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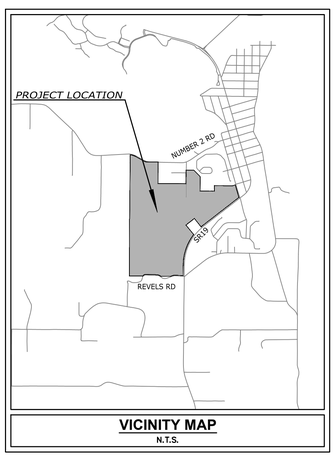
HILLSIDE GROVE

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



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
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5A – 5B	PRE DEVELOPMENT DRAINAGE PLAN
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30A – 30C	SR–19 MAINTENANCE OF TRAFFIC (SOUTHBOUND)
31A – 31B	SR–19 MAINTENANCE OF TRAFFIC (NORTHBOUND)

DEVELOPER
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WILLIAM (BILL) A. RAY, AICP
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2712 SE 29TH STREET,
OCALA, FL 34471
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No.	Date	Revision	By
1			
2			
3			
4			
5			
6			

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	

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

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JUSTIN E. WILLIAMS LICENSE No. 69260 STATE OF FLORIDA PROFESSIONAL ENGINEER

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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.

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SIGNATURE SHEET

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

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

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

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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:

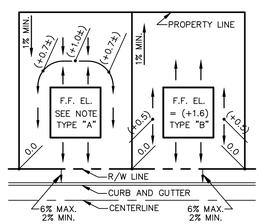
1. ALL WORK AND MATERIALS SHALL BE IN COMPLETE ACCORDANCE WITH ALL RELATIVE SECTIONS OF COUNTY STANDARDS (LATEST REVISION) AND ALL CURRENT CITY STANDARD DETAILS AND THE REQUIREMENTS OF OTHER AUTHORITIES HAVING JURISDICTION. THE WORK SHALL ALSO BE PERFORMED AND TESTED IN ACCORDANCE WITH THE RECOMMENDATIONS 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	ST	STORM SEWER AND SIZE
ST	ST	STORM SEWER INLET
ST	ST	STORM SEWER MANHOLE
ST	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
W 2"	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
25.1	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

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No.	Date	Revision	By
A..			
A..			
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GENERAL NOTES AND LEGENDS

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

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

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

Sheet 2

Printed: Nov 18, 2022 - 4:42pm Printed By: Wesley

J:\21\21-04-0008 Preserve at Howey\Design\Dwgs\Plots\21-04-0008 Maste.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 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, 573.6 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 NORTHEAST 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, 673.75 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 02°58'29", A RADIUS OF 2341.83 FEET, AN ARC LENGTH OF 839.04 FEET, A CHORD BEARING OF SOUTH 28°02'16" WEST AND A CHORD DISTANCE OF 832.76 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, 15.01 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 12°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, 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 31°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, 486.34 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 SOUTHWESTERLY; 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 07°07'12" WEST AND A CHORD DISTANCE OF 14.14 FEET TO THE POINT OF BEGINNING.

AND, ALSO LESS THE FOLLOWING DESCRIBED PARCEL:

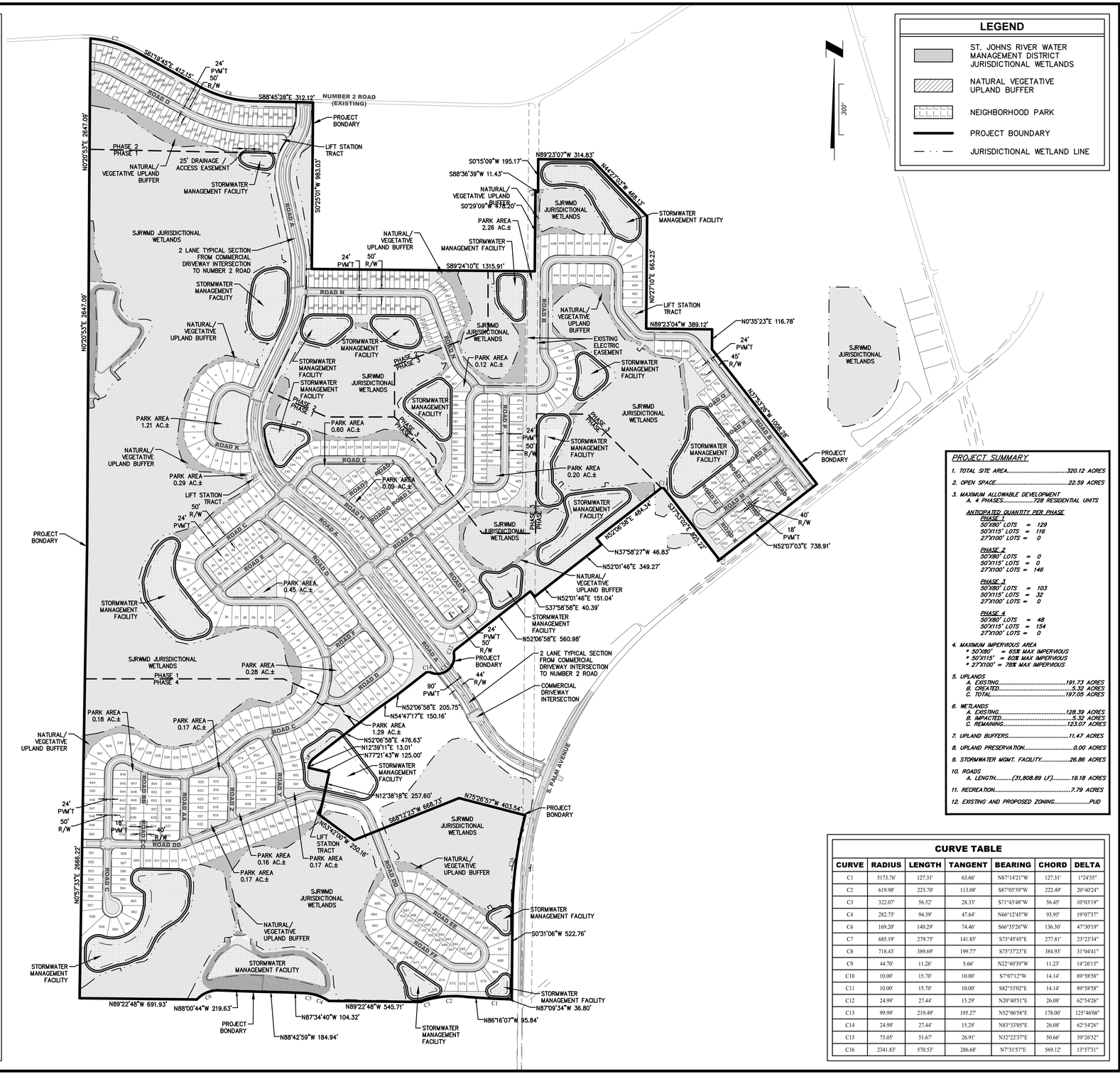
COMMENCE AT THE EAST 1/4 CORNER OF SECTION 35, TOWNSHIP 20 SOUTH, RANGE 25 EAST, LAKE COUNTY, FLORIDA; THENCE RUN NORTH 89°21'35" WEST ALONG THE SOUTH LINE OF THE NORTHEAST 1/4 OF SAID SECTION 35, 1487.79 FEET TO A POINT ON THE NORTHWESTERLY RIGHT-OF-WAY LINE OF STATE ROAD NO. 19; THENCE RUN NORTH 52°07'27" 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.



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'	N73°15'57"E	569.12'	13°57'31"

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

No.	Date	Revision	By
A1			
A2			
A3			
A4			
A5			
A6			

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

Sheet 3

Printed: Nov 18, 2022 - 4:43pm
Printed By: Wesley
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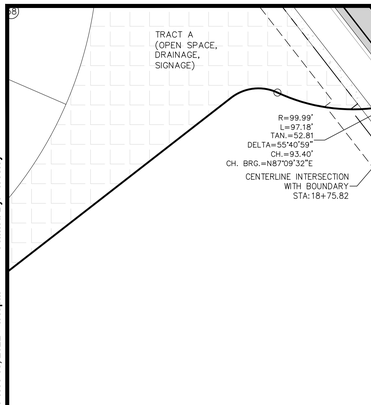
PHASE 1 OPEN SPACE TRACT TABLE		
TRACT LETTER	TRACT USE	TRACT ACREAGE
A	OPEN SPACE, DRAINAGE, SIGNAGE	0.97 Ac.
B	OPEN SPACE, DRAINAGE, SIGNAGE	9.16 Ac.
C	OPEN SPACE	0.04 Ac.
D	OPEN SPACE	0.07 Ac.
E	OPEN SPACE, DRAINAGE, PARK	0.78 Ac.
F	OPEN SPACE	0.09 Ac.
G	OPEN SPACE	0.24 Ac.
H	OPEN SPACE, DRAINAGE	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.

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"



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.
6. ALL SIDEWALK WITHIN THE RIGHT OF WAY IMMEDIATELY ADJACENT TO LOTS SHALL BE CONSTRUCTED WITH THE INDIVIDUAL LOTS. ALL CURB RAMPS WILL BE CONSTRUCTED WITH THE SUBDIVISION INFRASTRUCTURE.

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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By

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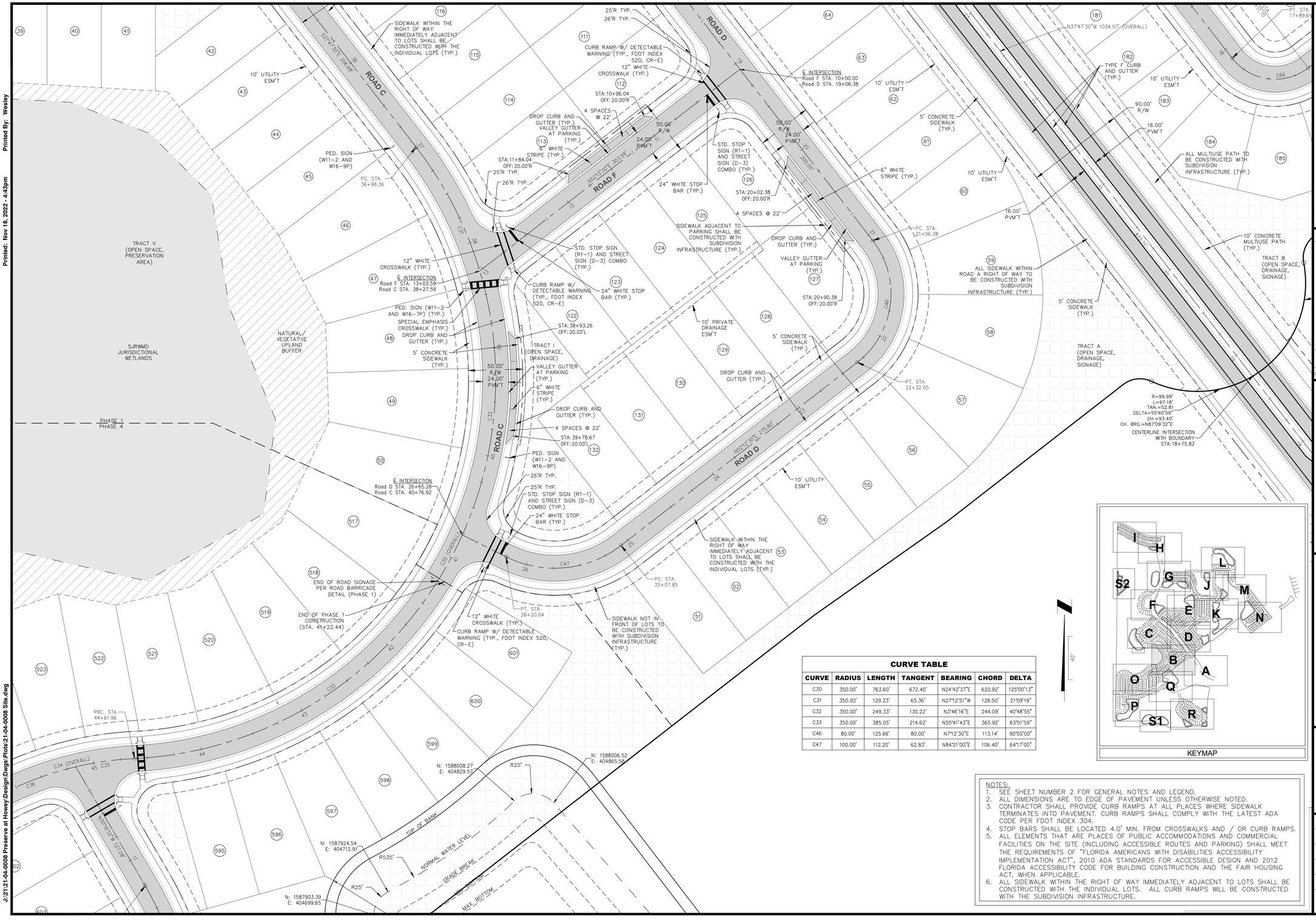
Project No.:	21-04-0008
Designed:	JEW
Drawn:	JEW
Checked:	JEW
O.C.:	RCW
Date:	AUGUST 2022
Scale:	1" = 40'
Sheet	4A

Printed: Nov 18, 2022 - 4:43pm Printed By: Wesley

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



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"

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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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

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

Printed: Nov 18, 2022 - 4:44pm Printed By: Wesley

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

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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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By

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 4C

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KEYMAP

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

Sheet 4D

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40'

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"

KEYMAP

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: 1589809.87 E: 405518.66
N: 1590077.22 E: 405513.35
N: 1590059.66 E: 405520.78

R41', R84', R34', R24'

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

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)

OPEN SPACE TRACT

ROAD B — 50.00' R/W, 24.00' PVM'T, 130.00'
ROAD C — 50.00' R/W, 24.00' PVM'T, 411.03'
ROAD P — 50.00' R/W, 24.00' PVM'T, S01°29'10"W 500.00'
ROAD H — 50.00' R/W, 24.00' PVM'T, S01°25'05"E 407.40' (OVERALL), 121.80'
ROAD I — 40.00' R/W, 18.00' PVM'T, S52°12'30"W 174.22'
ROAD J — 40.00' R/W, 18.00' PVM'T, S52°12'30"W 50.00'
ROAD L — 40.00' R/W, 18.00' PVM'T, S52°12'30"W 140.00'
ROAD G — 40.00' R/W, 18.00' PVM'T, S52°12'30"W 140.00'

N90°00'00"W 425.10' (OVERALL)
S89°30'50"E 312.13' (OVERALL)
S89°30'50"E 149.95'
N37°47'30"W 349.09' (OVERALL)

PT. STA. 24+02.16
PC. STA. 24+63.48
PT. STA. 25+89.14
PT. STA. 20+50.56
PT. STA. 12+75.62
PC. STA. 11+49.95
PC. STA. 18+70.02
PC. STA. 13+49.09
PT. STA. 14+21.99
PT. STA. 10+51.37
PT. STA. 29+68.13
PT. STA. 25+99.26

℄ INTERSECTION
Road J STA. 10+00.00
Road C STA. 14+36.05

℄ INTERSECTION
Road I STA. 10+00.00
Road H STA. 27+21.06

℄ INTERSECTION
Road C STA. 10+00.00
Road B STA. 17+50.00

℄ INTERSECTION
Road C STA. 12+05.00
Road L STA. 10+00.00

5' CONCRETE SIDEWALK (TYP.)
DROP CURB AND GUTTER (TYP.)
10' UTILITY ESM'T
4 SPACES @ 22'
STA:18+05.45 OFF: 20.00'L
STA:17+17.45 OFF:20.00'L
STA:16+79.79 OFF: 20.00'L
STA:15+91.79 OFF: 20.00'L
STA:13+41.09 OFF:20.00'L
STA:12+53.09 OFF:20.00'L
6" WHITE STRIPE (TYP.)
VALLEY GUTTER AT PARKING (TYP.)
SIDEWALK NOT IN FRONT OF LOTS TO BE CONSTRUCTED WITH SUBDIVISION INFRASTRUCTURE (TYP.)
TRACT E (OPEN SPACE, DRAINAGE, PARK)
WHITE STOP (TYP.)
12" WHITE CROSSWALK (TYP.)
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.)
TRACT F (OPEN SPACE)
SIDEWALK WITHIN THE RIGHT OF WAY IMMEDIATELY ADJACENT TO LOTS SHALL BE CONSTRUCTED WITH THE INDIVIDUAL LOTS (TYP.)
16.00' PVM'T
SIDEWALK NOT IN FRONT OF LOTS TO BE CONSTRUCTED WITH SUBDIVISION INFRASTRUCTURE. (TYP.)
TRACT E (OPEN SPACE, DRAINAGE, PARK)
PED. SIGN (W11-2 AND W16-7P) (TYP.)
SPECIAL EMPHASIS CROSSWALK (TYP.)
25'R TYP.
26'R TYP.
PED. SIGN (W11-2 AND W16-9P)
24" WHITE STOP BAR (TYP.)
TRACT D (OPEN SPACE)
END OF ROAD SIGNAGE PER ROAD BARRICADE DETAIL (PHASE 1)
END OF PHASE 1 CONSTRUCTION (STA. 18+70.02)

SJRWMD JURISDICTIONAL WETLANDS

387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432
133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240

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No.	Date	Revision	By
1			
2			
3			
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6			
7			

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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
O.C.:	RCW
Date:	AUGUST 2022
Scale:	1" = 40'
Sheet	4E

KEYMAP

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"

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PREPARED FOR
LENNAR HOMES - ORLANDO

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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"

KEYMAP

40'

