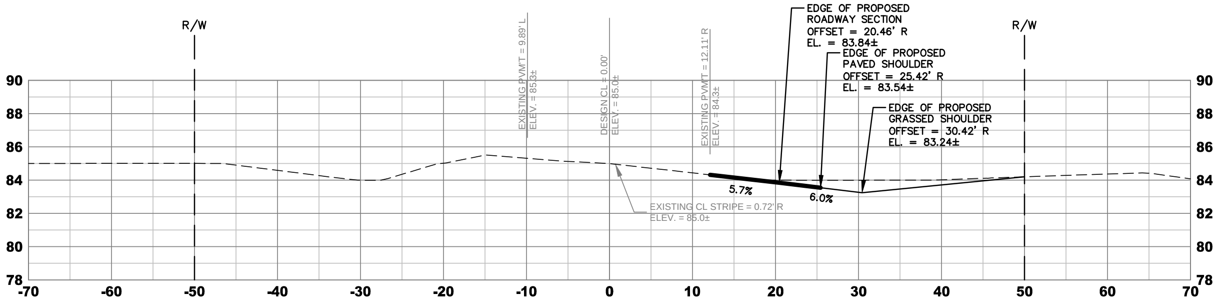


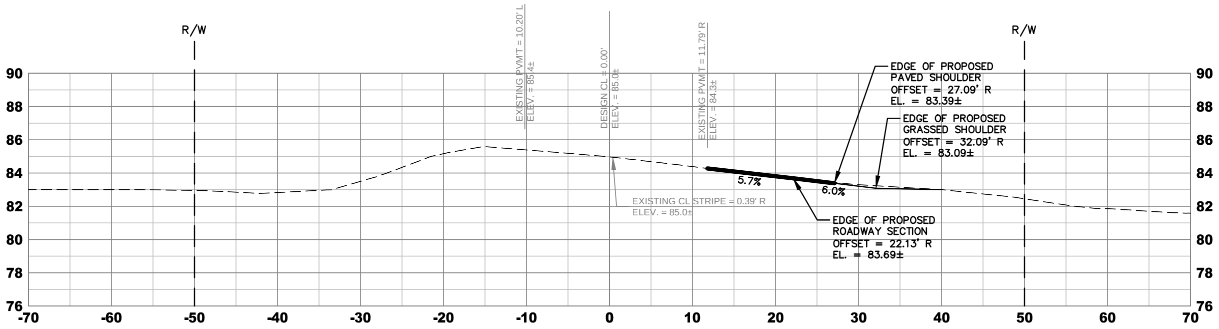
EXISTING CL STRIPE = 0.25' L
ELEV. = 85.0±
R/W
EXISTING PVM'T = 10.84' L
ELEV. = 85.0±
DESIGN CL = 0.00'
ELEV. = 85.0±
EXISTING PVM'T = 11.16' R
ELEV. = 85.0±
EDGE OF PROPOSED
ROADWAY SECTION
OFFSET = 18.86' R
EL. = 84.85±
EDGE OF PROPOSED
PAVED SHOULDER
OFFSET = 23.86' R
EL. = 84.55±
EDGE OF PROPOSED
GRASSED SHOULDER
OFFSET = 28.85' R
EL. = 84.25±
2.0%
6.0%
R/W
92
90
88
86
84
82
80
78
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70

CROSS-SECTION OF SR 19
AT STATION: 15+00.00



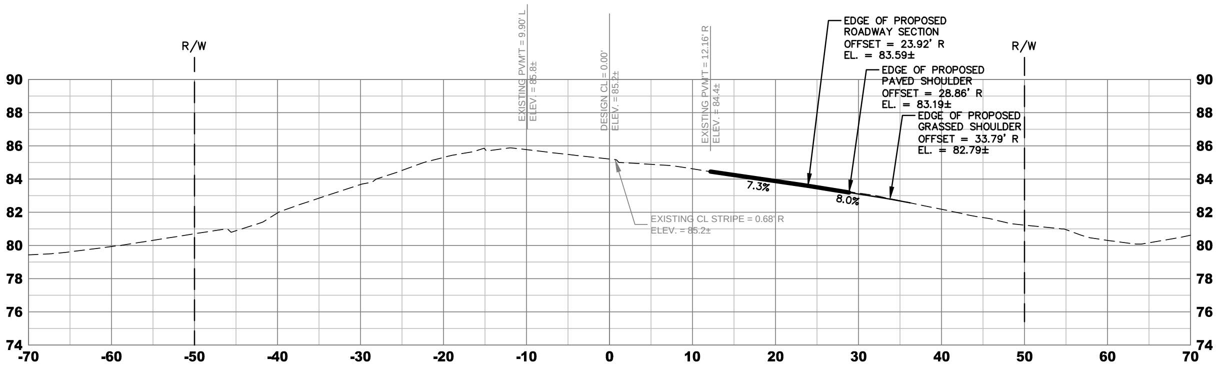
R/W
EXISTING PVM'T = 9.89' L
ELEV. = 85.3±
DESIGN CL = 0.00'
ELEV. = 85.0±
EXISTING PVM'T = 12.11' R
ELEV. = 84.3±
EDGE OF PROPOSED
ROADWAY SECTION
OFFSET = 20.46' R
EL. = 83.84±
EDGE OF PROPOSED
PAVED SHOULDER
OFFSET = 25.42' R
EL. = 83.54±
EDGE OF PROPOSED
GRASSED SHOULDER
OFFSET = 30.42' R
EL. = 83.24±
5.7%
6.0%
EXISTING CL STRIPE = 0.72' R
ELEV. = 85.0±
R/W
90
88
86
84
82
80
78
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70

CROSS-SECTION OF SR 19
AT STATION: 16+00.00



R/W
EXISTING PVM'T = 10.20' L
ELEV. = 85.4±
DESIGN CL = 0.00'
ELEV. = 85.0±
EXISTING PVM'T = 11.79' R
ELEV. = 84.3±
EDGE OF PROPOSED
PAVED SHOULDER
OFFSET = 27.09' R
EL. = 83.39±
EDGE OF PROPOSED
GRASSED SHOULDER
OFFSET = 32.09' R
EL. = 83.09±
5.7%
6.0%
EXISTING CL STRIPE = 0.39' R
ELEV. = 85.0±
EDGE OF PROPOSED
ROADWAY SECTION
OFFSET = 22.13' R
EL. = 83.69±
R/W
90
88
86
84
82
80
78
76
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70

CROSS-SECTION OF SR 19
AT STATION: 17+00.00



R/W
EXISTING PVM'T = 9.90' L
ELEV. = 85.8±
DESIGN CL = 0.00'
ELEV. = 85.2±
EXISTING PVM'T = 12.16' R
ELEV. = 84.4±
EDGE OF PROPOSED
ROADWAY SECTION
OFFSET = 23.92' R
EL. = 83.59±
EDGE OF PROPOSED
PAVED SHOULDER
OFFSET = 28.86' R
EL. = 83.19±
EDGE OF PROPOSED
GRASSED SHOULDER
OFFSET = 33.79' R
EL. = 82.79±
7.3%
8.0%
EXISTING CL STRIPE = 0.68' R
ELEV. = 85.2±
R/W
90
88
86
84
82
80
78
76
74
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70

CROSS-SECTION OF SR 19
AT STATION: 18+00.00

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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
7	:		
6	:		
5	:		
4	:		
3	:		
2	:		
1	:		

SR-19 CROSS SECTIONS

HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA
PREPARED FOR
LENNAR - ORLANDO

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

Project No.: 21-04-0008	
Designed: E.D.E.	Drawn: G.R.Q.
Checked: J.E.W.	O.C.: R.C.W
Date: JUNE, 2022	
Scale:	
Sheet 27B	

Printed By: Garrett

Printed: Sep 28, 2022 - 8:06am

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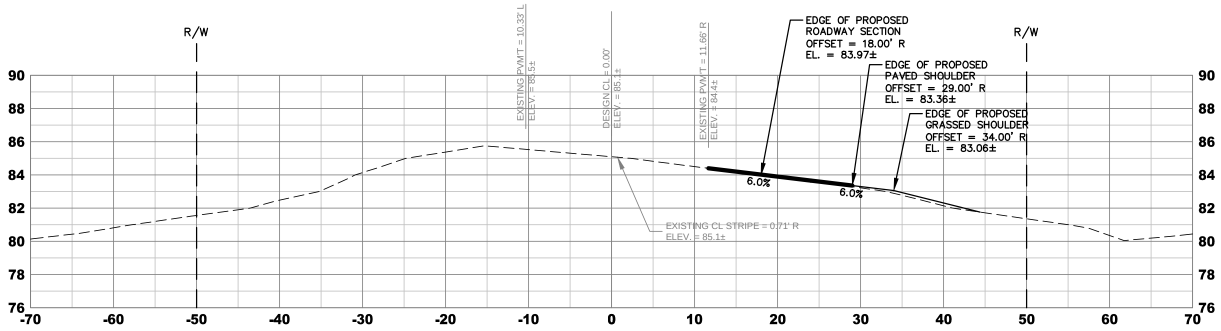
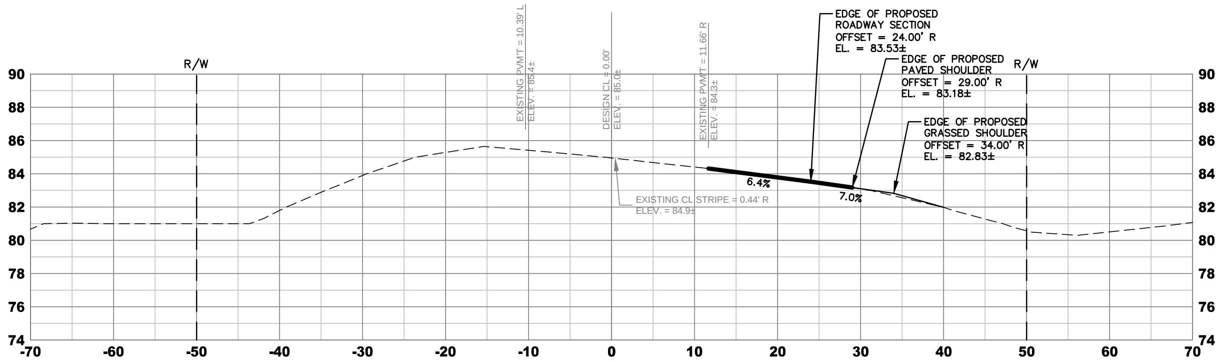