ROAD A
ROAD N
TRACT V (OPEN SPACE, PRESERVATION AREA)
TRACT T (OPEN SPACE, DRAINAGE)
TRACT S (OPEN SPACE, DRAINAGE)
SJRWMD JURISDICTIONAL WETLANDS
TYPE F CURB AND GUTTER (TYP.)
5' CONCRETE SIDEWALK (TYP.)
10' CONCRETE MULTIUSE PATH (TYP.)
18" YELLOW DIAGONAL STRIPE AT 10' O.C.
6" DOUBLE YELLOW
WHITE PAVEMENT MARKINGS (TYP.)
PT. STA. 48+61.53
PC. STA. 47+47.57
PC. STA. 43+63.31
PC. STA. 17+19.43
90.00' R/W
44.00' PVMT
TOP OF BANK
NORMAL WATER LEVEL
GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM
SMF-08 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE (STATIONING TAKEN FROM ROAD A)
SMF-09 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
SMF-10 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
PED. SIGN (W11-2 AND W16-9P) (TYP.)
STD. STOP SIGN (R1-1) AND STREET SIGN (D-3) COMBO (TYP.)
24" WHITE STOP BAR (TYP.)
END OF ROAD SIGNAGE PER ROAD BARRICADE DETAIL (PHASE 1)
SPECIAL EMPHASIS CROSSWALK (TYP.)
℄ INTERSECTION Road A STA. 45+92.66 Road N STA. 10+00.00
END OF PHASE 1 CONSTRUCTION (STA. 10+53.11)
12" WHITE CROSSWALK (TYP.)
CURB RAMP W/ DETECTABLE WARNING (TYP., FDOT INDEX 520, CR-E)
25'R TYP.
30'R TYP.
6" WHITE ~ 2'-4' SKIP LINE (TYP.)
LANDSCAPE / OPEN SPACE / DRAINAGE TRACT
NATURAL / VEGETATIVE UPLAND BUFFER
10' UTILITY ESM'T
24" NON-POTABLE WATER MAIN
PHASE 2
PHASE 3
N89°24'10"W 719.43'
N0°35'50"E 165.61' (OVERALL)
STA: 46+93.98 OFF: 201.08'L
STA: 47+12.04 OFF: 133.59'L
STA: 46+42.95 OFF: 247.05'L
STA: 46+67.87 OFF: 80.00'L
STA: 46+18.25 OFF: 254.01'L
STA: 45+39.53 OFF: 261.65'L
STA: 45+81.96 OFF: 80.00'L
STA: 45+48.28 OFF: 80.00'L
STA: 45+27.76 OFF: 261.76'L
STA: 44+01.55 OFF: 252.36'L
STA: 43+34.24 OFF: 236.04'L
STA: 43+09.53 OFF: 222.27'L
STA: 42+92.72 OFF: 208.79'L
STA: 43+07.82 OFF: 80.00'L
STA: 42+69.97 OFF: 181.27'L
STA: 42+64.81 OFF: 111.78'L
N: 1590486.12 E: 404733.78
N: 1590484.27 E: 404910.73
N: 1590482.16 E: 405113.02
N: 1590480.47 E: 405275.42
N: 1590451.33 E: 405317.06
N: 1590391.60 E: 405339.55
N: 1590456.20 E: 404690.57
N: 1590424.91 E: 404676.65
N: 1590438.31 E: 404924.09
N: 1590433.06 E: 404917.04
N: 1590401.07 E: 404882.24
N: 1590398.91 E: 404879.80
N: 1590380.17 E: 404857.77
N: 1590374.17 E: 404849.82
N: 1590364.72 E: 404711.08
N: 1590353.27 E: 404818.44
N: 1590346.32 E: 404788.00
N: 1590440.27 E: 405094.33
N: 1590407.53 E: 405124.34
N: 1590403.72 E: 405128.05
N: 1590380.19 E: 405152.50
N: 1590367.26 E: 405169.92
N: 1590355.91 E: 405190.20
N: 1590348.16 E: 405209.03
N: 1590338.10 E: 405245.33
N: 1590335.76 E: 405256.81
N: 1590331.13 E: 405291.50

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HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

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

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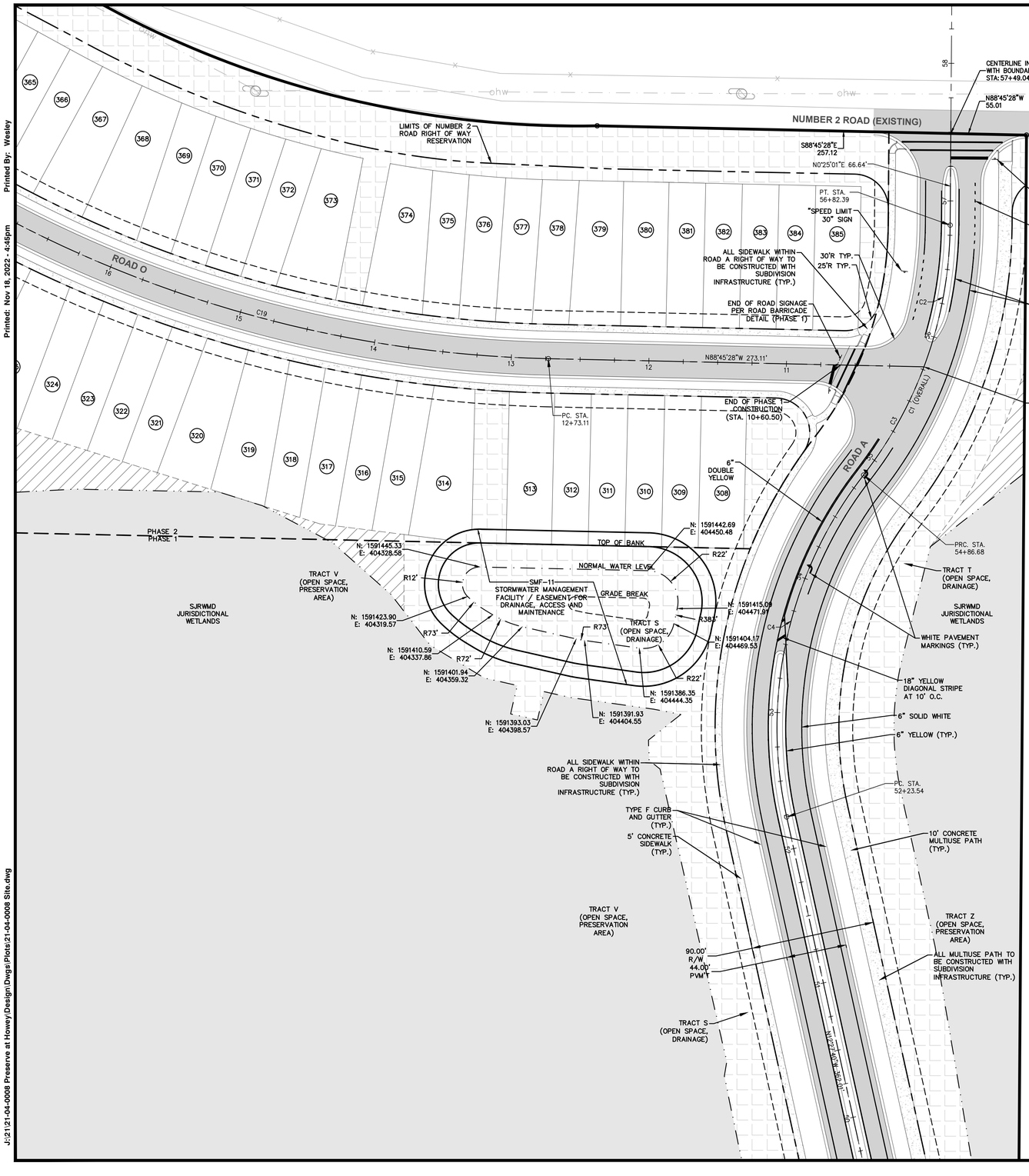
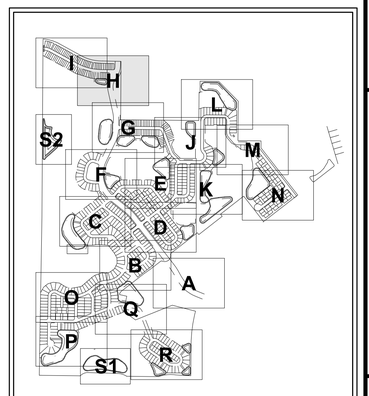
Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
Checked: JEW	O.C.: RCW
Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 4G	



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"



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.
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6. ALL SIDEWALK WITHIN THE RIGHT OF WAY IMMEDIATELY ADJACENT TO LOTS SHALL BE CONSTRUCTED WITH THE INDIVIDUAL LOTS. ALL CURB RAMPS WILL BE CONSTRUCTED WITH THE SUBDIVISION INFRASTRUCTURE.

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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
A			
A			
A			
A			
A			
A			

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

Printed: Nov 18, 2022 - 4:46pm Printed By: Wesley

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PC. STA. 24+63.48

ROAD B

ROAD P

S0°29'10"W 412.92'

S0°29'10"W 500.00'

N: 1589809.87
E: 406518.66

PT. STA. 20+50.56

PT. STA. 12+75.62

S89°30'50"E 149.95'

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.)

C69 (OVERALL)

C69

C70

C71

C72

C73

R25'

N: 1590066.61
E: 406380.59

N: 1590029.49
E: 406326.56

N: 1589896.16
E: 406126.34

N: 1589895.55
E: 406198.05

TOP OF BANK

NORMAL WATER LEVEL

N: 1589872.60
E: 406101.17

GRADE BREAK
MIN. BOTTOM
MAX. BOTTOM

TRACT Y
(OPEN SPACE, PRESERVATION AREA)

N: 1589861.38
E: 406221.09

N: 1589792.47
E: 406193.92

OPEN SPACE TRACT

SMF-05
STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE

R85'

N: 1589779.85
E: 406187.69

SJRWMD
JURISDICTIONAL
WETLANDS

N: 1589649.69
E: 406116.34

R40'

N: 1589625.74
E: 406112.08

N: 1589584.67
E: 406117.58

R85'
N: 1589575.79
E: 406118.30

N: 1589515.68
E: 406120.00

R40'

N: 1589490.40
E: 406129.94

TRACT Y
(OPEN SPACE, PRESERVATION AREA)

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: 1589452.81
E: 406552.38

N: 1589443.24
E: 406171.40

N: 1589444.76
E: 406076.49

R20'

R25'

TOP OF BANK

NORMAL WATER LEVEL

GRADE BREAK

MIN. BOTTOM

MAX. BOTTOM

N: 1589448.31
E: 406465.30

R20'

N: 1589417.05
E: 406565.67

R45'

R40'

N: 1589401.77
E: 406151.29

SMF-03
STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE

N: 1589399.63
E: 406136.10

N: 1589395.47
E: 406235.46

R45'

N: 1589334.27
E: 406252.45

N: 1589305.89
E: 406251.02

N: 1589258.50
E: 406232.54

R45'

N: 1589253.32
E: 406230.14

N: 1589215.26
E: 406209.41

R45'

N: 1589206.50
E: 406203.17

N: 1589172.44
E: 406172.17

SJRWMD
JURISDICTIONAL
WETLANDS

SJRWMD
JURISDICTIONAL
WETLANDS

TRACT X
(OPEN SPACE, PRESERVATION AREA)

PHASE 2
PHASE 1

40'

KEYMAP

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

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6			

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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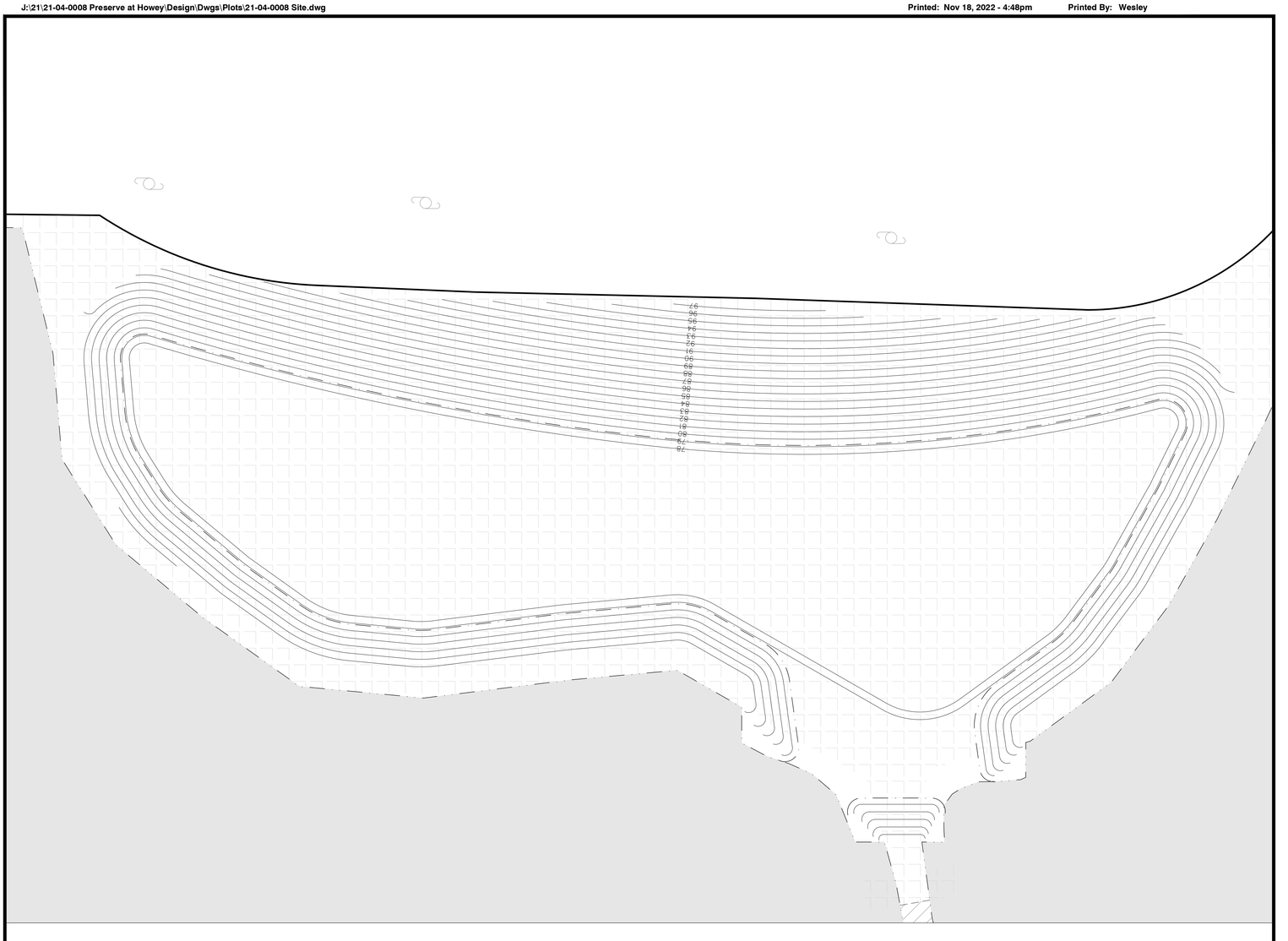

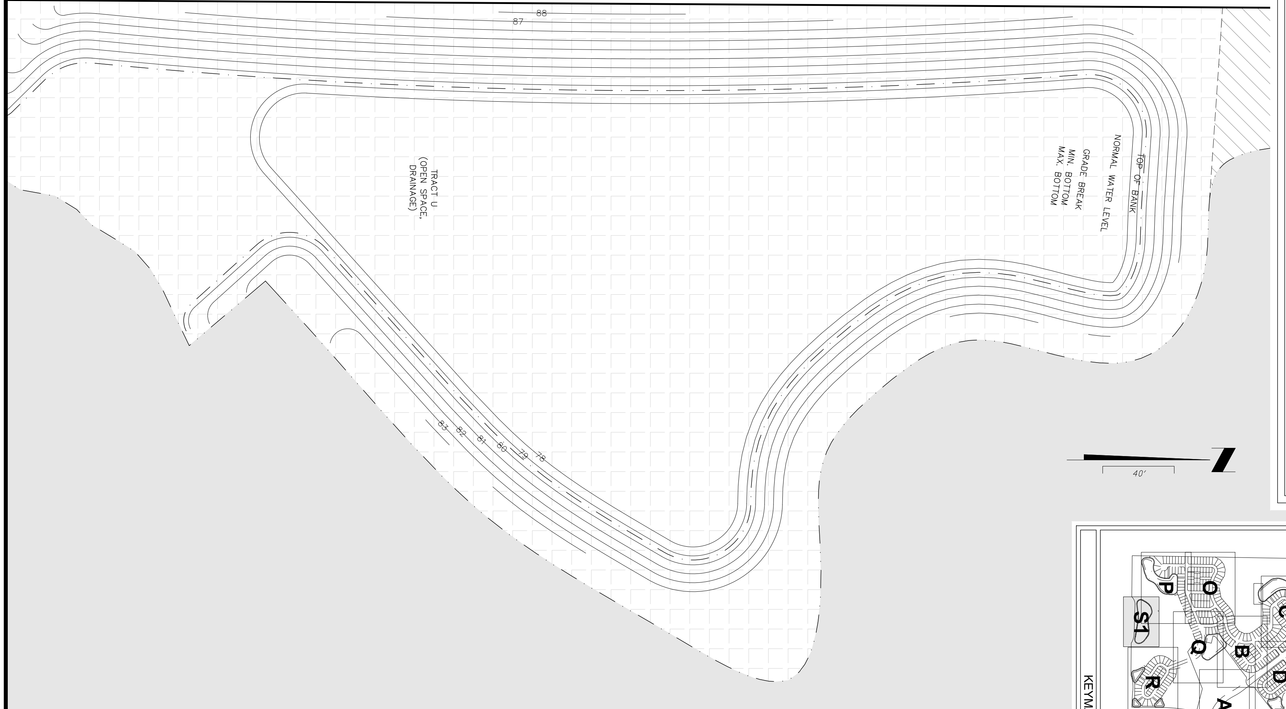

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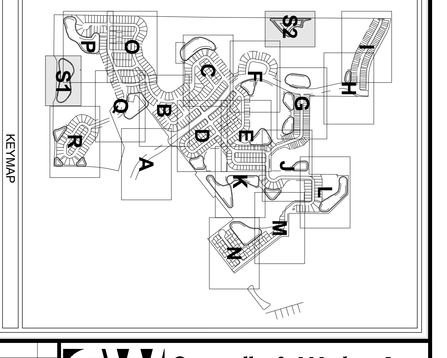

Sheet 4S
Project No.: 21-04-0008
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JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 69260
Reg. Engineer

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

SITE PLAN

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

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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.