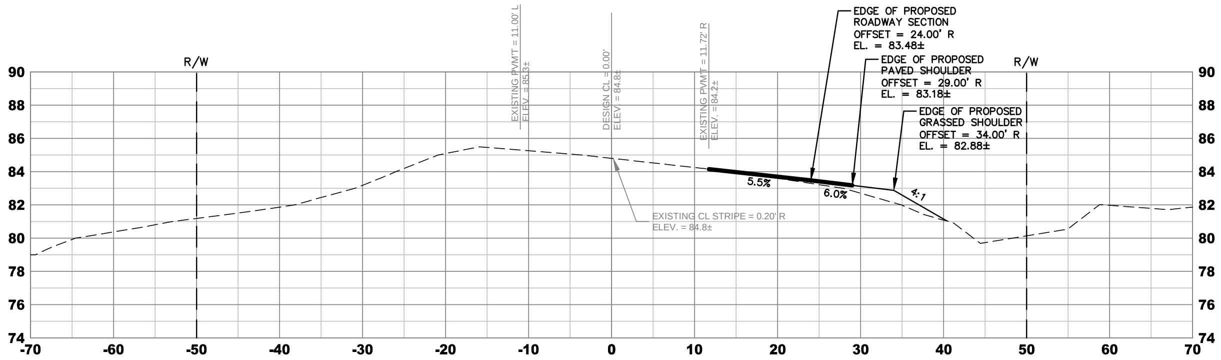
R/W
R/W
EXISTING PVM'T = 10.33' L
ELEV. = 85.5±
DESIGN CL = 0.00'
ELEV. = 85.1±
EXISTING PVM'T = 11.66' R
ELEV. = 84.4±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 18.00' R EL. = 83.97±
EDGE OF PROPOSED PAVED SHOULDER OFFSET = 29.00' R EL. = 83.36±
EDGE OF PROPOSED GRASSED SHOULDER OFFSET = 34.00' R EL. = 83.06±
6.0%
6.0%
EXISTING CL STRIPE = 0.71' R
ELEV. = 85.1±
90
88
86
84
82
80
78
76
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70

CROSS-SECTION OF SR 19
AT STATION: 19+00.00



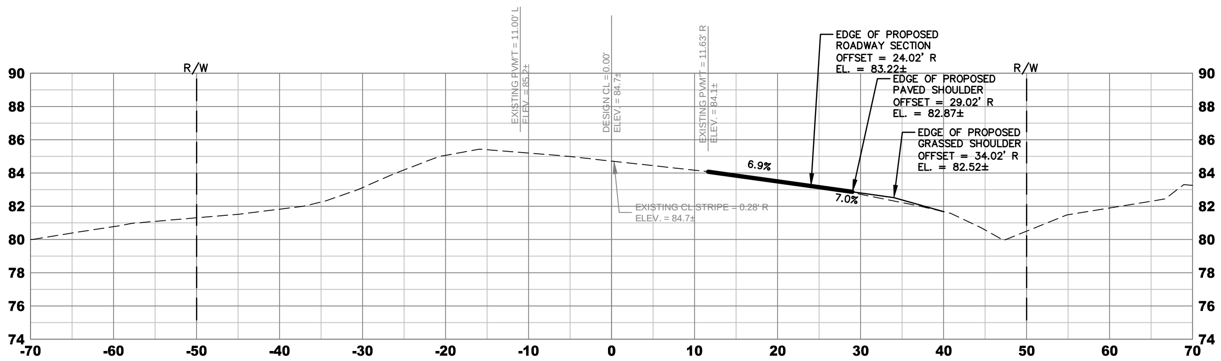
R/W
R/W
EXISTING PVM'T = 10.39' L
ELEV. = 85.4±
DESIGN CL = 0.00'
ELEV. = 85.0±
EXISTING PVMT = 11.66' R
ELEV. = 84.3±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 24.00' R EL. = 83.53±
EDGE OF PROPOSED PAVED SHOULDER OFFSET = 29.00' R EL. = 83.18±
EDGE OF PROPOSED GRASSED SHOULDER OFFSET = 34.00' R EL. = 82.83±
6.4%
7.0%
EXISTING CL STRIPE = 0.44' R
ELEV. = 84.9±
90
88
86
84
82
80
78
76
74
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70

CROSS-SECTION OF SR 19
AT STATION: 20+00.00



R/W
R/W
EXISTING PVM'T = 11.00' L
ELEV. = 85.3±
DESIGN CL = 0.00'
ELEV. = 84.8±
EXISTING PVM'T = 11.72' R
ELEV. = 84.2±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 24.00' R EL. = 83.48±
EDGE OF PROPOSED PAVED SHOULDER OFFSET = 29.00' R EL. = 83.18±
EDGE OF PROPOSED GRASSED SHOULDER OFFSET = 34.00' R EL. = 82.88±
5.5%
6.0%
4:1
EXISTING CL STRIPE = 0.20' R
ELEV. = 84.8±
90
88
86
84
82
80
78
76
74
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70

CROSS-SECTION OF SR 19
AT STATION: 21+00.00



R/W
R/W
EXISTING PVM'T = 11.00' L
ELEV. = 85.2±
DESIGN CL = 0.00'
ELEV. = 84.7±
EXISTING PVM'T = 11.63' R
ELEV. = 84.1±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 24.02' R EL. = 83.22±
EDGE OF PROPOSED PAVED SHOULDER OFFSET = 29.02' R EL. = 82.87±
EDGE OF PROPOSED GRASSED SHOULDER OFFSET = 34.02' R EL. = 82.52±
6.9%
7.0%
EXISTING CL STRIPE = 0.28' R
ELEV. = 84.7±
90
88
86
84
82
80
78
76
74
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70

CROSS-SECTION OF SR 19
AT STATION: 22+00.00

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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
7	:		
6	:		
5	:		
4	:		
3	:		
2	:		
1	:		

SR-19 CROSS SECTIONS

HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA
PREPARED FOR
LENNAR - ORLANDO

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

Project No.: 21-04-0008	
Designed: E.D.E.	Drawn: G.R.Q.
Checked: J.E.W.	Q.C.: R.C.W
Date: JUNE, 2022	
Scale:	
Sheet 27C	

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Printed By: Garrett

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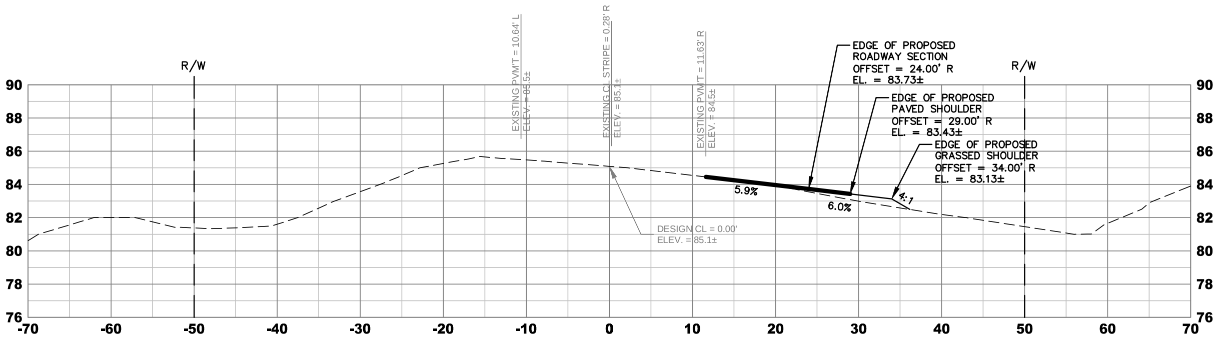
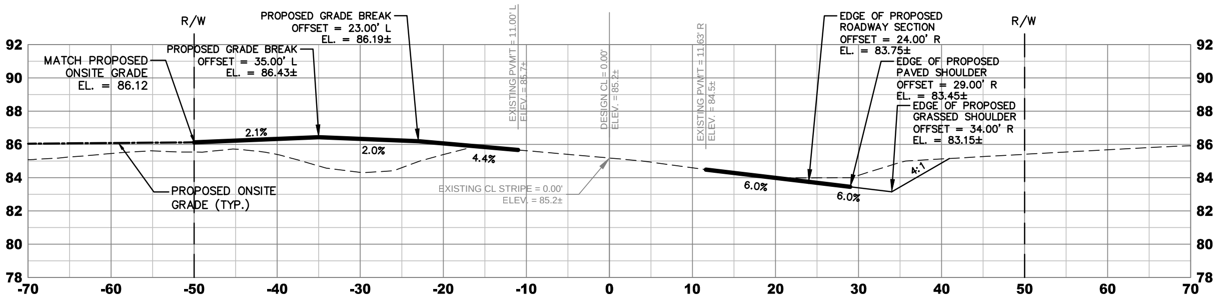


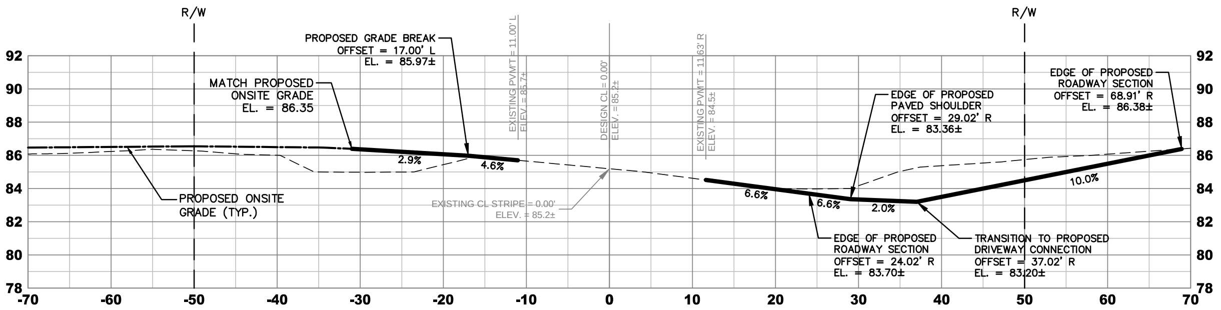
R/W
R/W
EXISTING PVM'T = 10.64' L
ELEV. = 85.5±
EXISTING CL STRIPE = 0.28' R
ELEV. = 85.1±
EXISTING PVM'T = 11.63' R
ELEV. = 84.5±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 24.00' R EL. = 83.73±
EDGE OF PROPOSED PAVED SHOULDER OFFSET = 29.00' R EL. = 83.43±
EDGE OF PROPOSED GRASSED SHOULDER OFFSET = 34.00' R EL. = 83.13±
5.9%
6.0%
4:1
DESIGN CL = 0.00'
ELEV. = 85.1±
90 88 86 84 82 80 78 76
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