KEYMAP

SJRWMD JURISDICTIONAL WETLANDS

SURVEYED STANDING WATER ELEVATION ≈ 79.5

NODE OUT-01-PRE

NODE OUT-02-PRE

SURVEYED STANDING WATER ELEVATION ≈ 78.3

BASIN PRE-05
AREA = 7.1
CN = 72
Tc = 29
K (SCS) = 323

Tc PATH ≈ 390 LF

CLOSED BASIN

OPEN BASIN

SURVEYED STANDING WATER ELEVATION ≈ 76.5

BASIN PRE-14
AREA = 3.6
CN = 51
Tc = 23
K (SCS) = 323

Tc PATH ≈ 394 LF

EXISTING 24" CMP

MCP 24"=80.45

MCP 24"=80.65

SURVEYED STANDING WATER ELEVATION ≈ 79.4

NODE WET-02-PRE

BASIN WET-02-PRE
AREA = 4.7
CN = 87
Tc = 10
K (SCS) = 484

NODE OUT-03-PRE

Tc PATH ≈ 505 LF

EXISTING 24" CMP

MCP 24"=79.5

BASIN PRE-15
AREA = 1.2
CN = 73
Tc = 25
K (SCS) = 323

NODE WET-01-PRE

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

Tc PATH ≈ 331 LF

BASIN PRE-03
AREA = 7.5
CN = 72
Tc = 28
K (SCS) = 323

NODE WET-04-PRE

SURVEYED STANDING WATER ELEVATION ≈ 77.6

BASIN WET-04-PRE
AREA = 14.8
CN = 91
Tc = 10
K (SCS) = 484

BASIN PRE-06
AREA = 28.1
CN = 72
Tc = 40
K (SCS) = 323

Tc PATH ≈ 471 LF

CLOSED BASIN

OPEN BASIN

Tc PATH ≈ 809 LF

BASIN PRE-01
AREA = 52
CN = 59
Tc = 30
K (SCS) = 323

BASIN PRE-08
AREA = 3.6
CN = 76
Tc = 23
K (SCS) = 323

NODE WET-06-PRE

SURVEYED STANDING WATER ELEVATION ≈ 79.1

BASIN PRE-05
AREA = 3.9
CN = 89
Tc = 10
K (SCS) = 484

NODE WET-05-PRE

NODE WET-03-PRE

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PRE DEVELOPMENT DRAINAGE PLAN

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

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Project No.: 21-04-0008

Designed:	Drawn:
JEW	JEW
Checked:	O.C.:
JEW	RCW

Date: AUGUST 2022

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Sheet 5A

Printed: Nov 18, 2022 - 4:49pm Printed By: Wesley

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NODE OUT-01-PRE

BASIN PRE-01
AREA = 52
CN = 59
Tc = 30
K (SCS) = 323

NODE WET-03-PRE

SURVEYED STANDING WATER ELEVATION ≈ 79.3

SJRWMD JURISDICTIONAL WETLANDS

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

SJRWMD JURISDICTIONAL WETLANDS

CLOSED BASIN OPEN BASIN

Tc PATH ≈ 471 LF

Tc PATH ≈ 476 LF

BASIN PRE-04
AREA = 14.9
CN = 67
Tc = 25
K (SCS) = 323

BASIN PRE-07
AREA = 12.5
CN = 72
Tc = 25
K (SCS) = 323

BOX CUV 6X4 TALL=77.49

BOX CUV 6X4 TALL=77.33

Tc PATH ≈ 631 LF

BASIN PRE-09
AREA = 15.3
CN = 61
Tc = 19
K (SCS) = 323

NODE OUT-01-PRE

SJRWMD JURISDICTIONAL WETLANDS

SURVEYED STANDING WATER ELEVATION ≈ 79.5

CLOSED BASIN OPEN BASIN

WELL PUMP TO PVC @ 98.91

Tc PATH ≈ 653 LF

Tc PATH ≈ 566 LF

Tc PATH ≈ 839 LF

CLOSED BASIN OPEN BASIN

SURVEYED STANDING WATER ELEVATION ≈ 79.2

SJRWMD JURISDICTIONAL WETLANDS

SURVEYED STANDING WATER ELEVATION ≈ 78.5

NODE OUT-04-PRE

MCP 24"=80.65
EXISTING 24" CMP
MCP 24"=80.67
DIP 8"=81.48
EXISTING 8" DIP
DIP 6"=81.48

402.84'(D)

BASIN PRE-13
AREA = 10.9
CN = 49
Tc = 43
K (SCS) = 323

SJRWMD JURISDICTIONAL WETLANDS

NODE WET-07-PRE

SURVEYED STANDING WATER ELEVATION ≈ 78.7

EXISTING 12" DIP

DIP 12"=80.16
DIP 12"=80.19

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

SJRWMD JURISDICTIONAL WETLANDS

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

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.

LEGEND

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

KEYMAP

A

B

150'

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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.= 86.48
DHW (25 YR) EL.= 85.72
DHW (10 YR) EL.=85.12
DHW (MEAN) EL.= 83.89

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-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-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

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

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.= 85.07
DHW (25 YR) EL.= 84.66
DHW (10 YR) EL.=84.36
DHW (MEAN) EL.= 83.88

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.= 85.37
DHW (25 YR) EL.= 84.73
DHW (10 YR) EL.=84.39
DHW (MEAN) EL.= 83.89

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.=84.39
DHW (MEAN) EL.= 83.89

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.= 83.89

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

WETLAND (WET-02-PST)
DHW (100 YR) EL. = 83.42
DHW (25 YR) EL. = 82.44
DHW (10 YR) EL. =81.50

WETLAND (WET-04-PST)
DHW (100 YR) EL. = 81.67
DHW (25 YR) EL. = 80.64
DHW (10 YR) EL. =80.05

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.= 84.57
DHW (10 YR) EL.=84.39
DHW (MEAN) EL.= 84.16

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

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

BASIN SUB-11
AREA = 8.4
CN = 77
Tc = 27
K (SCS) = 484

BASIN COMP-01
AREA = 3.6
CN = 68
Tc = 10
K (SCS) = 484

BASIN RY-01
AREA = 10.5
CN = 69
Tc = 10
K (SCS) = 484

BASIN SUB-02
AREA = 13.2
CN = 75
Tc = 22
K (SCS) = 484

BASIN RY-02
AREA = 0.6
CN = 45
Tc = 10
K (SCS) = 484

BASIN SUB-08
AREA = 5.1
CN = 81
Tc = 15
K (SCS) = 484

BASIN SUB-09
AREA = 4.0
CN = 80
Tc = 23
K (SCS) = 484

BASIN SUB-10
AREA = 3.1
CN = 79
Tc = 17
K (SCS) = 484

BASIN RY-03
AREA = 3.3
CN = 56
Tc = 11
K (SCS) = 484

BASIN WET-01-PST
AREA = 11.4
CN = 91
Tc = 10
K (SCS) = 484

BASIN RY-04
AREA = 1.5
CN = 59
Tc = 11
K (SCS) = 484

BASIN WET-02-PST
AREA = 4.7
CN = 87
Tc = 10
K (SCS) = 484

BASIN RY-05
AREA = 1.2
CN = 58
Tc = 15
K (SCS) = 484

BASIN SUB-12
AREA = 2.3
CN = 56
Tc = 17
K (SCS) = 484

BASIN SUB-05A
AREA = 7.88
CN = 69
Tc = 10
K (SCS) = 484

BASIN SUB-06
AREA = 1.2
CN = 75
Tc = 18
K (SCS) = 484

BASIN SUB-13
AREA = 8.5
CN = 71
Tc = 22
K (SCS) = 484

BASIN OFF-01
AREA = 1.2
CN = 37
Tc = 10
K (SCS) = 484

BASIN RY-07
AREA = 4.1
CN = 50
Tc = 15
K (SCS) = 484

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

BASIN SUB-05
AREA = 8.0
CN = 70
Tc = 21
K (SCS) = 484

BASIN SUB-14
AREA = 12.0
CN = 75
Tc = 21
K (SCS) = 484

BASIN RY-08
AREA = 3.2
CN = 50
Tc = 17
K (SCS) = 484

BASIN SUB-07
AREA = 4.4
CN = 78
Tc = 19
K (SCS) = 484

BASIN WET-05-PST
AREA = 3.8
CN = 89
Tc = 10
K (SCS) = 484

BASIN SUB-03
AREA = 2.2
CN = 77
Tc = 10
K (SCS) = 484

NODE OUT-01-PST
NODE COMP-01
NODE SMF-11
NODE S-08E
NODE S-08D
NODE S-08C
NODE SMF-08
NODE S-09A
NODE SMF-09
NODE SMF-10
NODE S-08A
NODE S-08B
NODE WET-01-PST
NODE SMF-02
NODE S-05E
NODE S-05D
NODE S-05F
NODE SMF-07
NODE S-05C
NODE S-05B
NODE S-05A
NODE SMF-05
NODE WET-02-PST
NODE SMF-12
NODE OUT-02-PST
NODE SMF-13
NODE SMF-06
NODE WET-04-PST
NODE OUT-03-PST
NODE SMF-14
NODE S-WET-04
NODE WET-05-PST
NODE SMF-03

BASIN SUB-08A
BASIN S-08E
BASIN S-08D
BASIN S-08C
BASIN S-08B
BASIN S-05E
BASIN S-05D
BASIN S-05F
BASIN S-05C
BASIN S-05B
BASIN S-05A

CONTROL STRUCTURE (CS-08)
CONTROL STRUCTURE (CS-11)
CONTROL STRUCTURE (CS-02)
CONTROL STRUCTURE (CS-12)
CONTROL STRUCTURE (CS-13)
CONTROL STRUCTURE (CS-14)
CONTROL STRUCTURE (CS-09)
CONTROL STRUCTURE (CS-03)

BUFFER TREATMENT AREA 01
BUFFER TREATMENT AREA 02
BUFFER TREATMENT AREA 03
BUFFER TREATMENT AREA 04
BUFFER TREATMENT AREA 05
BUFFER TREATMENT AREA 06
BUFFER TREATMENT AREA 07
BUFFER TREATMENT AREA 08
BUFFER TREATMENT AREA 09
BUFFER TREATMENT AREA 10
BUFFER TREATMENT AREA 11
BUFFER TREATMENT AREA 12
BUFFER TREATMENT AREA 13
BUFFER TREATMENT AREA 14

SEASONAL HIGH WATER ELEVATION = 81.34±
SEASONAL HIGH WATER ELEVATION = 81.53±
SEASONAL HIGH WATER ELEVATION = 81.20±
SEASONAL HIGH WATER ELEVATION = 80.57±
SEASONAL HIGH WATER ELEVATION = 80.96±
SEASONAL HIGH WATER ELEVATION = 80.49±
SEASONAL HIGH WATER ELEVATION = 80.39±
SEASONAL HIGH WATER ELEVATION = 79.92±
SEASONAL HIGH WATER ELEVATION = 80.19±
SEASONAL HIGH WATER ELEVATION = 80.60±

OVERTREATMENT-06 (0.29 Ac.±)

SJRWMD JURISDICTIONAL WETLANDS

KEYMAP

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.			

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

Printed: Nov 21, 2022 - 2:54pm Printed By: Derek

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

BASIN SUB-01
AREA = 14.3
CN = 75
Tc = 24
K (SCS) = 484

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

BASIN WET-05-PST
AREA = 3.8
CN = 89
Tc = 10
K (SCS) = 484

BASIN SUB-03
AREA = 2.2
CN = 77
Tc = 10
K (SCS) = 484

BASIN OFF-02
AREA = 4.3
CN = 37
Tc = 10
K (SCS) = 484

BASIN SUB-04
AREA = 24.9
CN = 75
Tc = 26
K (SCS) = 484

BASIN SUB-15
AREA = 8.4
CN = 73
Tc = 22
K (SCS) = 484

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-10
AREA = 2.7
CN = 62
Tc = 16
K (SCS) = 484

BASIN RY-09
AREA = 1.3
CN = 58
Tc = 10
K (SCS) = 484

BASIN SUB-17
AREA = 7.5
CN = 71
Tc = 21
K (SCS) = 484

BASIN RY-11
AREA = 1.4
CN = 53
Tc = 16
K (SCS) = 484

BASIN COMP-02
AREA = 4.9
CN = 66
Tc = 10
K (SCS) = 484

BASIN SUB-19
AREA = 1.2
CN = 67
Tc = 23
K (SCS) = 484

BASIN SUB-18
AREA = 1.2
CN = 61
Tc = 19
K (SCS) = 484

NODE SMF-01
NODE SMF-03
NODE SMF-04
NODE SMF-15
NODE SMF-16
NODE SMF-17
NODE SMF-18
NODE SMF-19
NODE OUT-01-PST
NODE OUT-04-PST
NODE WET-05-PST
NODE WET-07-PST
NODE WET-08-PST
NODE COMP-02
NODE S-17A
NODE S-17B
NODE S-17C
NODE S-17D
NODE S-17E
NODE S-17F

CONTROL STRUCTURE (CS-01)
CONTROL STRUCTURE (CS-03)
CONTROL STRUCTURE (CS-15)
CONTROL STRUCTURE (CS-16)
CONTROL STRUCTURE (CS-17)

BUFFER TREATMENT AREA 01
BUFFER TREATMENT AREA 14
BUFFER TREATMENT AREA 15
BUFFER TREATMENT AREA 16
BUFFER TREATMENT AREA 17

SJRWMD JURISDICTIONAL WETLANDS

SEASONAL HIGH WATER ELEVATION = 80.51±
SEASONAL HIGH WATER ELEVATION = 80.60±
SEASONAL HIGH WATER ELEVATION = 81.26±
SEASONAL HIGH WATER ELEVATION = 81.24±
SEASONAL HIGH WATER ELEVATION = 81.39±
SEASONAL HIGH WATER ELEVATION = 81.03±
SEASONAL HIGH WATER ELEVATION = 80.40±

OVERTREATMENT-19 (0.09 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.= 85.51
DHW (10 YR) EL.= 85.13
DHW (MEAN) EL.= 84.72

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.= 84.57
DHW (25 YR) EL.= 84.11
DHW (10 YR) EL.=83.80
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.= 84.83
DHW (25 YR) EL.= 84.28
DHW (10 YR) EL.=83.70
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.= 85.36
DHW (25 YR) EL.= 84.38
DHW (10 YR) EL.=83.73
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.= 85.09
DHW (25 YR) EL.= 84.31
DHW (10 YR) EL.=83.74
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

KEYMAP

150'

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

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

POST DEVELOPMENT DRAINAGE PLAN

HILLSIDE GROVE
HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY WILLIAMS
P.E. NUMBER: 89260
Reg. Engineer

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

Sheet 6B

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Printed By: Derek
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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	36" HP	SW
			81.00	36" HP	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	42" HP	
			78.80	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	42" HP	N
			78.00	42" HP	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	30" HP	SE
			79.00	30" HP	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	24" HP	
			80.00	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	30" HP	
			77.65	30" HP	
S-20	SINGLE CURB INLET	88.00	77.75	30" HP	
			78.25	24" RCP	
S-21	SINGLE CURB INLET	88.50	78.45	24" RCP	
			78.45	24" RCP	
S-22	SINGLE CURB INLET	84.50	78.65	24" RCP	
			78.65	24" RCP	
S-23	SINGLE CURB INLET	84.50	78.85	24" RCP	
			78.85	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	36" HP	SW
			80.00	36" HP	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	24" HP	
			79.60	24" RCP	
S-30	SINGLE CURB INLET	86.06	79.65	24" RCP	
			79.65	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	30" HP	
			79.15	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	36" HP	
			75.45	36" RCP	
S-37	SINGLE CURB INLET	86.06	75.60	36" RCP	
			75.60	36" RCP	
			82.15	15" RCP	
S-38	SINGLE CURB INLET	86.06	75.80	36" RCP	S
			78.65	36" HP	NW
			82.15	15" RCP	
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	30" HP	S
			80.50	30" HP	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	15" HP	W
			82.75	15" HP	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	24" HP	
			76.55	24" RCP	
S-48	TYPE E INLET	86.50	76.80	24" RCP	
			76.80	24" HP	
S-49	MOD E INLET	86.00	77.30	24" HP	S
			79.50	24" HP	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	30" HP	NW
			79.00	30" HP	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	36" HP	
			80.00	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	36" HP	S
			80.00	36" HP	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	36" HP	NW
			79.00	36" HP	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	30" HP	
			78.15	30" RCP	
S-65	SINGLE CURB INLET	86.50	78.20	30" RCP	
			78.20	30" RCP	
S-66	SINGLE CURB INLET	86.50	78.30	30" RCP	
			78.80	24" RCP	
			78.80	24" RCP	
S-67	SINGLE CURB INLET	86.50	78.85	24" RCP	
			78.85	24" HP	
S-68	STD. MES	-	78.50	24" HP	
S-69	TYPE J MH	86.50	79.00	24" RCP	
			79.00	24" RCP	
S-70	SINGLE CURB INLET	86.50	79.15	24" RCP	
			79.15	24" RCP	
S-71	SINGLE CURB INLET	86.50	79.20	24" RCP	
			79.20	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	30" RCP	
			79.10	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	30" HP	
			83.10	15" RCP	
			76.45	24" RCP	
S-102	SINGLE CURB INLET	87.11	83.20	15" RCP	
S-103	TYPE J MH	87.30	76.55	24" RCP	
			76.55	24" RCP	
S-104	TYPE J MH	88.05	76.80	24" RCP	
			76.80	24" RCP	
S-105	SINGLE CURB INLET	87.43	77.15	24" RCP	
			77.65	18" RCP	
S-106	SINGLE CURB INLET	87.11	77.75	18" RCP	
			83.20	15" RCP	SW
			80.40	15" RCP	SE
S-107	SINGLE CURB INLET	87.33	83.45	15" RCP	
S-108	TYPE J MH	88.09	81.35	15" RCP	NW
			83.85	15" RCP	SW
S-109	TYPE J MH	87.92	83.95	15" RCP	
			83.95	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	24" HP	
			83.45	15" RCP	
			79.35	24" RCP	
S-113	SINGLE CURB INLET	87.56	83.55	15" RCP	
			83.55	15" RCP	
S-114	SINGLE CURB INLET	87.55	83.65	15" RCP	
S-115	TYPE J MH	88.15	79.50	24" RCP	NW
			80.70	24" RCP	E
S-116	SINGLE CURB INLET	89.10	81.65	24" RCP	
			85.15	15" RCP	
			82.15	18" RCP	
S-117	SINGLE CURB INLET	89.15	85.25	15" RCP	
S-118	TYPE J MH	89.75	82.80	18" RCP	
			82.80	18" RCP	
S-119	SINGLE CURB INLET	92.58	84.25	18" RCP	
			88.60	15" RCP	SE
			84.50	15" RCP	S
S-120	SINGLE CURB INLET	92.63	88.75	15" RCP	
S-121	TYPE J MH	93.76	84.85	15" RCP	
			89.50	12" HP	
			84.85	15" RCP	
S-122	12" YARD DRAIN	95.00	91.30	12" HP	
			91.30	12" HP	
S-123	12" YARD DRAIN	94.80	91.80	12" HP	
S-124	SINGLE CURB INLET	93.26	85.25	15" RCP	N
			89.15	15" RCP	E
			89.20	15" RCP	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	24" HP	
			78.75	24" RCP	
S-202	SINGLE CURB INLET	86.16	78.90	24" RCP	
			81.75	18" RCP	
S-203	SINGLE CURB INLET	86.05	81.90	18" RCP	
			81.90	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	24" HP	
			77.80	24" RCP	
S-207	SINGLE CURB INLET	86.06	77.90	24" RCP	
			82.20	15" RCP	
			77.90	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	36" RCP	
			76.80	36" RCP	
S-212	SINGLE CURB INLET	86.08	76.90	36" RCP	
			81.90	18" RCP	
			77.40	30" RCP	
S-213	SINGLE CURB INLET	86.30	82.05	18" RCP	
			82.30	15" RCP	
S-214	SINGLE CURB INLET	86.15	82.40	15" RCP	
S-215	SINGLE CURB INLET	86.05	77.50	30" RCP	
			77.50	30" RCP	
S-216	SINGLE CURB INLET	86.31	77.65	30" RCP	
			78.15	24" RCP	NE
			78.50	24" RCP	SE
S-217	SINGLE CURB INLET	86.31	78.25	24" RCP	
			78.25	24" RCP	
S-218	TYPE J MH	86.80	78.35	24" RCP	
			78.35	24" RCP	
S-219	SINGLE CURB INLET	86.06	78.60	24" RCP	
			82.05	15" RCP	
			79.10	18" RCP	
S-220	SINGLE CURB INLET	86.06	82.15	15" RCP	
S-221	TYPE J MH	86.60	79.35	18" RCP	
			82.00	12" HP	
			79.35	18" RCP	
S-222	12" YARD DRAIN	87.00	82.85	12" HP	
			82.85	12" HP	
S-223	12" YARD DRAIN	86.20	83.20	12" HP	
S-224	SINGLE CURB INLET	86.10	79.60	18" RCP	
			82.20	15" RCP	NE
			82.05	15" RCP	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	24" RCP	
			82.00	15" RCP	
S-228	SINGLE CURB INLET	86.11	82.10	15" RCP	
			82.10	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	54" RCP	
			74.40	54" RCP	
S-402	SINGLE CURB INLET	90.19	74.45	54" RCP	
			74.45	54" RCP	
S-403	SINGLE CURB INLET	90.12	74.50	54" RCP	
			74.50	54" RCP	
S-404	SINGLE CURB INLET	87.76	74.60	54" RCP	
			79.70	15" RCP	
			74.60	54" RCP	
S-405	SINGLE CURB INLET	87.59	79.80	15" RCP	
S-406	SINGLE CURB INLET	84.73	74.70	54" RCP	
			80.75	15" RCP	
			77.05	24" RCP	
			75.70	42" RCP	
S-407	SINGLE CURB INLET	84.76	80.85	15" RCP	
			81.20	12" HP	
S-408	12" YARD DRAIN	85.70	82.70	12" HP	
S-409	SINGLE CURB INLET	84.78	77.15	24" RCP	
			77.15	24" RCP	
S-410	SINGLE CURB INLET	84.76	77.30	24" RCP	
			78.55	18" RCP	
S-411	SINGLE CURB INLET	84.67	78.65	18" RCP	
			80.75	15" RCP	
			78.65	18" RCP	
S-412	SINGLE CURB INLET	84.77	80.85	15" RCP	
S-413	SINGLE CURB INLET	85.45	78.95	18" RCP	
			81.55	15" RCP	NE
			81.45	15" RCP	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	42" RCP	
			81.20	15" RCP	
			76.65	36" RCP	
S-417	SINGLE CURB INLET	85.22	81.30	15" RCP	
S-418	SINGLE CURB INLET	85.54	76.70	36" RCP	NE
			78.45	15" RCP	
			77.35	36" RCP	SW
S-419	SINGLE CURB INLET	85.26	78.55	15" RCP	
			78.55	15" RCP	
S-420	SINGLE CURB INLET	86.15	79.45	15" RCP	SE
			81.95	15" RCP	NE
S-421	SINGLE CURB INLET	86.07	82.05	15" RCP	
			82.05	15" RCP	
S-422	SINGLE CURB INLET	86.08	82.15	15" RCP	
S-423	SINGLE CURB INLET	85.86	77.70	36" RCP	NE
			81.95	15" RCP	
			77.80	36" RCP	SW
S-424	SINGLE CURB INLET	85.86	82.10	15" RCP	
S-425	SINGLE CURB INLET	86.10	77.85	36" RCP	
			82.20	15" RCP	
			78.35	30" RCP	
S-426	SINGLE CURB INLET	86.10	82.35	15" RCP	
S-427	SINGLE CURB INLET	86.48	78.50	30" RCP	
			82.45	15" RCP	NW
			81.30	15" RCP	SW
			79.50	18" RCP	
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	18" RCP	
			82.15	15" RCP	
S-431	SINGLE CURB INLET	89.60	82.30	15" RCP	NE
			83.90	15" RCP	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	30" HP	
			78.60	30" HP	
S-435	MOD C INLET	89.20	78.85	30" HP	
			78.85	30" HP	
S-436	SINGLE CURB INLET	89.37	79.00	30" HP	
			82.95	15" RCP	
			79.00	30" RCP	
S-437	SINGLE CURB INLET	89.37	83.10	15" RCP	
			83.10	15" HP	
S-438	MOD C INLET	89.20	84.95	15" HP	
S-439	SINGLE CURB INLET	87.82	79.20	30" RCP	
			83.90	15" RCP	
			79.70	24" RCP	
S-440	SINGLE CURB INLET	87.82	84.05	15" RCP	
S-441	SINGLE CURB INLET	86.98	80.00	24" RCP	
			83.00	15" RCP	
			80.00	24" RCP	
S-442	SINGLE CURB INLET	86.98	83.20	15" RCP	
S-443	SINGLE CURB INLET	86.50	80.10	24" RCP	
			82.55	15" RCP	
			80.60	18" RCP	
S-444	SINGLE CURB INLET	86.50	82.75	15" RCP	
S-445	SINGLE CURB INLET	86.08	80.90	18" RCP	
			81.15	15" RCP	
S-446	SINGLE CURB INLET	85.43	81.50	15" RCP	
			81.50	15" RCP	
S-447	SINGLE CURB INLET	85.43	81.55	15" RCP	
S-800	STD. MES	-	80.25	15" HP	
S-801	SINGLE CURB INLET	86.46	80.80	15" HP	W
			82.35	15" RCP	SE
S-802	SINGLE CURB INLET	86.36	82.50	15" RCP	
			82.50	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	15" HP	
			80.50	15" RCP	
S-808	SINGLE CURB INLET	86.60	80.80	15" RCP	
			80.80	15" RCP	
S-809	SINGLE CURB INLET	86.74	80.95	15" RCP	
			80.95	15" RCP	
S-810	SINGLE CURB INLET	86.26	81.20	15" RCP	S
			82.00	15" RCP	E
S-811	SINGLE CURB INLET	85.89	82.15	15" RCP	

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.

KEYMAP

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	11/21/22	PER CITY COMMENTS	JEW

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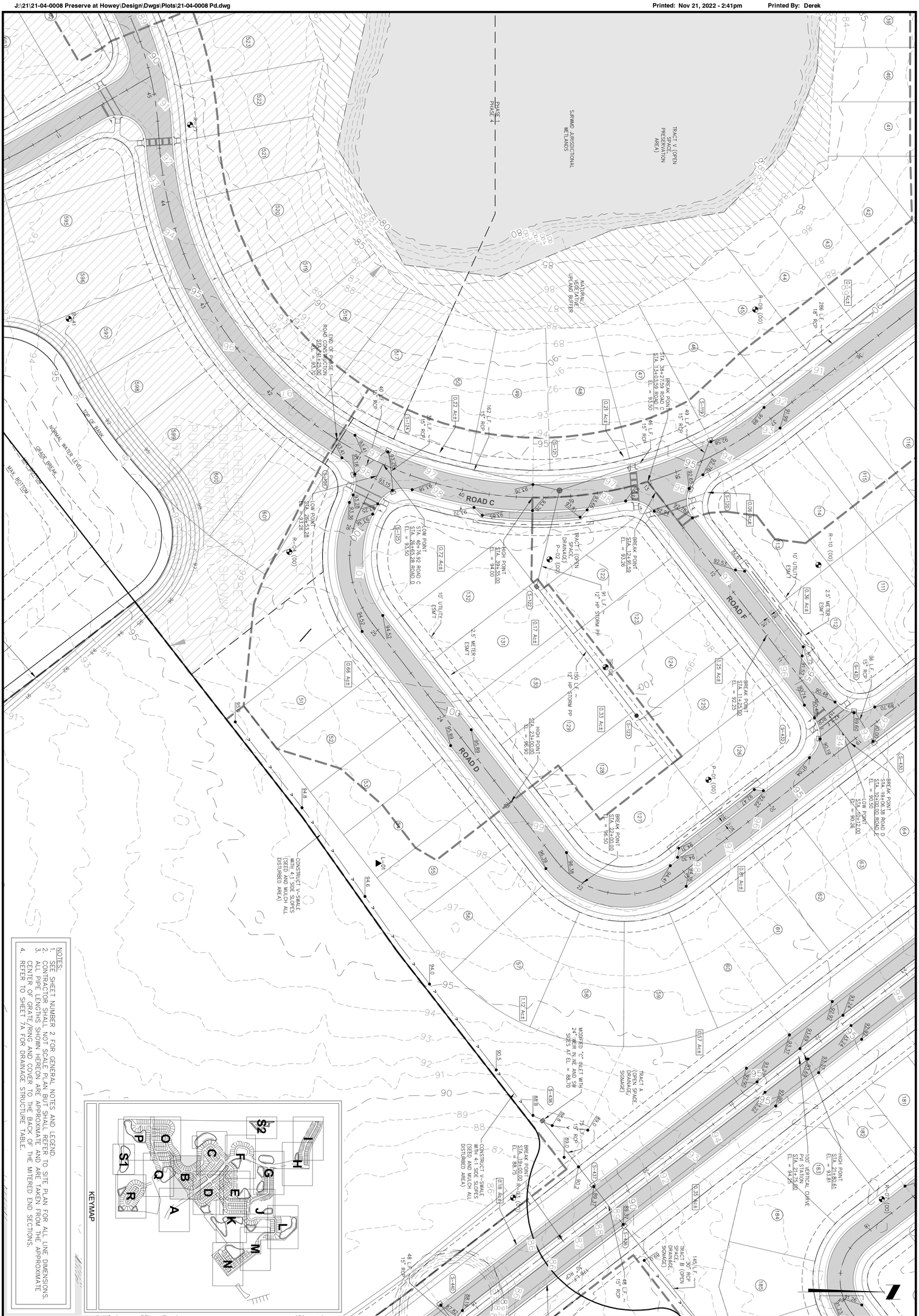
Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
O.C.: RCW
Date: AUGUST 2022
Scale: 1" = 40'

Sheet 7A



NOTES:
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3. ALL PIPE LENGTHS SHOWN HEREON ARE APPROXIMATE AND ARE TAKEN FROM THE APPROXIMATE CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.

Sheet 7B

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

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

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

PAVING AND DRAINAGE PLAN

No.	Date	Revision	By
1			
2			
3			
4			
5			
6			

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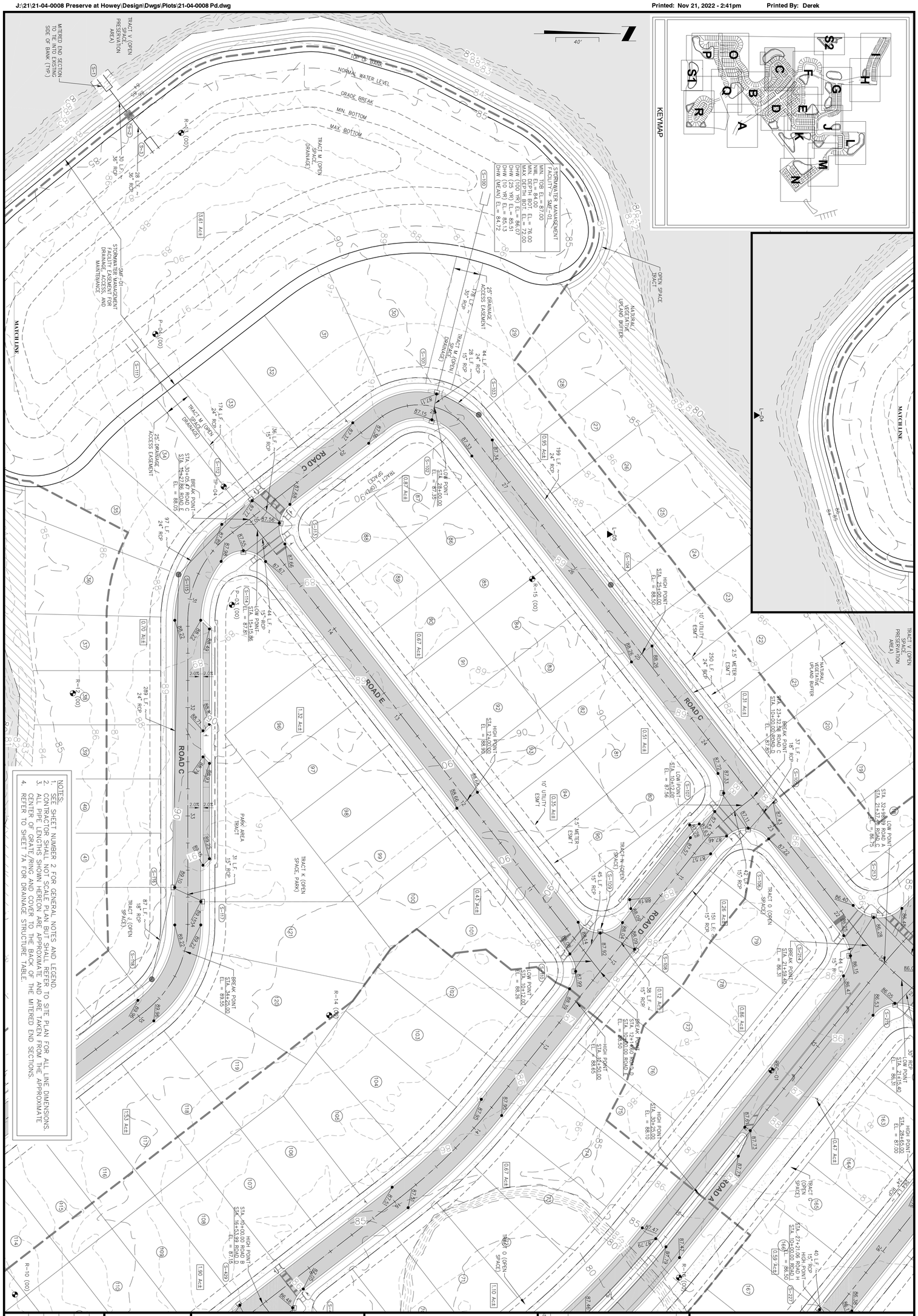

Sheet: 7C	Project No.: 21-04-0008	JUSTIN ELLERY WILLIAMS P.E. NUMBER: 69260 Reg. Engineer	HILLSIDE GROVE HOWEY IN THE HILLS PREPARED FOR LENNAR HOMES - ORLANDO	PAVING AND DRAINAGE PLAN
	Designed: JEW			
	Drawn: JEW			
	Checked: JEW			
	Date: AUGUST 2022			
	Scale: 1" = 40'			
	QC: RCW			

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

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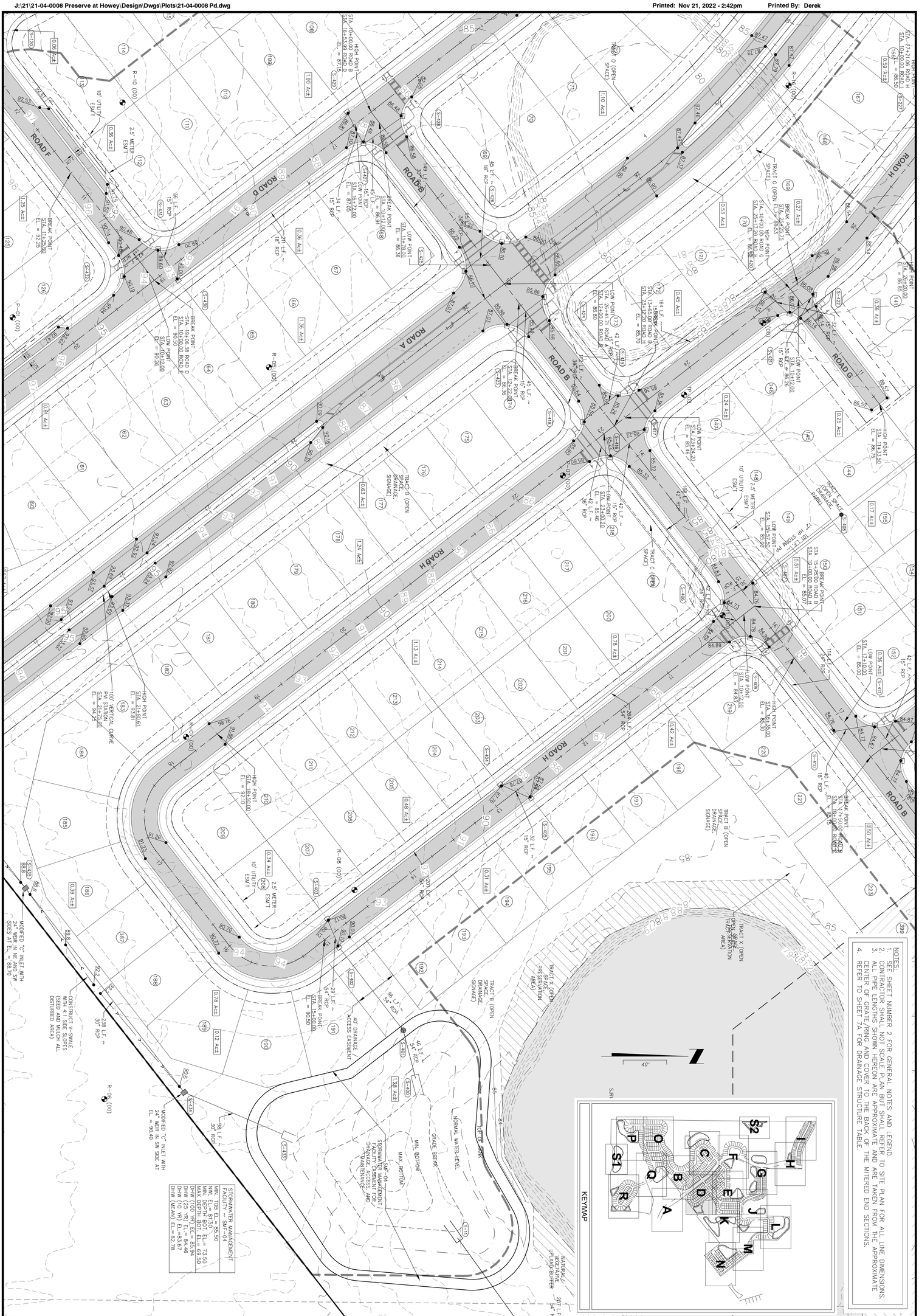

Sheet	Project No.	Designed:	Drawn:	Checked:	Date:	Scale:
7D	21-04-0008	JEW	JEW	RCW	AUGUST 2022	1" = 40'