CROSS-SECTION OF SR 19
AT STATION: 23+00.00



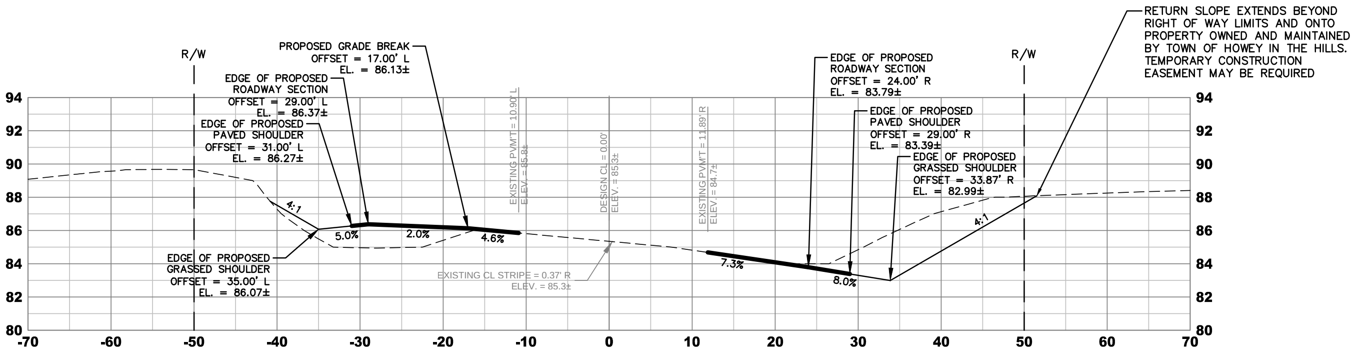
R/W
R/W
PROPOSED GRADE BREAK OFFSET = 23.00' L EL. = 86.19±
PROPOSED GRADE BREAK OFFSET = 35.00' L EL. = 86.43±
MATCH PROPOSED ONSITE GRADE EL. = 86.12
EXISTING PVM'T = 11.00' L
ELEV. = 85.7±
DESIGN CL = 0.00'
ELEV. = 85.2±
EXISTING PVM'T = 11.63' R
ELEV. = 84.5±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 24.00' R EL. = 83.75±
EDGE OF PROPOSED PAVED SHOULDER OFFSET = 29.00' R EL. = 83.45±
EDGE OF PROPOSED GRASSED SHOULDER OFFSET = 34.00' R EL. = 83.15±
2.1%
2.0%
4.4%
6.0%
6.0%
4:1
PROPOSED ONSITE GRADE (TYP.)
EXISTING CL STRIPE = 0.00'
ELEV. = 85.2±
92 90 88 86 84 82 80 78
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

CROSS-SECTION OF SR 19
AT STATION: 24+00.00



R/W
R/W
PROPOSED GRADE BREAK OFFSET = 17.00' L EL. = 85.97±
MATCH PROPOSED ONSITE GRADE EL. = 86.35
EXISTING PVM'T = 11.00' L
ELEV. = 85.7±
DESIGN CL = 0.00'
ELEV. = 85.2±
EXISTING PVM'T = 11.63' R
ELEV. = 84.5±
EDGE OF PROPOSED PAVED SHOULDER OFFSET = 29.02' R EL. = 83.36±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 68.91' R EL. = 86.38±
2.9%
4.6%
6.6%
6.6%
2.0%
10.0%
PROPOSED ONSITE GRADE (TYP.)
EXISTING CL STRIPE = 0.00'
ELEV. = 85.2±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 24.02' R EL. = 83.70±
TRANSITION TO PROPOSED DRIVEWAY CONNECTION OFFSET = 37.02' R EL. = 83.20±
92 90 88 86 84 82 80 78
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

CROSS-SECTION OF SR 19
AT STATION: 24+20.59



R/W
R/W
PROPOSED GRADE BREAK OFFSET = 17.00' L EL. = 86.13±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 29.00' L EL. = 86.37±
EDGE OF PROPOSED PAVED SHOULDER OFFSET = 31.00' L EL. = 86.27±
EXISTING PVM'T = 10.90' L
ELEV. = 85.8±
DESIGN CL = 0.00'
ELEV. = 85.3±
EXISTING PVM'T = 11.89' R
ELEV. = 84.7±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 24.00' R EL. = 83.79±
EDGE OF PROPOSED PAVED SHOULDER OFFSET = 29.00' R EL. = 83.39±
EDGE OF PROPOSED GRASSED SHOULDER OFFSET = 33.87' R EL. = 82.99±
RETURN SLOPE EXTENDS BEYOND RIGHT OF WAY LIMITS AND ONTO PROPERTY OWNED AND MAINTAINED BY TOWN OF HOWEY IN THE HILLS. TEMPORARY CONSTRUCTION EASEMENT MAY BE REQUIRED
4:1
5.0%
2.0%
4.6%
7.3%
8.0%
4:1
EDGE OF PROPOSED GRASSED SHOULDER OFFSET = 35.00' L EL. = 86.07±
EXISTING CL STRIPE = 0.37' R
ELEV. = 85.3±
94 92 90 88 86 84 82 80
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

CROSS-SECTION OF SR 19
AT STATION: 25+00.00

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10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246
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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By

SR-19 CROSS SECTIONS

HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA
PREPARED FOR
LENNAR - ORLANDO

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

Project No.: 21-04-0008
Designed: E.D.E.
Drawn: G.R.Q.
Checked: J.E.W.
Q.C.: R.C.W
Date: JUNE, 2022
Scale:
Sheet 27D

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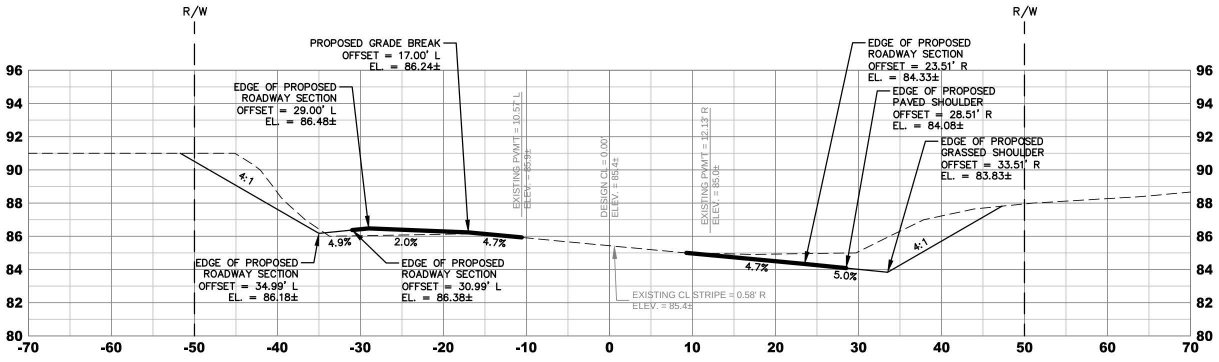
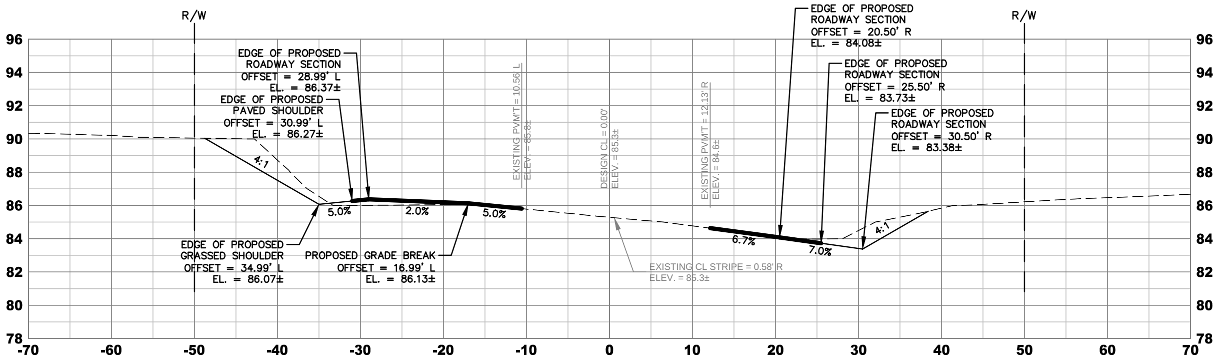
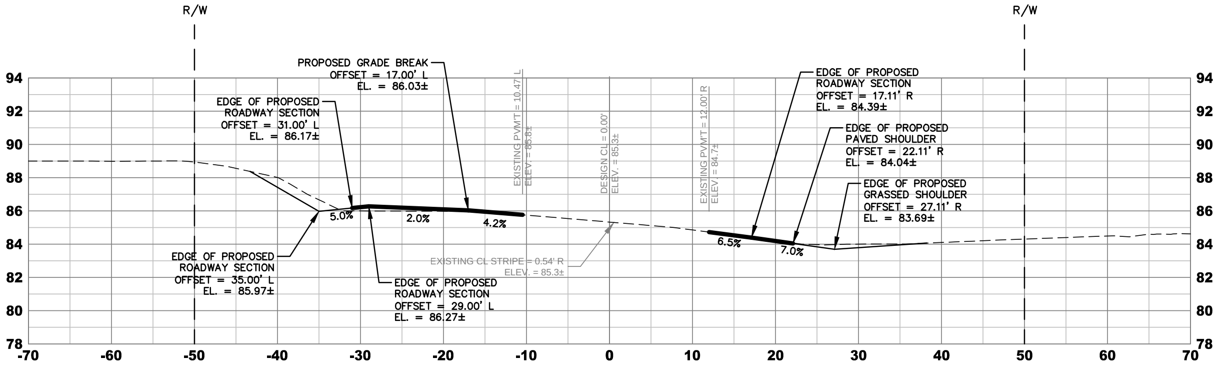

R/W
R/W
PROPOSED GRADE BREAK
OFFSET = 17.00' L
EL. = 86.24±
EDGE OF PROPOSED
ROADWAY SECTION
OFFSET = 29.00' L
EL. = 86.48±
EDGE OF PROPOSED
ROADWAY SECTION
OFFSET = 23.51' R
EL. = 84.33±
EDGE OF PROPOSED
PAVED SHOULDER
OFFSET = 28.51' R
EL. = 84.08±
EDGE OF PROPOSED
GRASSED SHOULDER
OFFSET = 33.51' R
EL. = 83.83±
EXISTING PVM'T = 10.57' L
ELEV. = 85.9±
DESIGN CL = 0.00'
ELEV. = 85.4±
EXISTING PVM'T = 12.13' R
ELEV. = 85.0±
4:1
4.9%
2.0%
4.7%
4.7%
5.0%
4:1
EDGE OF PROPOSED
ROADWAY SECTION
OFFSET = 34.99' L
EL. = 86.18±
EDGE OF PROPOSED
ROADWAY SECTION
OFFSET = 30.99' L
EL. = 86.38±
EXISTING CL STRIPE = 0.58' R
ELEV. = 85.4±
96
94
92
90
88
86
84
82
80
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70

CROSS-SECTION OF SR 19
AT STATION: 26+00.00


R/W
R/W
EDGE OF PROPOSED
ROADWAY SECTION
OFFSET = 20.50' R
EL. = 84.08±
EDGE OF PROPOSED
ROADWAY SECTION
OFFSET = 28.99' L
EL. = 86.37±
EDGE OF PROPOSED
PAVED SHOULDER
OFFSET = 30.99' L
EL. = 86.27±
EDGE OF PROPOSED
ROADWAY SECTION
OFFSET = 25.50' R
EL. = 83.73±
EDGE OF PROPOSED
ROADWAY SECTION
OFFSET = 30.50' R
EL. = 83.38±
EXISTING PVM'T = 10.56' L
ELEV. = 85.8±
DESIGN CL = 0.00'
ELEV. = 85.3±
EXISTING PVM'T = 12.13' R
ELEV. = 84.6±
4:1
5.0%
2.0%
5.0%
6.7%
7.0%
4:1
EDGE OF PROPOSED
GRASSED SHOULDER
OFFSET = 34.99' L
EL. = 86.07±
PROPOSED GRADE BREAK
OFFSET = 16.99' L
EL. = 86.13±
EXISTING CL STRIPE = 0.58' R
ELEV. = 85.3±
96
94
92
90
88
86
84
82
80
78
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70