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

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

PAVING AND DRAINAGE PLAN

No.	Date	Revision	By
1			
2			
3			
4			
5			
6			

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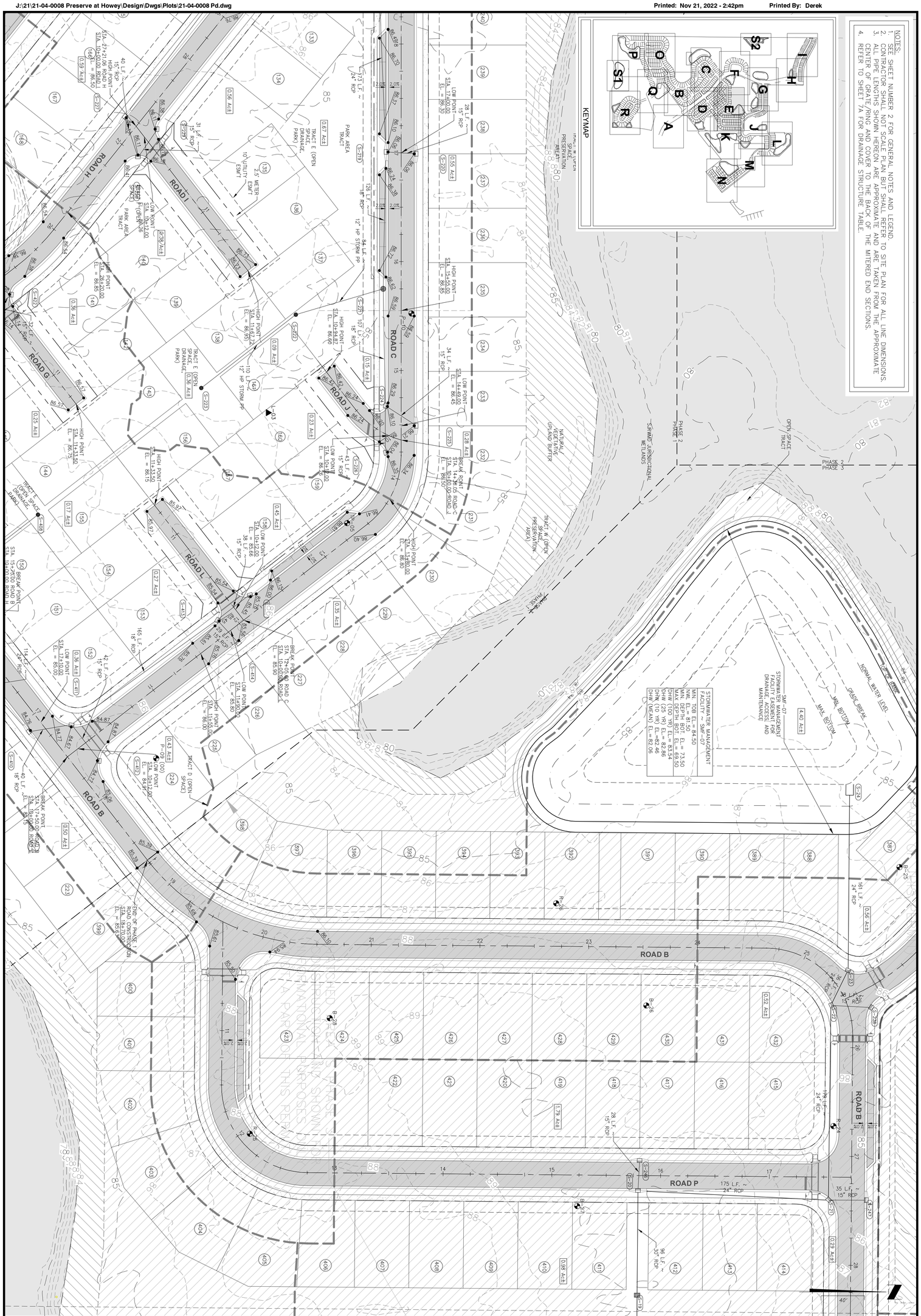
NOTES:
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2. CONTRACTOR SHALL NOT SCALE PLAN BUT SHALL REFER TO SITE PLAN FOR ALL LINE DIMENSIONS.
3. ALL PIPE LENGTHS SHOWN HEREON ARE APPROXIMATE AND ARE TAKEN FROM THE APPROXIMATE CENTER OF GRATE/RING AND COVER TO THE BACK OF THE MITERED END SECTIONS.
4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.
KEYMAP
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 M
ROAD N
ROAD P
ROAD Q
ROAD R
ROAD S1
ROAD S2
TRACT E (OPEN SPACE, DRAINAGE, PARK)
TRACT D (OPEN SPACE)
TRACT W (OPEN SPACE, PRESERVATION AREA)
PARK AREA TRACT
OPEN SPACE TRACT
NATURAL UPLAND BUFFER
SEWAGE LIFT STATION
SMF-07
STORMWATER MANAGEMENT FACILITY ~ SMF-07
MAX. DEPTH BOT. EL= 73.50
NWL EL= 81.50
MAX. DEPTH BOT. EL= 79.50
DHW (100 YR) EL= 83.54
DHW (25 YR) EL= 82.86
DHW (1 YR) EL= 82.66
DHW (MEAN) EL= 82.06
NORMAL WATER LEVEL
MAX. BOTTOM
GRADE BREAK
4.40 Ac±
PHASE 2 PHASE 1
PHASE 2 PHASE 3
SEWAGE LIFT STATION
SEWAGE LIFT STATION
SEWAGE LIFT STATION

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

Printed: Nov 21, 2022 - 2:43pm

Printed By: Derek

NOTES:
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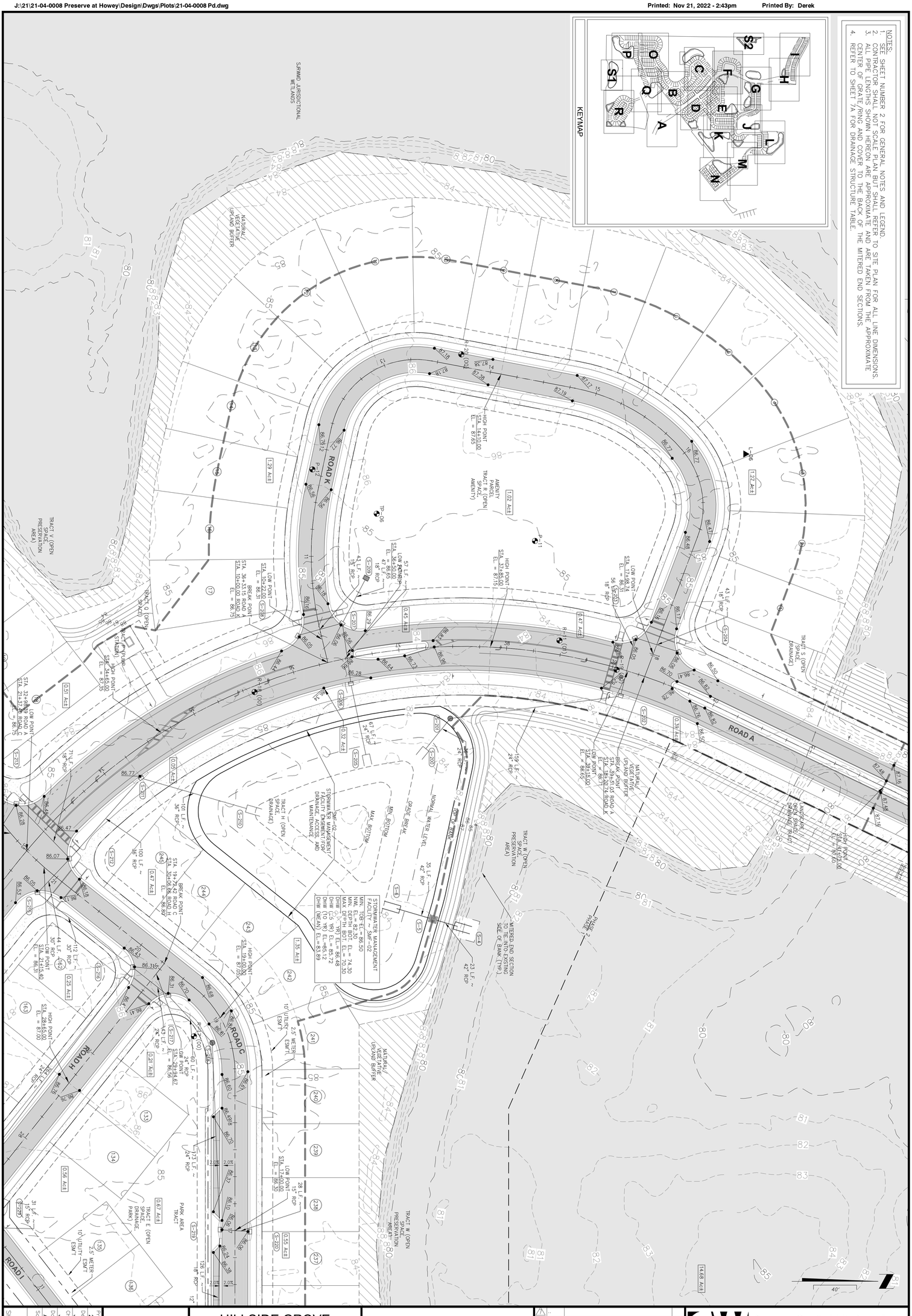
KEYMAP


ROAD K
ROAD A
ROAD C
ROAD H
ROAD I
S.J.R.W.M.D. JURISDICTIONAL WETLANDS
NATURAL VEGETATIVE UPLAND BUFFER
TRACT V (OPEN SPACE, PRESERVATION AREA)
TRACT Q (OPEN SPACE, DRAINAGE)
TRACT S (OPEN SPACE, DRAINAGE)
TRACT H (OPEN SPACE, DRAINAGE)
TRACT E (OPEN SPACE, DRAINAGE, PARK)
TRACT W (OPEN SPACE, PRESERVATION AREA)
AMENITY PARK (OPEN SPACE AMENITY)
PARK AREA TRACT
STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE MAINTENANCE AND ACCESS
MAX. BOTTOM
NORMAL WATER LEVEL
GRADE BREAK
STORMWATER MANAGEMENT FACILITY ~ SMF-02
MIN. ELEV. EOB = 86.50
MIN. ELEV. BOT. = 74.30
MAX. DEPTH BOT. EL. = 74.30
MAX. DEPTH TOP EL. = 86.48
DHW (2.5 YR) EL. = 85.72
DHW (10 YR) EL. = 85.89
DHW (100 YR) EL. = 86.89
MITERED END SECTION TO TIE INTO EXISTING SIDE OF BANK (TYP.)
10' UTILITY ESMT.
2.5' METER ESMT.
HIGH POINT STA. 144+10.00 EL. = 87.85
HIGH POINT STA. 32+65.00 EL. = 87.00
HIGH POINT STA. 28+65.00 EL. = 87.00
HIGH POINT STA. 19+75.42 ROAD C EL. = 87.05
HIGH POINT STA. 21+15.40 EL. = 86.31
LOW POINT STA. 32+80.00 ROAD A EL. = 86.75
LOW POINT STA. 17+58.14 EL. = 86.65
LOW POINT STA. 23+94.67 EL. = 86.58
LOW POINT STA. 28+35.00 EL. = 86.65
LOW POINT STA. 30+40.00 EL. = 86.89
LOW POINT STA. 19+22.00 EL. = 86.31
BREAK POINT STA. 36+50.00 ROAD K EL. = 86.65
BREAK POINT STA. 104+50.00 ROAD K EL. = 86.75
BREAK POINT STA. 21+35.00 ROAD A EL. = 86.31
BREAK POINT STA. 28+35.00 ROAD A EL. = 86.65
BREAK POINT STA. 19+75.42 ROAD C EL. = 86.89
LOW POINT STA. 30+40.00 EL. = 86.89
LOW POINT STA. 32+80.00 ROAD A EL. = 86.75
LOW POINT STA. 21+35.00 EL. = 86.31
LOW POINT STA. 23+94.67 EL. = 86.58
LOW POINT STA. 28+35.00 EL. = 86.65
LOW POINT EL. = 86.30
TP-06
S-209
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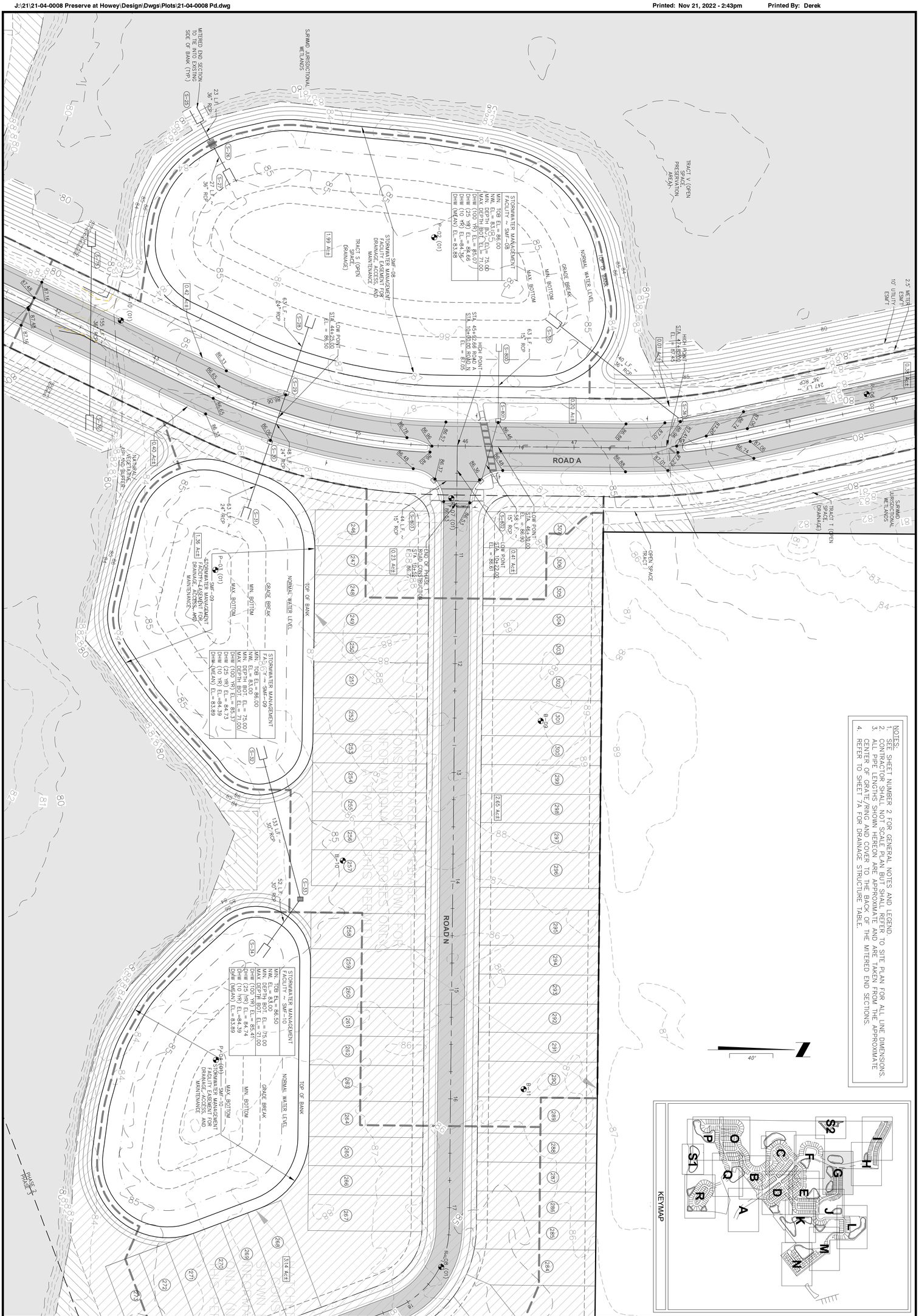

Sheet: 7G	Project No.: 21-04-0008	JUSTIN ELLERY WILLIAMS P.E. NUMBER: 69260 Reg. Engineer	HILLSIDE GROVE HOWEY IN THE HILLS PREPARED FOR LENNAR HOMES - ORLANDO
Date: AUGUST 2022	Designed: JEW		PAVING AND DRAINAGE PLAN
Scale: 1" = 40'	Drawn: JEW		
	Checked: RCW		

No.	Date	Revision	By
1			
2			
3			
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5			
6			

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NUMBER 2 ROAD (EXISTING)

ROAD O

ROAD A

MILL AND RESURFACE 1.0" EXISTING ASPHALT AND REPLACE WITH 1.0" SP 9.5 ASPHALTIC CONCRETE SURFACE COURSE (MATCHING EXISTING ASPHALT)

EXISTING EDGE OF PAVEMENT

PROPOSED ROADWAY TO MATCH EXISTING GRADES AT EDGE OF PAVEMENT AND PROVIDE SMOOTH TRANSITION

OPEN SPACE TRACT

MINIMUM 1.0% SLOPE FROM PAVEMENT EDGE TO INLETS (TYP.)

LOW POINT
STA. 57+45.86
EL. = 86.57±
(MATCH EXISTING EDGE OF PAVEMENT)

HIGH POINT
STA. 55+77.13 ROAD A
STA. 10+00.00 ROAD O
EL. = 87.45

LOW POINT
STA. 10+22.00
EL. = 87.01

END OF PHASE 1 ROAD CONSTRUCTION
STA. 10+79.19
EL. = 87.22

HIGH POINT
STA. 51+75.00
EL. = 86.95

LOW POINT
STA. 53+00.00
EL. = 86.50

LOW POINT
STA. 50+50.00
EL. = 86.50

51 L.F. ~ 15" RCP

125 L.F. ~ 15" RCP

62 L.F. ~ 15" RCP

114 L.F. ~ 15" RCP

92 L.F. ~ 15" RCP

85 L.F. ~ 36" RCP

48 L.F. ~ 15" RCP

255 L.F. ~ 36" RCP

123 L.F. ~ 36" RCP

48 L.F. ~ 15" RCP

0.09 Ac±

0.14 Ac±

0.04 Ac±

0.07 Ac±

0.09 Ac±

0.40 Ac±

0.26 Ac±

0.41 Ac±

0.38 Ac±

TOP OF BANK

NORMAL WATER LEVEL

GRADE BREAK

STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE

P-01 (01)

SMF-11

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.= 83.89

MITERED END SECTION TO-TIE INTO EXISTING SIDE SLOPE BANK (TYP.)

TRACT V (OPEN SPACE, PRESERVATION AREA)

TRACT S (OPEN SPACE, DRAINAGE)

TRACT T (OPEN SPACE, DRAINAGE)

TRACT Z (OPEN SPACE, PRESERVATION AREA)

SJRWMD JURISDICTIONAL WETLANDS

PHASE 2
PHASE 1

7.25 Ac±

B-04 B-0 B-08 B-06 R-02 (01) R-03 (01) R-04 (01) R-05 R-06 (01)

S-810 S-811 S-809 S-808 S-807 S-806 S-805 S-804 S-42 S-41 S-39 S-38 S-37 S-74 S-73

2.5' METER ESM'T

10' UTILITY ESM'T

ATTACHED AREA IS PHASE 1 INFORMATION AND SHOWN FOR REFERENCE PURPOSES ONLY

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.