CROSS-SECTION OF SR 19
AT STATION: 27+00.00


R/W
R/W
PROPOSED GRADE BREAK
OFFSET = 17.00' L
EL. = 86.03±
EDGE OF PROPOSED
ROADWAY SECTION
OFFSET = 31.00' L
EL. = 86.17±
EDGE OF PROPOSED
ROADWAY SECTION
OFFSET = 17.11' R
EL. = 84.39±
EDGE OF PROPOSED
PAVED SHOULDER
OFFSET = 22.11' R
EL. = 84.04±
EDGE OF PROPOSED
GRASSED SHOULDER
OFFSET = 27.11' R
EL. = 83.69±
EXISTING PVM'T = 10.47' L
ELEV. = 85.8±
DESIGN CL = 0.00'
ELEV. = 85.3±
EXISTING PVM'T = 12.00' R
ELEV. = 84.7±
5.0%
2.0%
4.2%
6.5%
7.0%
EDGE OF PROPOSED
ROADWAY SECTION
OFFSET = 35.00' L
EL. = 85.97±
EXISTING CL STRIPE = 0.54' R
ELEV. = 85.3±
EDGE OF PROPOSED
ROADWAY SECTION
OFFSET = 29.00' L
EL. = 86.27±
94
92
90
88
86
84
82
80
78
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70

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No.	Date	Revision	By
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7			

SR-19 CROSS SECTIONS

HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA
PREPARED FOR
LENNAR - ORLANDO

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

Project No.: 21-04-0008	
Designed: E.D.E.	Drawn: G.R.Q.
Checked: J.E.W.	Q.C.: R.C.W
Date: JUNE, 2022	
Scale:	
Sheet 27E	

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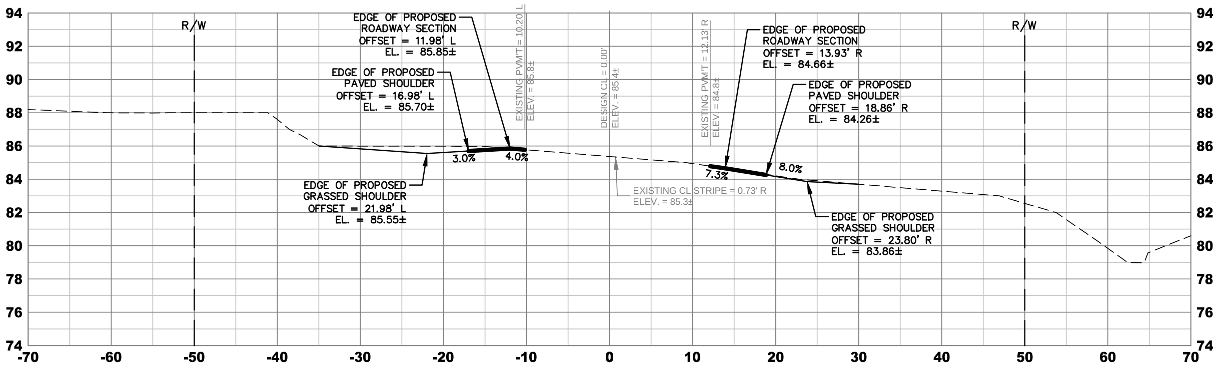

94
92
90
88
86
84
82
80
78
76
74
R/W
R/W
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 11.98' L EL. = 85.85±
EDGE OF PROPOSED PAVED SHOULDER OFFSET = 16.98' L EL. = 85.70±
EXISTING PVMT = 10.20' L
ELEV. = 85.8±
DESIGN CL = 0.00'
ELEV. = 85.4±
EXISTING PVMT = 12.13' R
ELEV. = 84.8±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 13.93' R EL. = 84.66±
EDGE OF PROPOSED PAVED SHOULDER OFFSET = 18.86' R EL. = 84.26±
3.0%
4.0%
7.3%
8.0%
EDGE OF PROPOSED GRASSED SHOULDER OFFSET = 21.98' L EL. = 85.55±
EXISTING CL STRIPE = 0.73' R
ELEV. = 85.3±
EDGE OF PROPOSED GRASSED SHOULDER OFFSET = 23.80' R EL. = 83.86±
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70

CROSS-SECTION OF SR 19
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SR-19 CROSS SECTIONS

HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA
PREPARED FOR
LENNAR - ORLANDO

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
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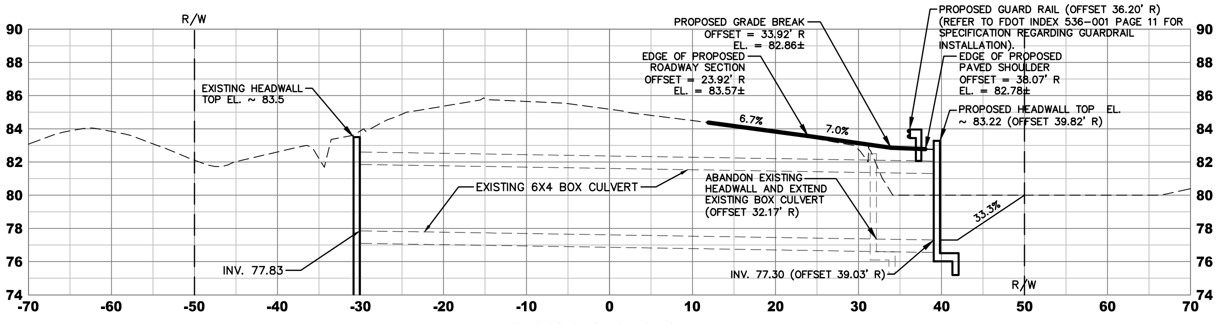
R/W
R/W
90
88
86
84
82
80
78
76
74
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70
EXISTING HEADWALL TOP EL. ~ 83.5
EXISTING 6X4 BOX CULVERT
INV. 77.83
PROPOSED GRADE BREAK OFFSET = 33.92' R EL. = 82.86±
EDGE OF PROPOSED ROADWAY SECTION OFFSET = 23.92' R EL. = 83.57±
6.7%
7.0%
33.3%
ABANDON EXISTING HEADWALL AND EXTEND EXISTING BOX CULVERT (OFFSET 32.17' R)
INV. 77.30 (OFFSET 39.03' R)
PROPOSED GUARD RAIL (OFFSET 36.20' R) (REFER TO FDOT INDEX 536-001 PAGE 11 FOR SPECIFICATION REGARDING GUARDRAIL INSTALLATION).
EDGE OF PROPOSED PAVED SHOULDER OFFSET = 38.07' R EL. = 82.78±
PROPOSED HEADWALL TOP EL. ~ 83.22 (OFFSET 39.82' R)

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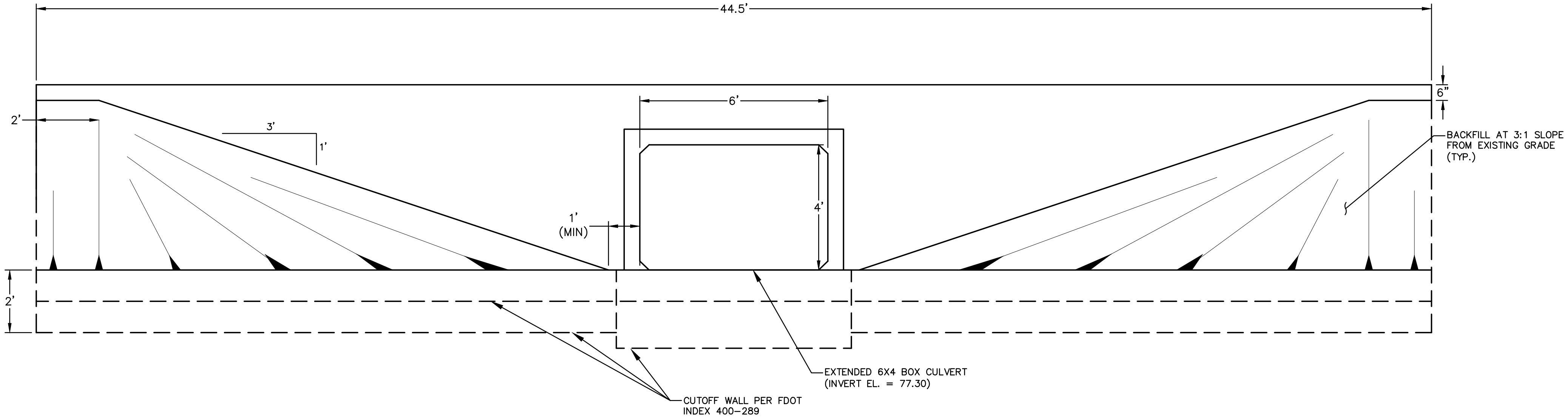
AT STATION: 18+47.98


44.5'
6"
6'
2'
3'
1'
4'
1'
(MIN)
2'
BACKFILL AT 3:1 SLOPE FROM EXISTING GRADE (TYP.)
EXTENDED 6X4 BOX CULVERT (INVERT EL. = 77.30)
CUTOFF WALL PER FDOT INDEX 400-289

FRONT VIEW OF PROPOSED BOX CULVERT EXTENSION
SCALE: 1"=2'

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FDOT BOX CULVERT
EXTENSION SECTION

HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA
PREPARED FOR
LENNAR - ORLANDO

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

Project No.: 21-04-0008
Designed: E.D.E.
Drawn: G.R.Q.
Checked: J.E.W.
Q.C.: R.C.W
Date: JUNE, 2022
Scale:
Sheet 28

GENERAL NOTES

1. WORK OPERATIONS SHALL BE CONFINED TO ONE TRAFFIC LANE, LEAVING THE OPPOSITE LANE OPEN TO TRAFFIC

2. ADDITIONAL ONE-WAY CONTROL MAY BE EFFECTED BY THE FOLLOWING MEANS:
    1. FLAG CARRYING VEHICLE;
    2. OFFICIAL VEHICLE;
    3. PILOT VEHICLES;
    4. TRAFFIC SIGNALS

    WHEN FLAGGERS RE THE SOLE MEANS OF ONE-WAY CONTROL, THE FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES.

3. THE ONE-LANE ROAD SIGNS ARE TO BE FULLY COVERED AND THE FLAGGER SIGNS EITHER REMOVED OR FULLY COVERED WHEN NO WORK IS BEING PERFORMED AND THE HIGHWAY IS OPEN TO TWO-WAY TRAFFIC. REMOVE THE "PREPARE TO STOP" SIGNS AND REPLACE WITH THE SYMBOL FOR MEN WORKING WHEN NO LANE CLOSURE IN USE.

4. WHEN A SIDE ROAD INTERSECTS THE HIGHWAY WITHIN THE TTC ZONE, ADDITIONAL TTC DEVICES SHALL BE PLACED IN ACCORDANCE WITH OTHER APPLICABLE TCZ INDEXES.

5. FOR GENERAL TCZ REQUIREMENTS AND ADDITIONAL INFORMATION, REFER TO INDEX NO. 600.

6. SHOULD A CONFLICT ARISE BETWEEN THE DETAILS SHOWN IN THE PLANS AND THE DEPARTMENT OF TRANSPORTATION STANDARDS, THE ENGINEER/PERMITTEE SHALL IMMEDIATELY CONFER WITH THE DEPARTMENT'S ENGINEER IN ORDER TO RESOLVE THE DISCREPANCY. IN NO CASE WILL ANYTHING LESS THAN THE DEPARTMENTS MINIMUM STANDARD BE ALLOWED.

7. REMOVAL OF EXISTING STRIPING SHALL BE ACCOMPLISHED USING THE 'HYDRO-BLAST' METHOD TO OBLITERATE OBSOLETE PAVEMENT MARKINGS. IF THIS PROCESS DAMAGES/SCARS PAVEMENT, THEN THE PAVEMENT SHALL BE MILLED AND RESURFACED PER FDOT STANDARDS.

8. ALL WORK SHALL BE PERFORMED IN A SAFE MANNER. ALL SAFETY RULES AND GUIDELINES OF O.S.H.A. SHALL BE FOLLOWED. THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ANY INJURIES OF HIS EMPLOYEES, AND ANY DAMAGE TO PRIVATE PROPERTY OR PERSONS DURING THE COURSE OF THIS PROJECT. ALL COSTS ASSOCIATED WITH COMPLYING WITH O.S.H.A. REGULATIONS AND THE FLORIDA TRENCH SAFETY ACT MUST BE INCLUDED IN THE CONTRACTORS BID.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE JOB SITE PRIOR TO PREPARING THE BID FOR THE PURPOSE OF FAMILIARIZING HIMSELF WITH THE NATURE AND THE EXTENT OF THE WORK AND LOCAL CONDITIONS, EITHER SURFACE OR SUB-SURFACE, WHICH MAY AFFECT THE WORK TO BE PERFORMED, AND THE EQUIPMENT, LABOR AND MATERIALS REQUIRED. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF COMPLETE PERFORMANCE UNDER THIS CONTRACT. THE CONTRACTOR IS ALSO URGED TO TAKE COLOR PHOTOGRAPHS ALONG THE ROUTE OF THE PROJECT TO RECORD EXISTING CONDITIONS PRIOR TO CONSTRUCTION, AND TO AID IN RESOLVING POSSIBLE FUTURE COMPLAINTS THAT MAY OCCUR DUE TO THE CONSTRUCTION OF THE PROJECT.

10. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EITHER CONDUCT ANY FIELD EXPLORATION OR ACQUIRE ANY GEOTECHNICAL ASSISTANCE REQUIRED TO ESTIMATE THE AMOUNT OF UNSUITABLE MATERIAL THAT WILL REQUIRE REMOVAL AND/OR TO ESTIMATE THE AMOUNT OF OFF SITE BORROW THAT WILL BE REQUIRED.

11. ALL IMPROVEMENTS SHOWN ARE TO BE WARRANTED BY THE CONTRACTOR TO THE DEVELOPER AND THE FDOT FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY THE OWNER AND THE FDOT.

12. ELEVATIONS ARE BASED ON NATIONAL AMERICAN VERTICAL DATUM OF 1988 (NAVD88) UNITED STATES COASTAL AND GEODETIC SURVEY (U.S.C & G.S), AS DETERMINED BY PEC SURVEYING AND MAPPING, LLC.

13. THE CONTRACTOR WILL CONTRACT WITH AN INDEPENDENT TESTING LABORATORY TO PERFORM MATERIAL TESTING AND SOIL TESTING IN ACCORDANCE WITH FDOT REQUIREMENTS. THIS SHALL INCLUDE DENSITY TESTS IN ALL PAVEMENT AREAS AND IN ALL UTILITY TRENCHES LOCATED IN PAVEMENT AREAS CONCRETE TESTING AND ALL OTHER MATERIAL TESTING. PRIOR TO LIMEROCK PLACEMENT, THE PROJECT GEOTECHNICAL ENGINEER SHALL MAKE RECOMMENDATION FOR UNDERDRAIN PLACEMENT.

14. THE CONTRACTOR SHALL COORDINATE THE WORK WITHIN STATE RIGHT-OF-WAY WITH THE PROPER AGENCIES FOR MAINTENANCE OF TRAFFIC AND METHOD OF CONSTRUCTION AND REPAIR.

15. "AS-BUILT" DRAWINGS – AS-BUILTS TO THE FDOT ARE REQUIRED TO BE SIGNED AND SEALED BY A FLORIDA REGISTERED LAND SURVEYOR THEREFORE, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTRACT WITH A LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA FOR THE PREPARATION, FIELD LOCATIONS, CERTIFICATION AND SUBMITTAL OF "AS-BUILT" DRAWINGS IN ACCORDANCE WITH CURRENT FDOT STANDARDS AND SPECIFICATIONS AND SJRWMD REGULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROCESS THE "AS-BUILT" DRAWINGS FOR APPROVAL BY THE FDOT.

16. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION WITH ALL OTHER CONTRACTORS. IN THE EVENT OF ANY CONFLICT WHATSOEVER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.

17. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL SURVEY AND PROPERTY MONUMENTS. IF A MONUMENT IS DISTURBED, THE CONTRACTOR SHALL CONTRACT WITH THE SURVEYOR OF RECORD FOR REINSTALLATION OF THE MONUMENT.

18. ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED ROADWAY DEVELOPMENT SHALL BE REMOVED BY THE CONTRACTOR AS DESCRIBED IN NOTE #2.

19. IF THE WORK OPERATION ENCROACHES ON THE THROUGH TRAFFIC LANES OR WHEN FOUR OR MORE WORK VEHICLES ENTER THE THROUGH TRAFFIC LANES IN A ONE HOUR PERIOD A FLAGGER SHALL BE PROVIDED AND A FLAGGER SIGN SHALL BE SUBSTITUTED FOR THE WORKERS SIGN. THE FLAGGER SHALL BE POSITIONED AT THE POINT OF VEHICLE ENTRY OR DEPARTURE FROM THE WORK AREA.

20. THIS TRAFFIC CONTROL THROUGH WORK ZONES PLAN ALSO APPLIES TO WORK PERFORMED IN THE MEDIAN MORE THAN 2' BUT LESS THAN 15' FROM THE EDGE OF EITHER PAVEMENT.

21. WORKERS SIGNS TO BE REMOVED OR FULLY COVERED WHEN NO WORK IS BEING PERFORMED.

22. ALL WORK PERFORMED IN THE DEPARTMENT'S RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT EDITIONS OF:
    A. F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
    B. F.D.O.T. DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM.
    C. F.D.O.T. ROADWAY PLANS PREPARATION MANUAL VOLUME I, CHAPTER 2 AND/OR 25.
    D. F.D.O.T. FLEXIBLE PAVEMENT DESIGN MANUAL FOR NEW CONSTRUCTION AND PAVEMENT REHABILITATION.

23. ALL DISTURBED AREA WITH THE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY WILL RESTORED TO ORIGINAL OR BETTER CONDITION BY GRADING AND SODDING THE AREA DISTURBED (BERMUDA IN RURAL, CENTIPEDE IN UTILITY STRIPS).

24. LANE CLOSURES WILL ONLY BE PERMITTED DURING DAYLIGHT HOURS OF 9:00AM – 3:30PM. THE F.D.O.T. ENGINEER MUST APPROVE NIGHT WORK AND LANE CLOSURES AT LEAST 48 HOURS IN ADVANCE. THE APPLICANT MUST NOTIFY THE FLORIDA DEPARTMENT OF TRANSPORTATION LOCAL MAINTENANCE OFFICE 48 HOURS IN ADVANCE OF STARTING ANY PROPOSED WORK.

25. ALL TRAFFIC STRIPES AND PAVEMENT MARKINGS ARE TO BE LEAD-FREE, NON-SOLVENT BASED THERMOPLASTIC. THE PERMITTEE SHALL FURNISH THE DEPARTMENT WITH THE MANUFACTURER'S CERTIFICATION THAT THE THERMOPLASTIC IS "LEAD FREE".

26. ALL PROPOSED TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH AND CONSTRUCTED TO THE FDOT DESIGN STANDARDS INDEX SERIES 11000, 17000, 17302, 9535 AND 11800 SERIES. THE PROPERTY OWNER MUST MAINTAIN THE DRIVEWAY TRAFFIC SIGNS AND MARKINGS.

27. THE FDOT REQUIRES DOCUMENTATION FOR SUCCESSFUL COMPLETION OF AN APPROVED WORK ZONE TRAFFIC CONTROL TRAINING COURSE FOR THE AGENCY, UTILITY OR CONTRACTOR EMPLOYEE(S) INSTALLING AND/OR MAINTAINING THE APPROVED MAINTENANCE OF TRAFFIC PLAN. DOCUMENTATION IS TO BE FURNISHED TO THE DEPARTMENT AT THE PRE-CONSTRUCTION MEETING OR BEFORE OCCUPYING STATE RIGHT-OF-WAY.

28. MAINTENANCE OF TRAFFIC PLAN FOR WORK ZONES SHALL BE IN CONFORMANCE WITH ALL APPLICABLE INDICES OF THE FDOT DESIGN STANDARDS INDEX 600 SERIES ACCORDING TO THE TYPE OF ROADWAY AND TYPE OF WORK BEING PERFORMED.

29. ALL LANES MUST BE OPENED FOR TRAFFIC DURING AN EVACUATION NOTICE OF A HURRICANE OR OTHER CATASTROPHIC EVENT AND SHALL REMAIN OPEN FOR THE DURATION OR THE EVACUATION OR EVENT.

30. EXISTING PAVED SHOULDERS TO BE SAWCUT AT THE WHITE EDGE LINE AND REMOVED FULL DEPTH BEFORE NEW TURN LANES, DRIVEWAYS, PAVED SHOULDERS, AND/OR OTHER NEW APPLICABLE FEATURES ARE CONSTRUCTED.