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No	Date	Revision	By
A1			
A2			
A3			
A4			
A5			
A6			

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:	Drawn:
JEW	JEW
Checked:	O.C.:
JEW	RCW

Date: AUGUST 2022

Scale: 1" = 40'

Sheet 7H

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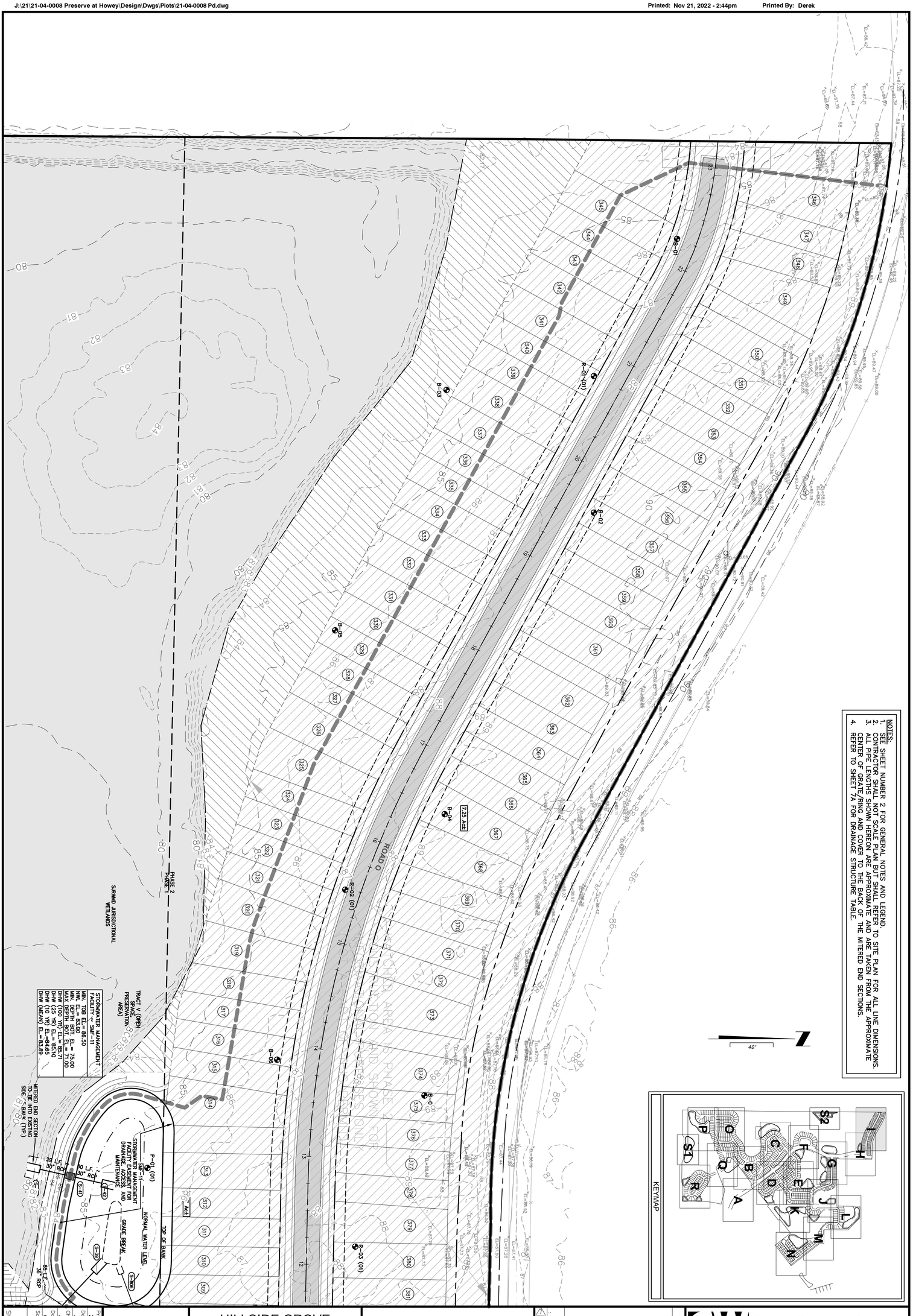

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Sheet 71

Project No: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
Date: AUGUST 2022
Scale: 1" = 40'

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

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

PAVING AND DRAINAGE PLAN

No.	Date	Revision	By
1			
2			
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4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.

ROAD A

ROAD B

ROAD D

HOUSE 2 PHASE 3

NORMAL WATER LEVEL

GRADE BREAK

MAX BOTTOM

MIN BOTTOM

TOP OF BANK

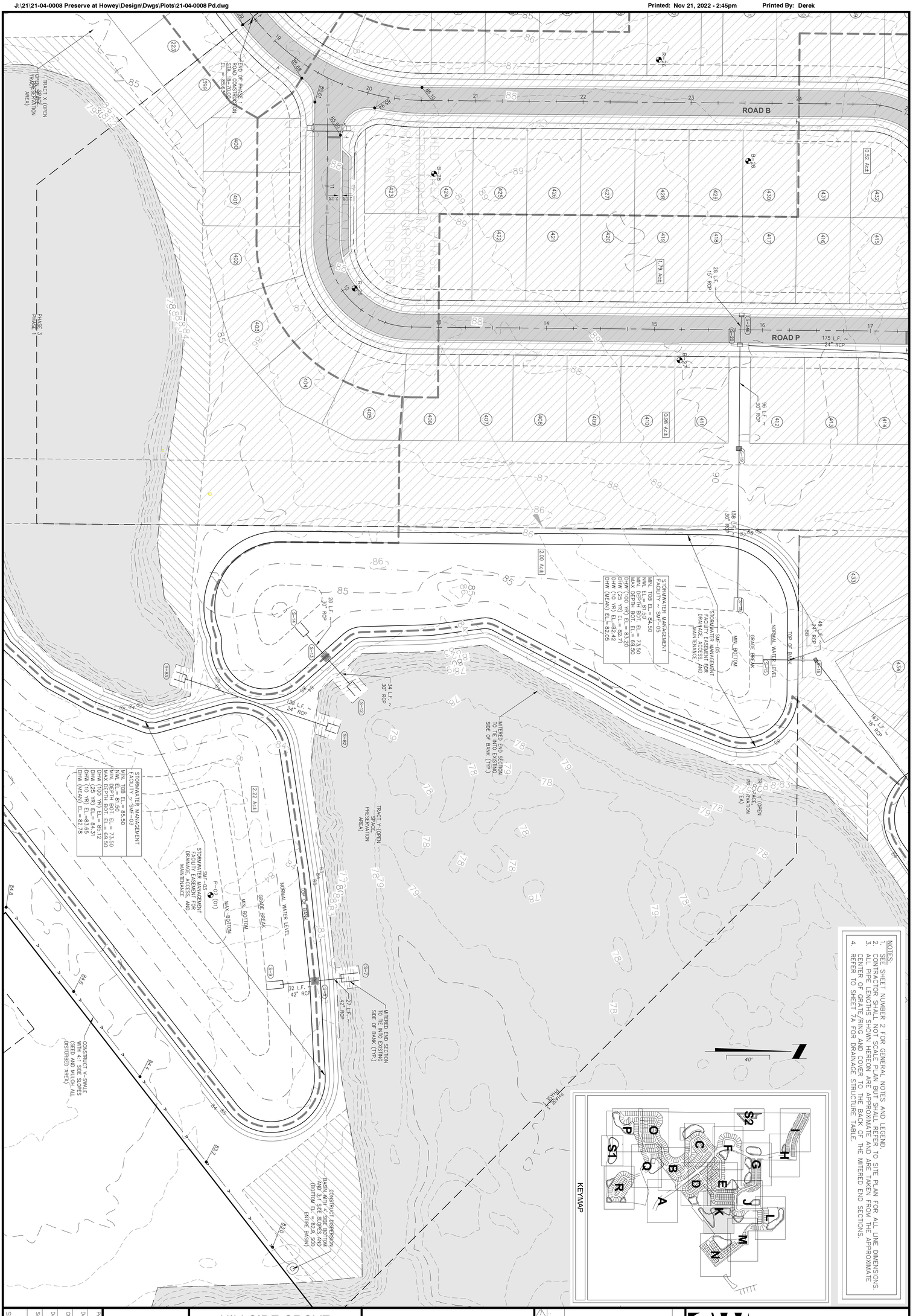
WEIRED DUE SECTION TO TIE INTO EXISTING SIDE OF BANK (TYP.)

STORMWATER MANAGEMENT FACILITY (WET) MIN. TOB EL.= 86.00 NWL EL.= 84.00 MIN. BOTTOM EL.= 78.00 MAX DEPTH BOT. EL.= 72.00 DHW (100 YR) EL.= 84.79 DHW (25 YR) EL.= 84.57 DHW (10 YR) EL.= 84.39 DHW (MEAN) EL.= 84.16

STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE ACCESS AND MAINTENANCE

KEYMAP

| | | |



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

Sheet: 7K	Project No: 21-04-0008	HILLSIDE GROVE
Date: AUGUST 2022	Designed: JEW	HOWEY IN THE HILLS
Scale: 1" = 40'	Drawn: JEW	PREPARED FOR
	Checked: RCW	LENNAR HOMES - ORLANDO

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

PAVING AND DRAINAGE PLAN

No.	Date	Revision	By
1			
2			
3			
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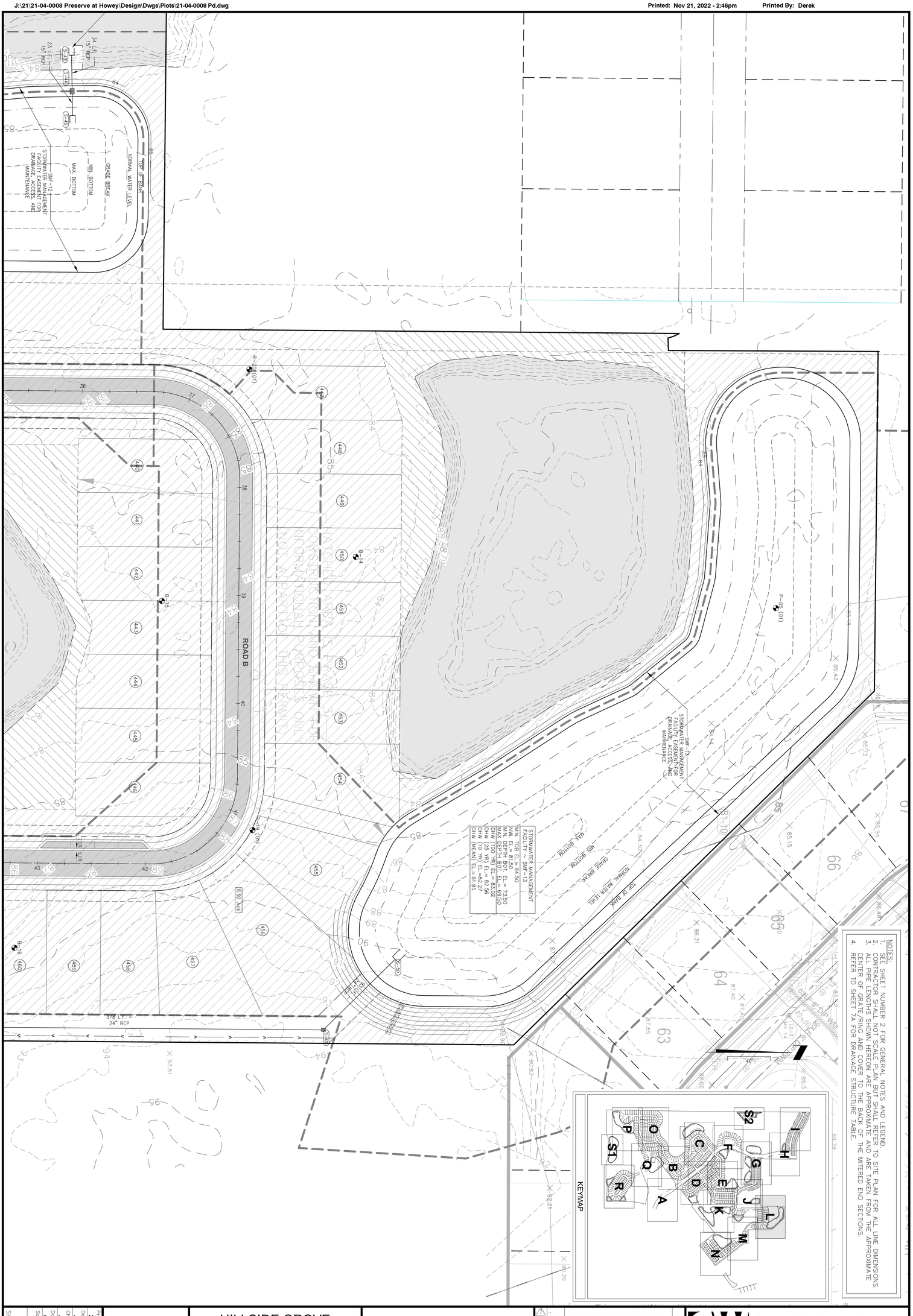

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4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.

Sheet 7L

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

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

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

PAVING AND DRAINAGE PLAN

No.	Date	Revision	By
1			
2			
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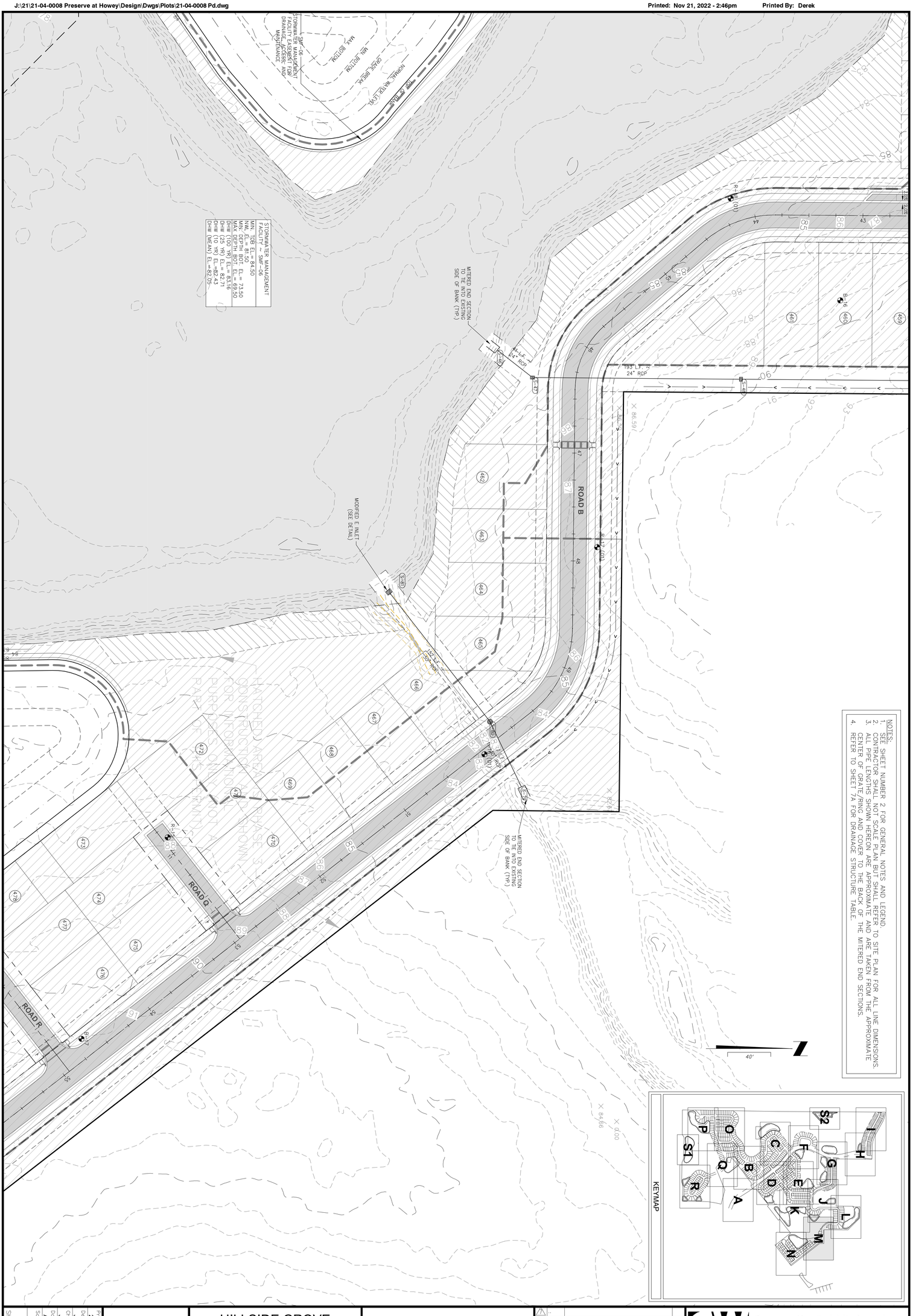

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4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.