DURATION NOTES

1. ROAD WORK AHEAD AND THE BE PREPARED TO STOP SIGNS MAY BE OMITTED IF ALL OF THE FOLLOWING CONDITIONS ARE MET:
    A. WORK OPERATIONS ARE 60 MINUTES OR LESS
    B. SPEED LIMIT IS 45 MPH OR LESS
    C. NO SIGHT OBSTRUCTIONS TO VEHICLES APPROACHING THE WORK AREA FOR A DISTANCE EQUAL TO THE BUFFER SPACE
    D. VEHICLES IN THE WORK AREA HAVE HIGH-INTENSITY, ROTATING, FLASHING, OSCILLATING, OR STROBE LIGHTS OPERATING
    E. VOLUME AND COMPLEXITY OF THE ROADWAY HAS BEEN CONSIDERED

LEGEND

▨	WORK AREA, HAZARD OR WORK PHASE
◇	SIGN WITH 18"x18" (MIN.) ORANGE FLAG AND TYPE B LIGHT
■	DRUM
▯	WORK ZONE SIGN
⊓●	FLAGGER
◇	ORANGE FLAG FOR TCZ SIGNS
○	TYPE B LIGHT FOR TCZ SIGNS
⇨	LANE IDENTIFICATION + DIRECTION OF TRAFFIC

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Florida Registry 3650 L.A. Number: LC26000311

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MAINTENANCE OF TRAFFIC PLAN (NOTES AND LEGEND)

HOWEY IN THE HILLS SR-19 IMPROVEMENTS LAKE COUNTY, FLORIDA

PREPARED FOR
LENNAR - ORLANDO

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

Project No.: 21-04-0008	
Designed: E.D.E.	Drawn: G.R.Q.
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Scale:	
Sheet 29	

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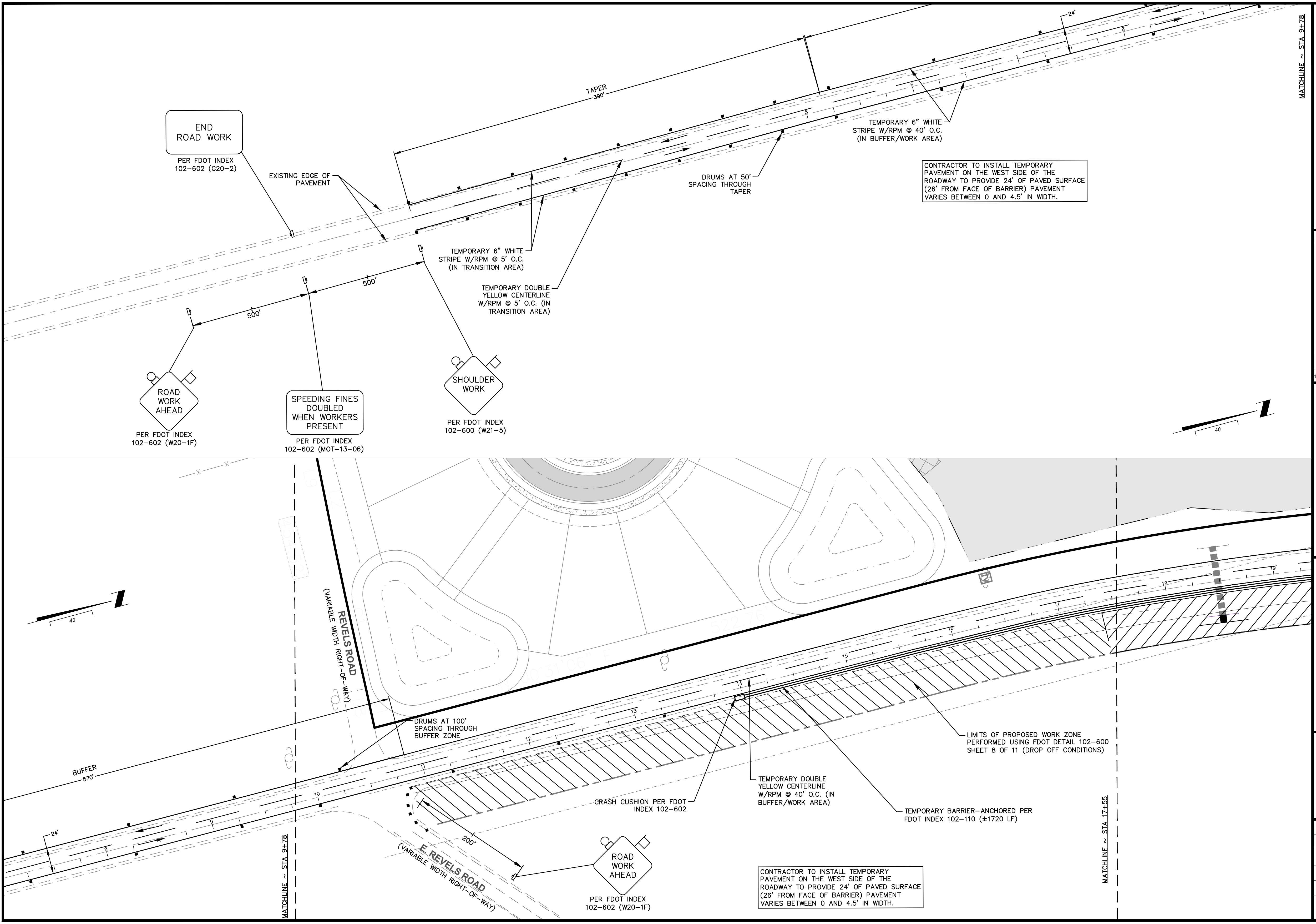
END
ROAD WORK
PER FDOT INDEX
102-602 (G20-2)
EXISTING EDGE OF
PAVEMENT
TAPER
390'
24'
TEMPORARY 6" WHITE
STRIPE W/RPM @ 40' O.C.
(IN BUFFER/WORK AREA)
DRUMS AT 50'
SPACING THROUGH
TAPER
TEMPORARY 6" WHITE
STRIPE W/RPM @ 5' O.C.
(IN TRANSITION AREA)
TEMPORARY DOUBLE
YELLOW CENTERLINE
W/RPM @ 5' O.C. (IN
TRANSITION AREA)
500'
500'
ROAD
WORK
AHEAD
PER FDOT INDEX
102-602 (W20-1F)
SPEEDING FINES
DOUBLED
WHEN WORKERS
PRESENT
PER FDOT INDEX
102-602 (MOT-13-06)
SHOULDER
WORK
PER FDOT INDEX
102-600 (W21-5)
MATCHLINE ~ STA 9+78
40
REVELS ROAD
(VARIABLE WIDTH RIGHT-OF-WAY)
BUFFER
570'
DRUMS AT 100'
SPACING THROUGH
BUFFER ZONE
CRASH CUSHION PER FDOT
INDEX 102-602
TEMPORARY DOUBLE
YELLOW CENTERLINE
W/RPM @ 40' O.C. (IN
BUFFER/WORK AREA)
LIMITS OF PROPOSED WORK ZONE
PERFORMED USING FDOT DETAIL 102-600
SHEET 8 OF 11 (DROP OFF CONDITIONS)
TEMPORARY BARRIER-ANCHORED PER
FDOT INDEX 102-110 (±1720 LF)
200'
E. REVELS ROAD
(VARIABLE WIDTH RIGHT-OF-WAY)
ROAD
WORK
AHEAD
PER FDOT INDEX
102-602 (W20-1F)
MATCHLINE ~ STA 9+78
MATCHLINE ~ STA 17+55
24'
8
9
10
11
12
13
14
15
16
17
18
19
5
6
7
8

CONTRACTOR TO INSTALL TEMPORARY PAVEMENT ON THE WEST SIDE OF THE ROADWAY TO PROVIDE 24' OF PAVED SURFACE (26' FROM FACE OF BARRIER) PAVEMENT VARIES BETWEEN 0 AND 4.5' IN WIDTH.

CONTRACTOR TO INSTALL TEMPORARY PAVEMENT ON THE WEST SIDE OF THE ROADWAY TO PROVIDE 24' OF PAVED SURFACE (26' FROM FACE OF BARRIER) PAVEMENT VARIES BETWEEN 0 AND 4.5' IN WIDTH.

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(904) 256-3030 FAX: (904) 265-3031 www.cwieng.com
Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
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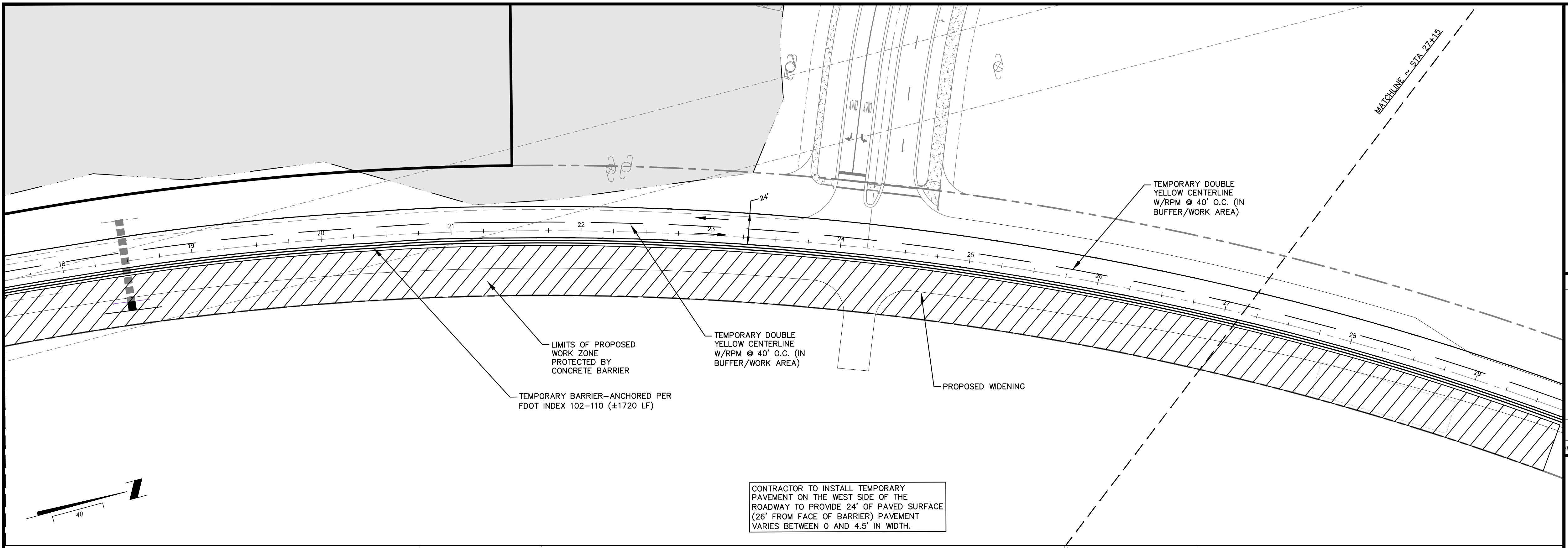
1	:		

MAINTENANCE OF TRAFFIC PLAN (SR-19 EAST WIDENING)