KEYMAP

Sheet: 7M

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

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

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

PAVING AND DRAINAGE PLAN

No.	Date	Revision	By
1			
2			
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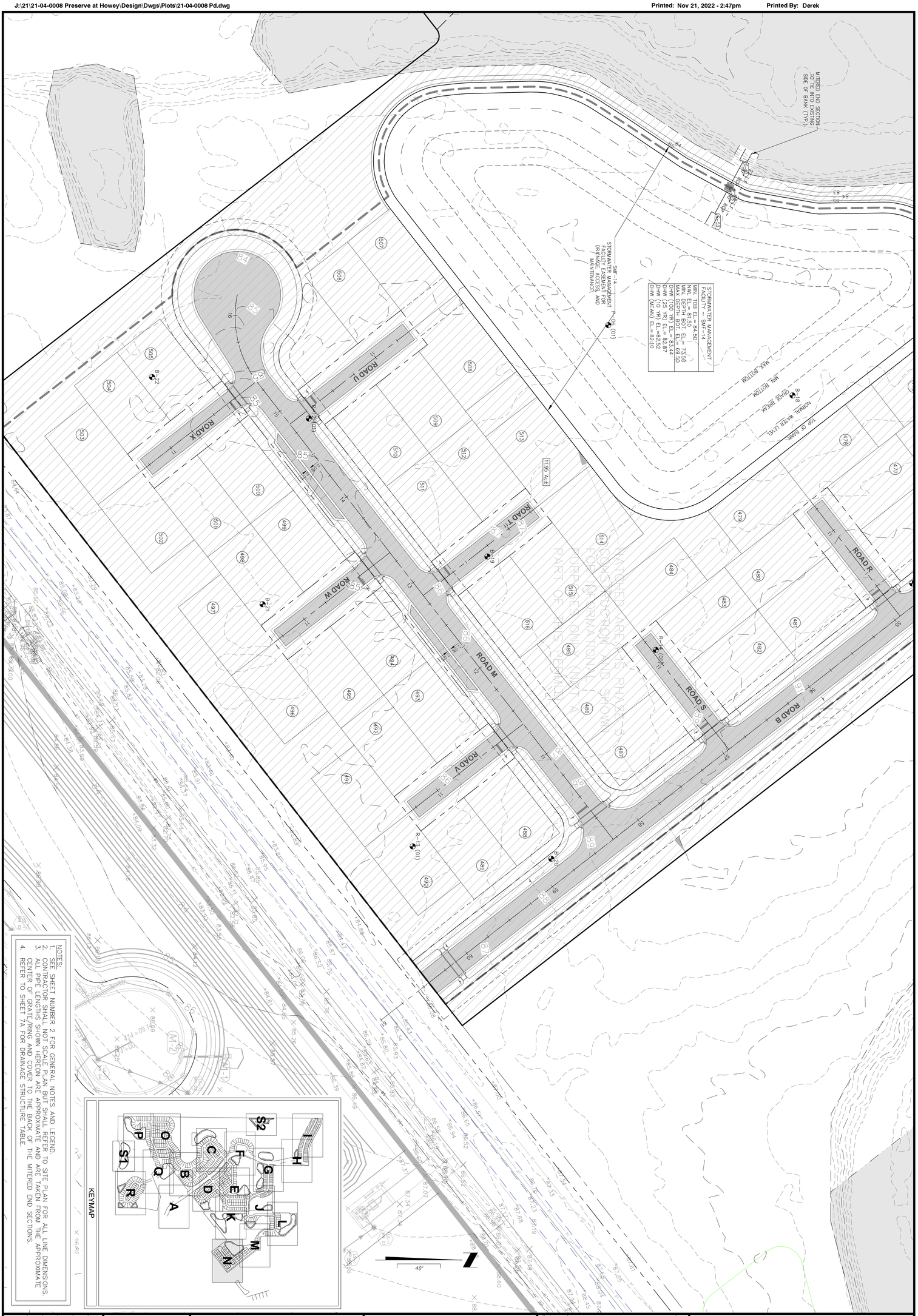

Sheet 7N

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

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

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

PAVING AND DRAINAGE PLAN

No.	Date	Revision	By
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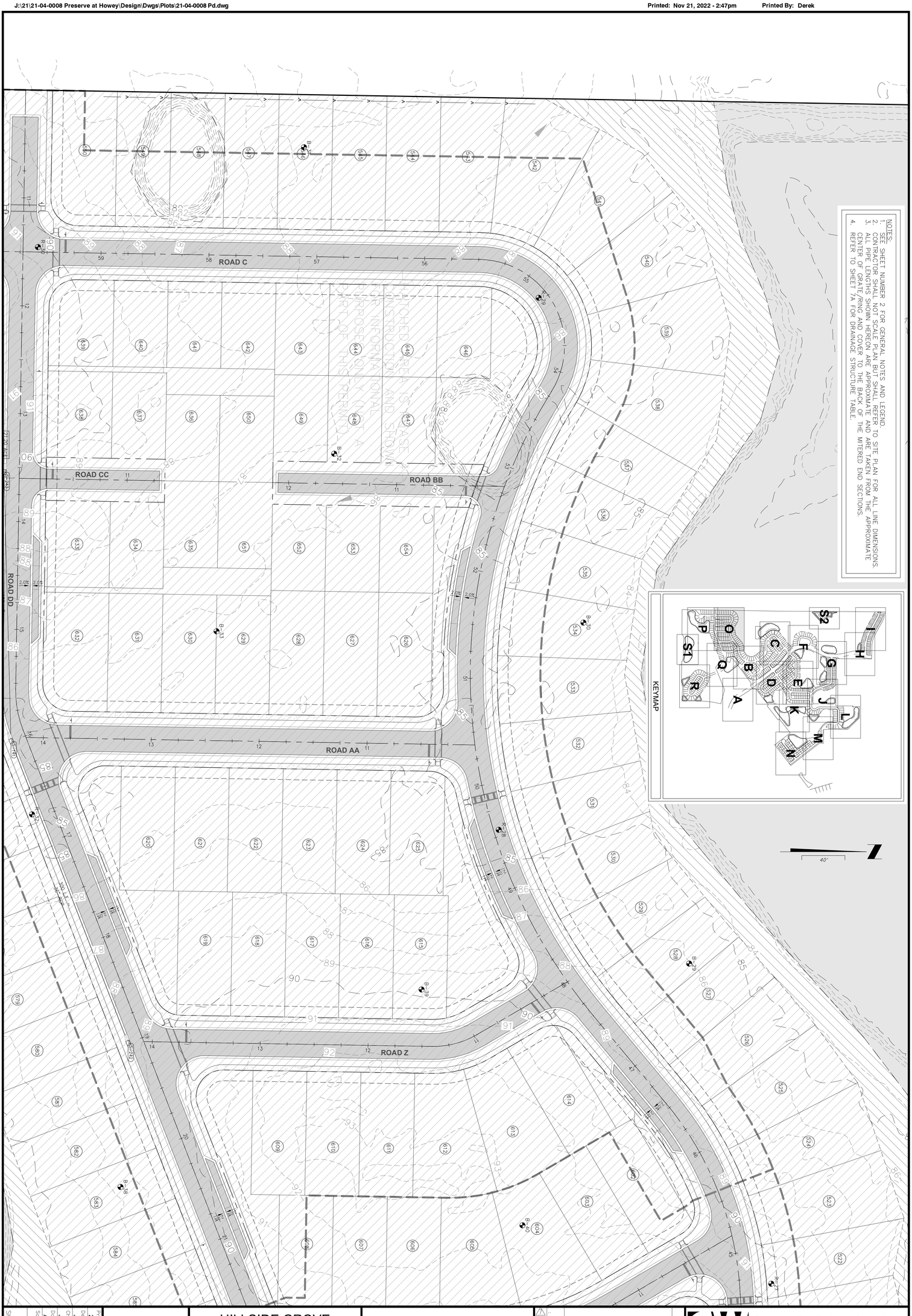

Sheet 7O

Project No: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: ROW
Date: AUGUST 2022
Scale: 1" = 40'

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

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

PAVING AND DRAINAGE PLAN

No.	Date	Revision	By
1			
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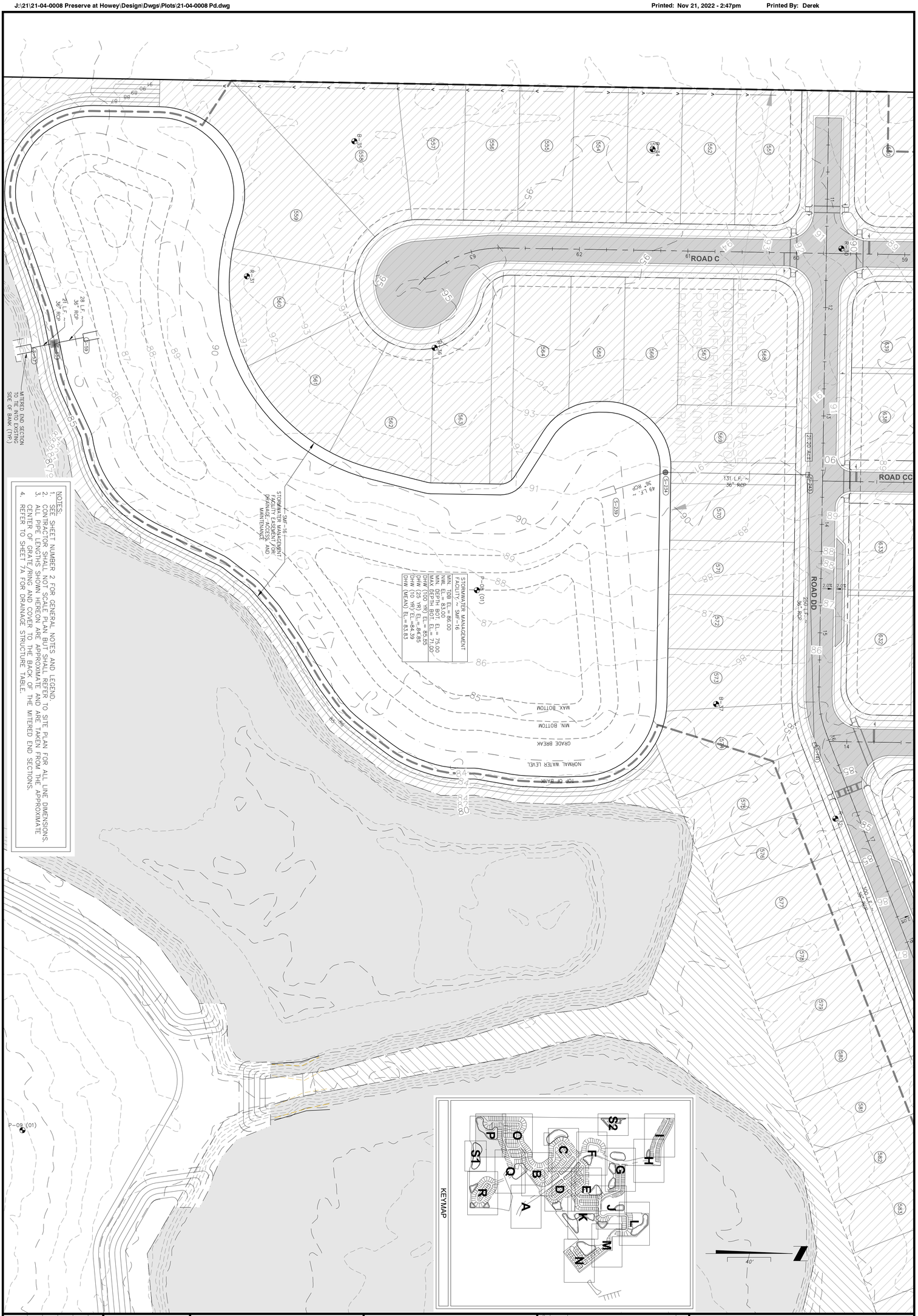

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4. REFER TO SHEET 7A FOR DRAINAGE STRUCTURE TABLE.

Sheet	Project No.	Designed:	Drawn:	Checked:	Date:	Scale:
7P	21-04-0008	JEW	JEW	RCW	AUGUST 2022	Custom

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

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

PAVING AND DRAINAGE PLAN

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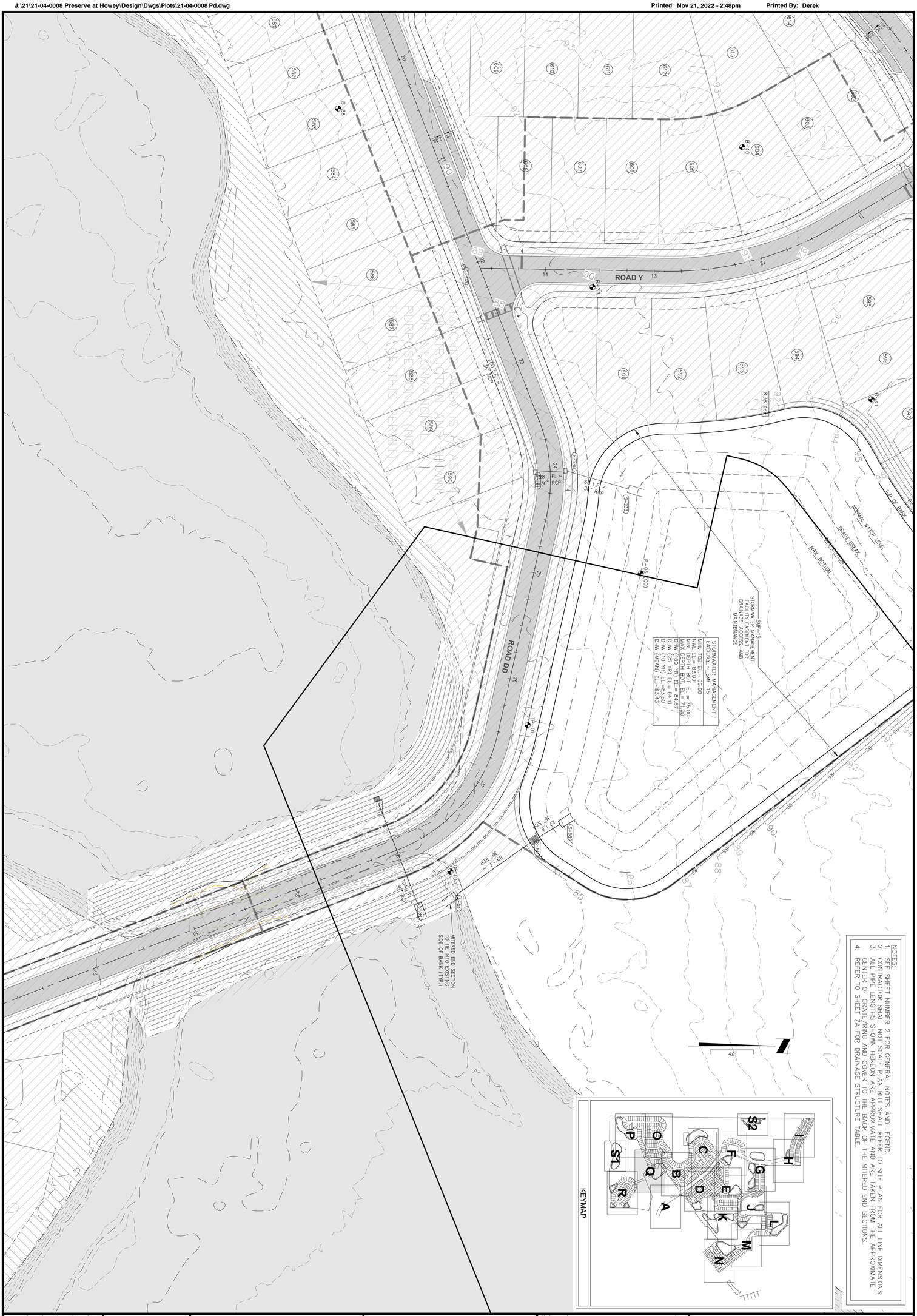

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Sheet: 7Q

Project No: 21-04-0008

Designed: JEW

Drawn: JEW

Checked: RCW

Date: AUGUST 2022

Scale: 1" = 40'

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

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

PAVING AND DRAINAGE PLAN

No.	Date	Revision	By
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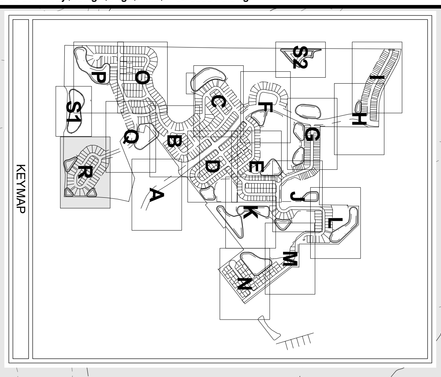
KEYMAP



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.= 84.59
DHW (25 YR) EL.= 84.21
DHW (10 YR) EL.= 83.73
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.= 84.36
DHW (25 YR) EL.= 84.38
DHW (10 YR) EL.= 83.73
DHW (MEAN) EL.= 82.91

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.= 84.28
DHW (25 YR) EL.= 84.30
DHW (10 YR) EL.= 83.70
DHW (MEAN) EL.= 82.89

ROAD FF
ROAD EE
1.39 Ac±
3.04 Ac±
0.55 Ac±
0.39 Ac±
0.51 Ac±
0.45 Ac±
1.18 Ac±
0.58 Ac±
2.44 Ac±
1.17 Ac±
151 L.F. ~ 36" RCP
144± L.F. ~ 36" RCP
88 L.F. ~ 36" RCP
14 L.F. ~ 36" RCP
80 L.F. ~ 36" RCP
18 L.F. ~ 36" RCP
50 L.F. ~ 36" RCP
6 L.F. ~ 36" RCP
NORMAL WATER LEVEL
TOP OF BANK
GRADE BREAK
MITERED END SECTION TO TIE INTO EXISTING SIDE OF BANK (TYP.)
STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
SPIGOT
ZONE AE

Sheet: 7R	Project No.: 21-04-0008	HILLSIDE GROVE HOWEY IN THE HILLS PREPARED FOR LENNAR HOMES - ORLANDO	PAVING AND DRAINAGE PLAN
	Designed: JEW		
	Drawn: JEW		
	Checked: RCW		
	Date: AUGUST 2022		
	Scale: 1" = 40'		

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

No.	Date	Revision	By
1			
2			
3			
4			
5			
6			
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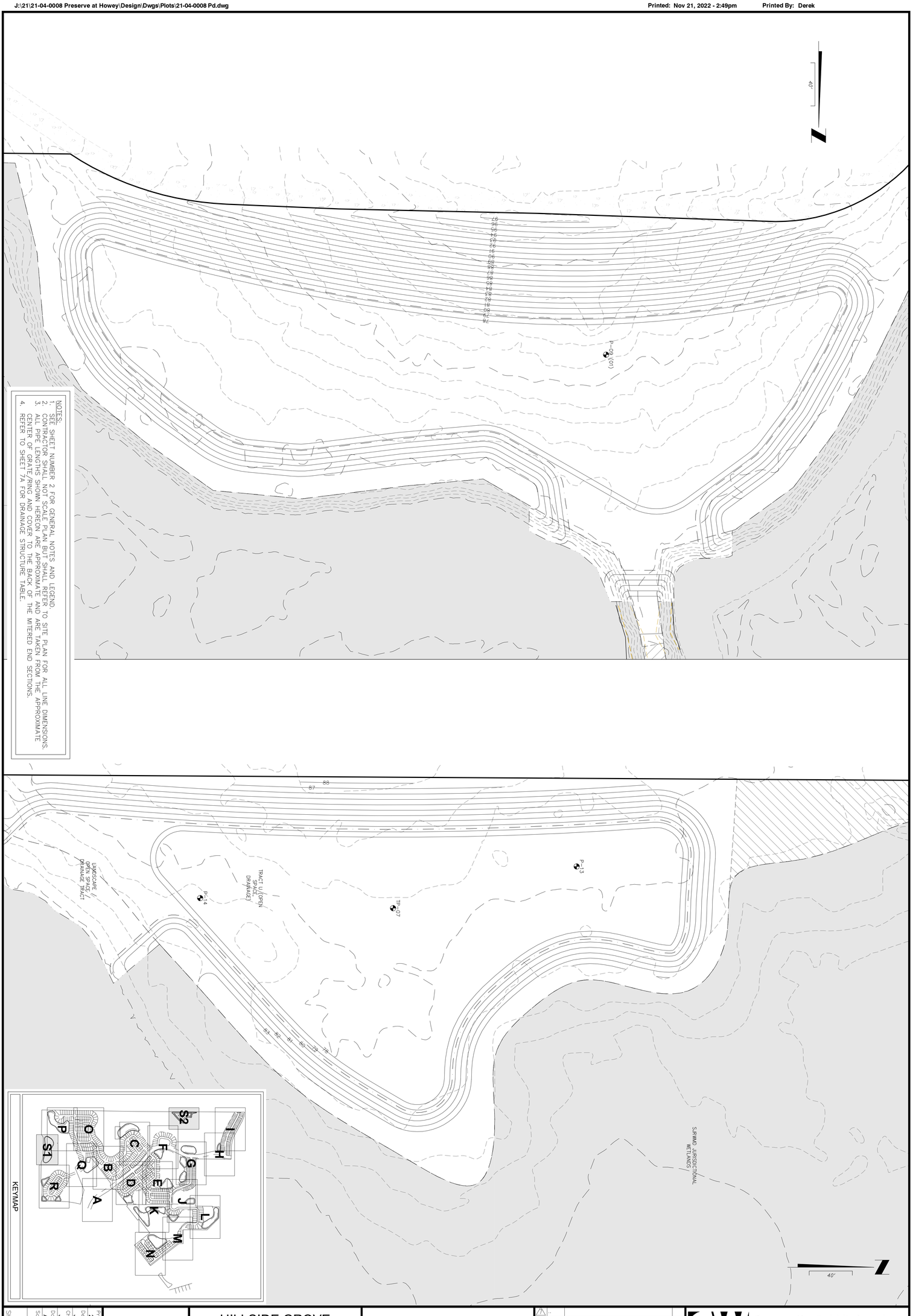