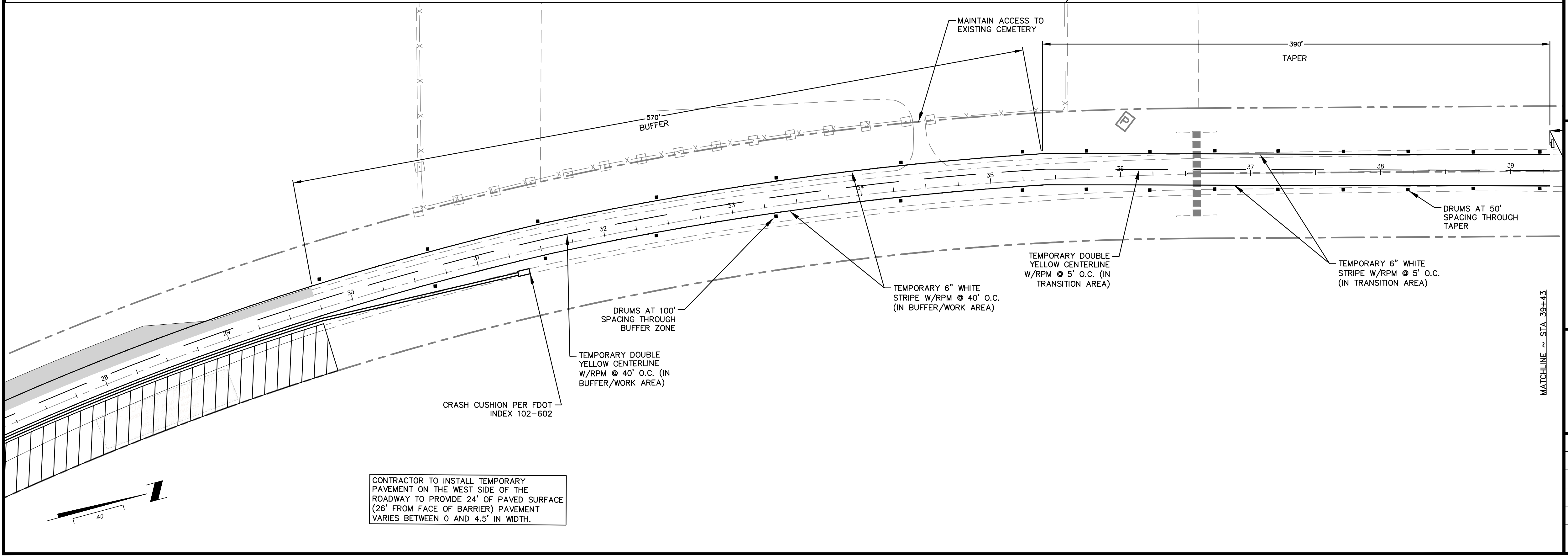
HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA
PREPARED FOR
LENNAR - ORLANDO

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

Project No.: 21-04-0008	
Designed: E.D.E.	Drawn: G.R.Q.
Checked: J.E.W.	O.C.: R.C.W
Date: JUNE, 2022	
Scale: 1" = 40'	
Sheet 30A	


MATCHLINE ~ STA 27+15
24'
TEMPORARY DOUBLE YELLOW CENTERLINE W/RPM @ 40' O.C. (IN BUFFER/WORK AREA)
LIMITS OF PROPOSED WORK ZONE PROTECTED BY CONCRETE BARRIER
TEMPORARY DOUBLE YELLOW CENTERLINE W/RPM @ 40' O.C. (IN BUFFER/WORK AREA)
PROPOSED WIDENING
TEMPORARY BARRIER–ANCHORED PER FDOT INDEX 102–110 (±1720 LF)
18
19
20
21
22
23
24
25
26
27
28
29
40

CONTRACTOR TO INSTALL TEMPORARY PAVEMENT ON THE WEST SIDE OF THE ROADWAY TO PROVIDE 24' OF PAVED SURFACE (26' FROM FACE OF BARRIER) PAVEMENT VARIES BETWEEN 0 AND 4.5' IN WIDTH.


MAINTAIN ACCESS TO EXISTING CEMETERY
390'
TAPER
570'
BUFFER
DRUMS AT 50' SPACING THROUGH TAPER
TEMPORARY DOUBLE YELLOW CENTERLINE W/RPM @ 5' O.C. (IN TRANSITION AREA)
TEMPORARY 6" WHITE STRIPE W/RPM @ 5' O.C. (IN TRANSITION AREA)
TEMPORARY 6" WHITE STRIPE W/RPM @ 40' O.C. (IN BUFFER/WORK AREA)
DRUMS AT 100' SPACING THROUGH BUFFER ZONE
TEMPORARY DOUBLE YELLOW CENTERLINE W/RPM @ 40' O.C. (IN BUFFER/WORK AREA)
CRASH CUSHION PER FDOT INDEX 102–602
MATCHLINE ~ STA 39+43
28
29
30
31
32
33
34
35
36
37
38
39
40

CONTRACTOR TO INSTALL TEMPORARY PAVEMENT ON THE WEST SIDE OF THE ROADWAY TO PROVIDE 24' OF PAVED SURFACE (26' FROM FACE OF BARRIER) PAVEMENT VARIES BETWEEN 0 AND 4.5' IN WIDTH.

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1			
2			
3			
4			
5			
6			
7			

MAINTENANCE OF TRAFFIC PLAN (SR-19 EAST WIDENING)

HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA

PREPARED FOR
LENNAR - ORLANDO

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

Project No.: 21-04-0008	
Designed: E.D.E.	Drawn: G.R.Q.
Checked: J.E.W.	Q.C.: R.C.W
Date: JUNE, 2022	
Scale: 1" = 40'	
Sheet 30B	

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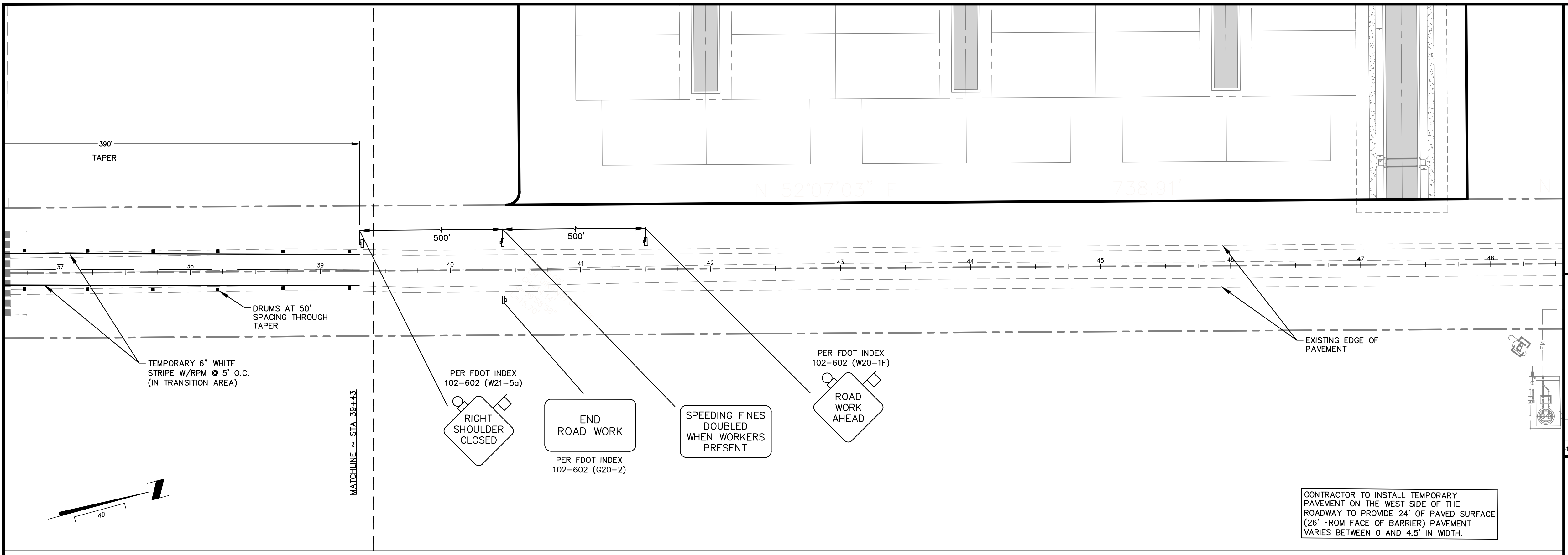
390'
TAPER
500'
500'
37
38
39
40
41
42
43
44
45
46
47
48
N 52°07'03" E
738.91'
DRUMS AT 50' SPACING THROUGH TAPER
TEMPORARY 6" WHITE STRIPE W/RPM @ 5' O.C. (IN TRANSITION AREA)
MATCHLINE ~ STA 39+43
PER FDOT INDEX 102-602 (W21-5a)
RIGHT SHOULDER CLOSED
END ROAD WORK
PER FDOT INDEX 102-602 (G20-2)
SPEEDING FINES DOUBLED WHEN WORKERS PRESENT
PER FDOT INDEX 102-602 (W20-1F)
ROAD WORK AHEAD
EXISTING EDGE OF PAVEMENT
40
FM

CONTRACTOR TO INSTALL TEMPORARY PAVEMENT ON THE WEST SIDE OF THE ROADWAY TO PROVIDE 24' OF PAVED SURFACE (26' FROM FACE OF BARRIER) PAVEMENT VARIES BETWEEN 0 AND 4.5' IN WIDTH.

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MAINTENANCE OF TRAFFIC PLAN (SR-19 EAST WIDENING)

HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA

PREPARED FOR
LENNAR - ORLANDO

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

Project No.: 21-04-0008
Designed: E.D.E.
Drawn: G.R.Q.
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Date: JUNE, 2022
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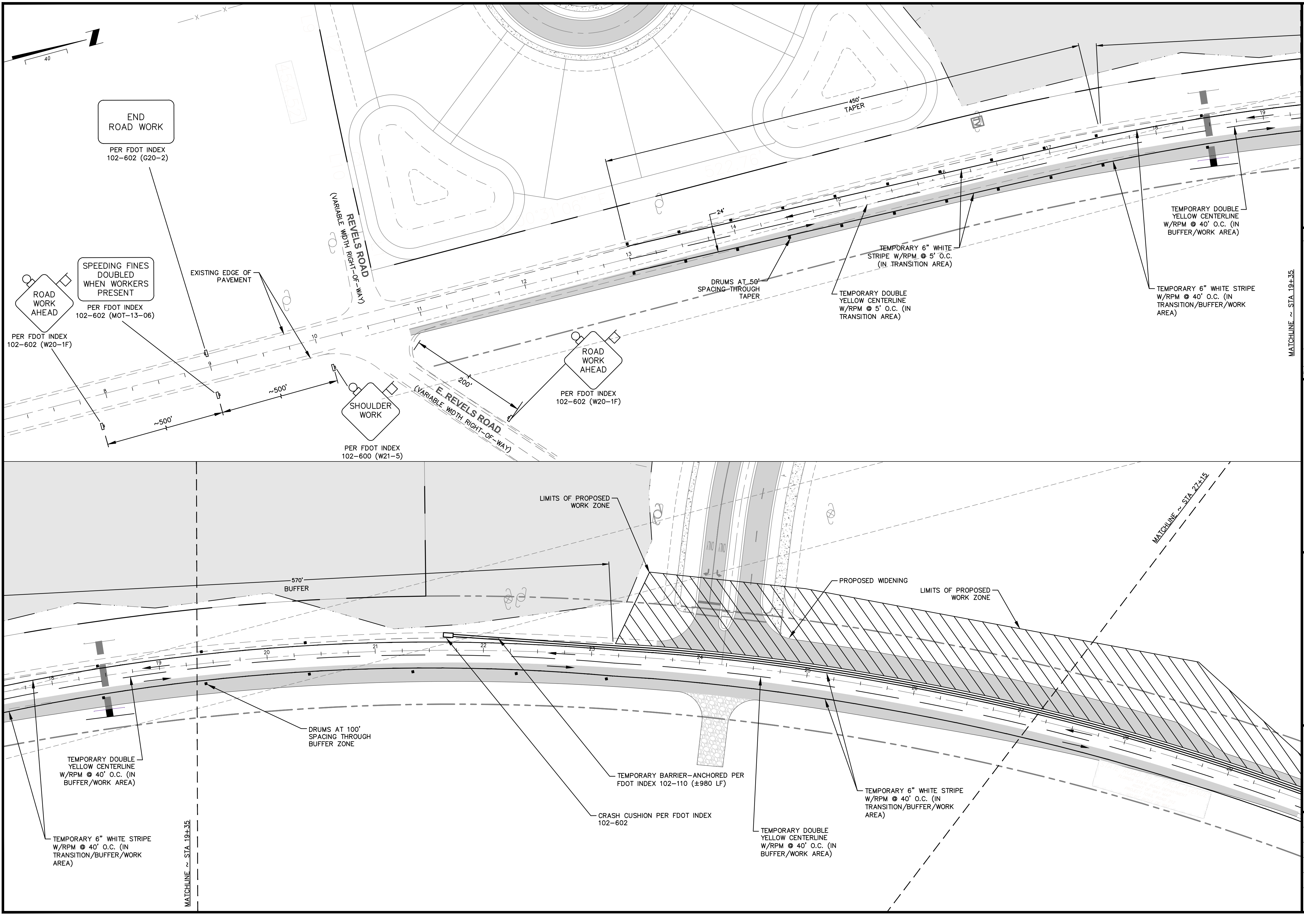
Sheet 30C


40
END ROAD WORK
PER FDOT INDEX 102-602 (G20-2)
ROAD WORK AHEAD
PER FDOT INDEX 102-602 (W20-1F)
SPEEDING FINES DOUBLED WHEN WORKERS PRESENT
PER FDOT INDEX 102-602 (MOT-13-06)
EXISTING EDGE OF PAVEMENT
REVELS ROAD (VARIABLE WIDTH RIGHT-OF-WAY)
~500'
~500'
SHOULDER WORK
PER FDOT INDEX 102-600 (W21-5)
E. REVELS ROAD (VARIABLE WIDTH RIGHT-OF-WAY)
200'
ROAD WORK AHEAD
PER FDOT INDEX 102-602 (W20-1F)
450' TAPER
24'
DRUMS AT 50' SPACING THROUGH TAPER
TEMPORARY 6" WHITE STRIPE W/RPM @ 5' O.C. (IN TRANSITION AREA)
TEMPORARY DOUBLE YELLOW CENTERLINE W/RPM @ 5' O.C. (IN TRANSITION AREA)
TEMPORARY DOUBLE YELLOW CENTERLINE W/RPM @ 40' O.C. (IN BUFFER/WORK AREA)
TEMPORARY 6" WHITE STRIPE W/RPM @ 40' O.C. (IN TRANSITION/BUFFER/WORK AREA)
MATCHLINE ~ STA 19+35
LIMITS OF PROPOSED WORK ZONE
570' BUFFER
PROPOSED WIDENING
LIMITS OF PROPOSED WORK ZONE
MATCHLINE ~ STA 27+15
DRUMS AT 100' SPACING THROUGH BUFFER ZONE
TEMPORARY DOUBLE YELLOW CENTERLINE W/RPM @ 40' O.C. (IN BUFFER/WORK AREA)
TEMPORARY BARRIER-ANCHORED PER FDOT INDEX 102-110 (±980 LF)
CRASH CUSHION PER FDOT INDEX 102-602
TEMPORARY 6" WHITE STRIPE W/RPM @ 40' O.C. (IN TRANSITION/BUFFER/WORK AREA)
TEMPORARY DOUBLE YELLOW CENTERLINE W/RPM @ 40' O.C. (IN BUFFER/WORK AREA)
TEMPORARY 6" WHITE STRIPE W/RPM @ 40' O.C. (IN TRANSITION/BUFFER/WORK AREA)
MATCHLINE ~ STA 19+35
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

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MAINTENANCE OF TRAFFIC PLAN (SR-19 WEST WIDENING)

HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA
PREPARED FOR
LENNAR - ORLANDO

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

Project No.: 21-04-0008	
Designed: E.D.E.	Drawn: G.R.Q.
Checked: J.E.W.	O.C.: R.C.W
Date: JUNE, 2022	
Scale: 1"=40'	
Sheet 31A	

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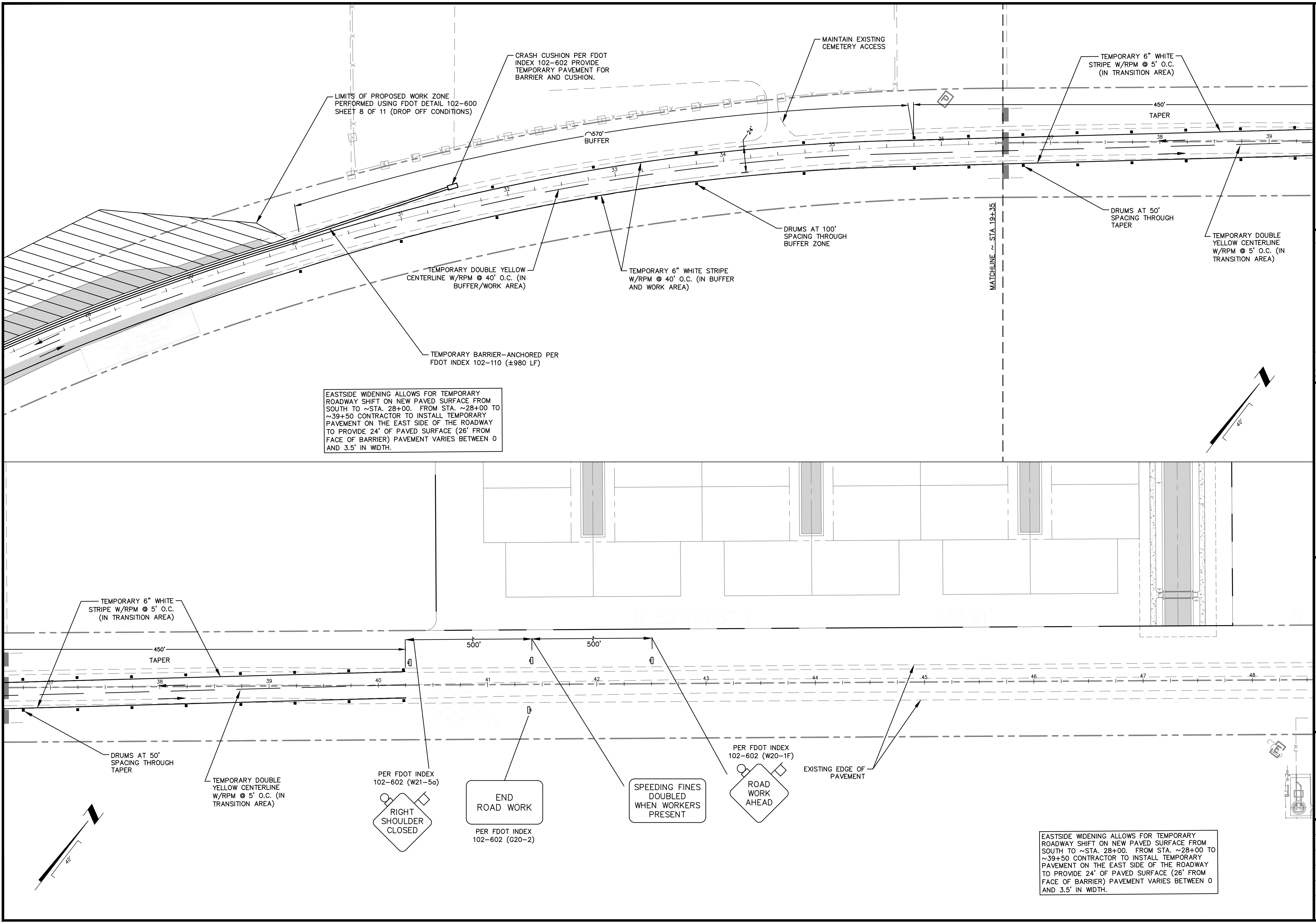
CRASH CUSHION PER FDOT INDEX 102-602 PROVIDE TEMPORARY PAVEMENT FOR BARRIER AND CUSHION.
MAINTAIN EXISTING CEMETERY ACCESS
TEMPORARY 6" WHITE STRIPE W/RPM @ 5' O.C. (IN TRANSITION AREA)
LIMITS OF PROPOSED WORK ZONE PERFORMED USING FDOT DETAIL 102-600 SHEET 8 OF 11 (DROP OFF CONDITIONS)
450'
TAPER
570' BUFFER
24'
31
32
33
34
35
36
37
38
39
DRUMS AT 100' SPACING THROUGH BUFFER ZONE
DRUMS AT 50' SPACING THROUGH TAPER
TEMPORARY DOUBLE YELLOW CENTERLINE W/RPM @ 5' O.C. (IN TRANSITION AREA)
MATCHLINE ~ STA 19+35
TEMPORARY DOUBLE YELLOW CENTERLINE W/RPM @ 40' O.C. (IN BUFFER/WORK AREA)
TEMPORARY 6" WHITE STRIPE W/RPM @ 40' O.C. (IN BUFFER AND WORK AREA)
TEMPORARY BARRIER-ANCHORED PER FDOT INDEX 102-110 (±980 LF)
N
40'
N 52°07'03" E
738.81'
TEMPORARY 6" WHITE STRIPE W/RPM @ 5' O.C. (IN TRANSITION AREA)
450'
TAPER
500'
500'
37
38
39
40
41
42
43
44
45
46
47
48
DRUMS AT 50' SPACING THROUGH TAPER
TEMPORARY DOUBLE YELLOW CENTERLINE W/RPM @ 5' O.C. (IN TRANSITION AREA)
PER FDOT INDEX 102-602 (W21-5a)
RIGHT SHOULDER CLOSED
END ROAD WORK
PER FDOT INDEX 102-602 (G20-2)
SPEEDING FINES DOUBLED WHEN WORKERS PRESENT
PER FDOT INDEX 102-602 (W20-1F)
ROAD WORK AHEAD
EXISTING EDGE OF PAVEMENT
FM
N
40'

EASTSIDE WIDENING ALLOWS FOR TEMPORARY ROADWAY SHIFT ON NEW PAVED SURFACE FROM SOUTH TO ~STA. 28+00. FROM STA. ~28+00 TO ~39+50 CONTRACTOR TO INSTALL TEMPORARY PAVEMENT ON THE EAST SIDE OF THE ROADWAY TO PROVIDE 24' OF PAVED SURFACE (26' FROM FACE OF BARRIER) PAVEMENT VARIES BETWEEN 0 AND 3.5' IN WIDTH.

EASTSIDE WIDENING ALLOWS FOR TEMPORARY ROADWAY SHIFT ON NEW PAVED SURFACE FROM SOUTH TO ~STA. 28+00. FROM STA. ~28+00 TO ~39+50 CONTRACTOR TO INSTALL TEMPORARY PAVEMENT ON THE EAST SIDE OF THE ROADWAY TO PROVIDE 24' OF PAVED SURFACE (26' FROM FACE OF BARRIER) PAVEMENT VARIES BETWEEN 0 AND 3.5' IN WIDTH.

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MAINTENANCE OF TRAFFIC PLAN (SR-19 WEST WIDENING)

HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA

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