Sheet 7S

Project No: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
Approved: RCW
Date: AUGUST 2022
Scale: 1" = 40'

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

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

PAVING AND DRAINAGE PLAN

No.	Date	Revision	By
1			
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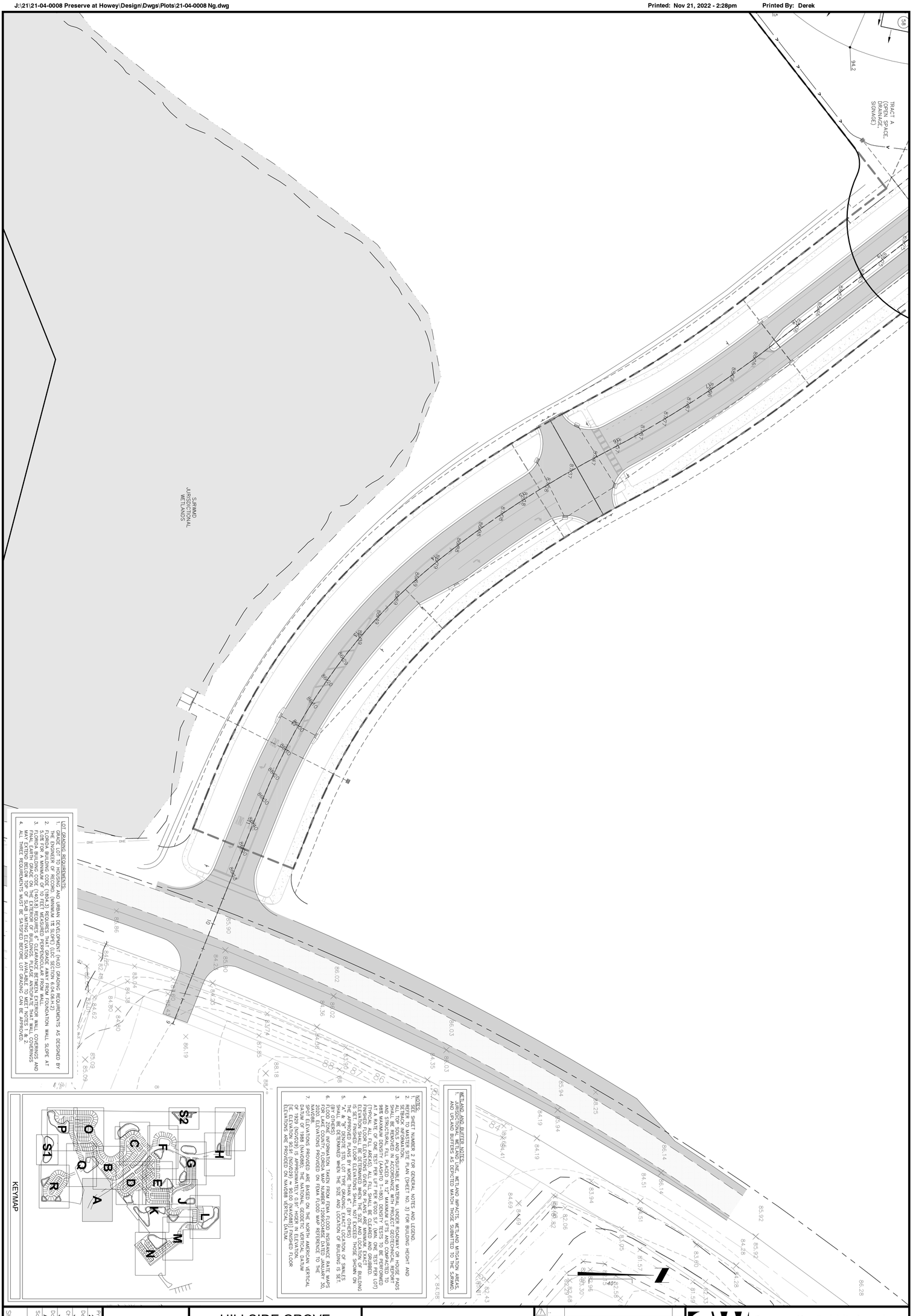

Sheet: 8A	Project No: 21-04-0008	JUSTIN ELLERY WILLIAMS P.E. NUMBER: 69260 Reg. Engineer	HILLSIDE GROVE HOWEY IN THE HILLS PREPARED FOR LENNAR HOMES - ORLANDO	NEIGHBORHOOD GRADING PLAN
	Designed: JEW			
	Drawn: JEW			
	Checked: RCW			
	Date: AUGUST 2022			
	Scale: 1" = 40'			

No.	Date	Revision	By
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FEMA FLOOD ZONE AE (EL= 83.6)

TRACT V (OPEN SPACE, PRESERVATION AREA)

SJRWMD JURISDICTIONAL WETLANDS

NATURAL VEGETATIVE UPLAND BUFFER

FEMA FLOOD ZONE X-SHADED

FEMA FLOOD ZONE X

TRACT C (OPEN SPACE, DRAINAGE)

PARK AREA (0.3 AC.)

TRACT B (OPEN SPACE, DRAINAGE, SIGNAGE)

TRACT A (OPEN SPACE, DRAINAGE, SIGNAGE)

PARK AREA (1.3 AC.)

TOP OF BANK

NORMAL WATER LEVEL

HATCHED AREA IS PHASE 2 CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES ONLY AND IS A PART OF A SEPARATE PERMIT

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.

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

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.

KEYMAP

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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: 89260
Reg. Engineer

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

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MATCH LINE

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.

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.= 85.51
DHW (10 YR) EL.= 85.13
DHW (MEAN) EL.= 84.72

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)
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.

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

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No.	Date	Revision	By
1			
2			
3			
4			
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6			

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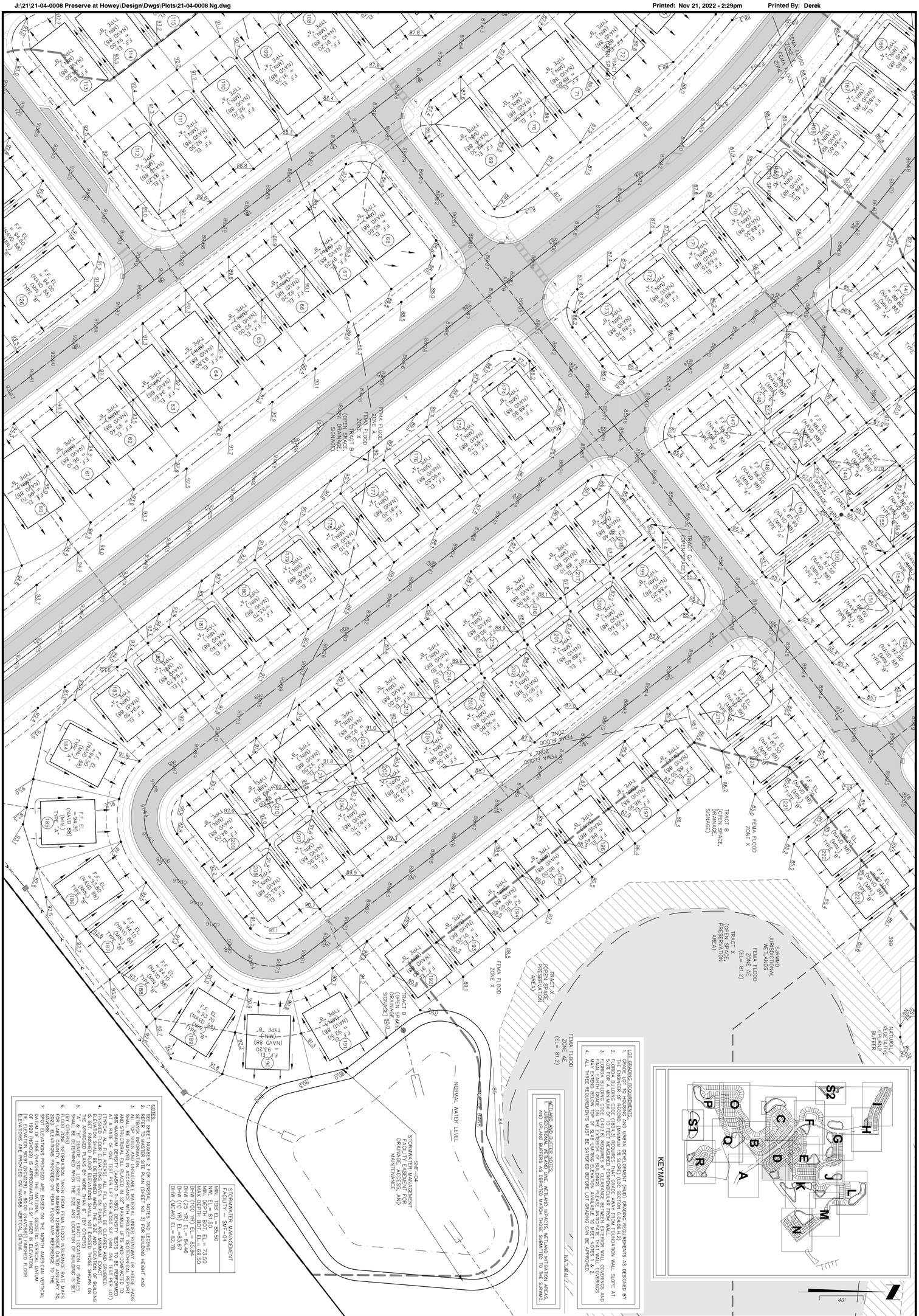
Project No:	21-04-0008
Designed:	JEW
Drawn:	JEW
Checked:	JEW
O.C.:	RCW
Date:	AUGUST 2022
Scale:	1" = 40'
Sheet	8C



NOTES:
1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. REFER TO ARCHITECTURAL SITE PLAN (SHEET NO. 3) FOR BUILDING HEIGHT AND SETBACK INFORMATION.
3. ALL STORMWATER MANAGEMENT FACILITIES AND CONVEYANCE SYSTEMS SHALL BE REMOVED IN ACCORDANCE WITH PROJECT GEOTECHNICAL REPORT RECOMMENDATIONS AND ALL APPLICABLE REGULATIONS.
4. FINISHED FLOOR ELEVATIONS GIVEN ON PLANS ARE MINIMUM. EXACT ELEVATIONS SHALL BE DETERMINED BY BUILDER AT TIME OF BUILDING PERMIT. AT A RATE OF ONE TEST PER LOT PER 6000 S.F. (MIN. ONE TEST PER LOT) FINISHED FLOOR ELEVATIONS SHALL NOT EXCEED THOSE SHOWN ON APPROVED PLANS BY MORE THAN 6", BY OTHERS).
5. THE APPROXIMATE LOCATION OF SWALES IS SET. FINISHED FLOOR ELEVATIONS SHALL BE DETERMINED WHEN THE SIZE AND LOCATION OF BUILDING IS SET.
6. FLOOD ZONE INFORMATION, TAKEN FROM FEMA FLOOD INSURANCE RATE MAPS 12095C0470F, EFFECTIVE DATE SEPTEMBER 25, 2009 AND 12095C0490F, EFFECTIVE JANUARY 50, 2020. ELEVATIONS PROVIDED ON FEMA FLOOD MAP REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) = 90.00 (NAVD88) [E. ELEVATION 89.91 (NGVD29) = 90.00 (NAVD88)]. FINISHED FLOOR ELEVATIONS ARE PROVIDED ON NAVD88 VERTICAL DATUM
7. SPOT ELEVATIONS PROVIDED ARE BASED ON THE NORTH AMERICAN VERTICAL

STORMWATER MANAGEMENT FACILITY ~ SMF-04
NORMAL WATER LEVEL EL= 81.50
MIN. DEPTH BOT. EL= 73.50
MAX. DEPTH BOT. EL= 73.50
DHW (100 YR) EL= 85.94
DHW (25 YR) EL= 84.46
DHW (10 YR) EL= 83.78
DHW (MEAN) EL= 82.78

LOT GRADING REQUIREMENTS:
1. GRADE LOT TO HOUSING AND URBAN DEVELOPMENT (HUD) GRADING REQUIREMENTS AS DESIGNED BY A REGISTERED ENGINEER.
2. FLORIDA BUILDING CODE (1804.3) REQUIRES THAT GRADE AWAY FROM FOUNDATION WALL SLOPE AT MIN. 6" WITHIN THE FIRST 10' OF LOT. EXCEPTIONS MAY BE MADE IN SOME CASES.
3. FLORIDA BUILDING CODE (1403.5) REQUIRES 8" CLEARANCE BETWEEN EXTERIOR WALL COVERINGS AND EXTERIOR GRADE ON THE ENTERIOR SIDE OF THE BUILDING. A CLEARANCE OF 4" MAY BE PERMITTED IF THE EXTERIOR WALL COVERING IS APPROVED FOR BELOW GRADE USE.
4. ALL THREE REQUIREMENTS MUST BE SATISFIED BEFORE LOT GRADING CAN BE APPROVED.

WETLAND IMPACTS: THE LIMITS OF THE WETLAND IMPACTS, WETLAND MITIGATION AREAS, AND UPLAND BUFFERS AS DEPICTED MATCH THOSE SUBMITTED TO THE SJRWMD.

MATCHLINE

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR

LENNAR HOMES - ORLANDO

NEIGHBORHOOD GRADING PLAN

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

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

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

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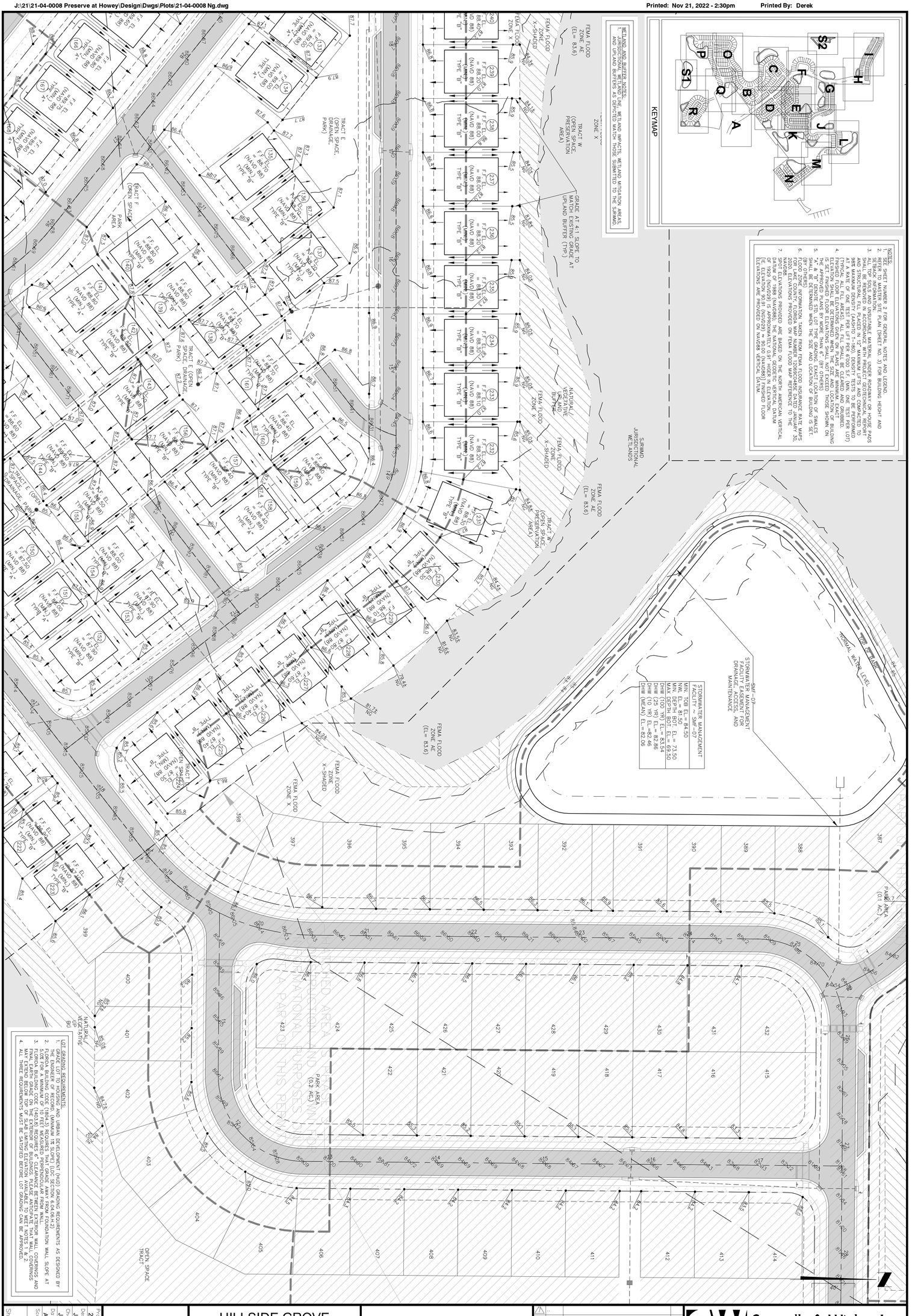
KEYMAP
NOTES:
1. SEE SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. REFER TO ARCHITECTURAL SITE PLAN (SHEET NO. 3) FOR BUILDING HEIGHT AND SETBACK INFORMATION.
3. SHALL BE REMOVED IN ACCORDANCE WITH PROJECT GEOTECHNICAL REPORTS AND STRUCTURAL FILL PLACED IN 12" MAXIMUM LIFTS AND COMPACTED TO MINIMUM 98% MODIFIED PROCTOR DENSITY (ASTM D-1557). TESTING SHALL BE PERFORMED AT A RATE OF ONE TEST PER LIFT PER 6000 S.F. (MIN. ONE TEST PER LOT)
4. FINISHED FLOOR ELEVATIONS GIVEN ON PLANS ARE MINIMUM EXACT ELEVATIONS. FINISHED FLOOR ELEVATION SHALL BE ADJUSTED TO FACTOR IN GRADING TOLERANCES AND ACTUAL HOUSE DIMENSIONS.
5. THE APPROVED PLANS BY MORE THAN 6" (BY OTHERS).
6. FLOOD ZONE INFORMATION TAKEN FROM FEMA FLOOD INSURANCE RATE MAPS (FIRM) PANEL NUMBER 12095C0510F, EFFECTIVE DATE SEPTEMBER 25, 2020. ELEVATIONS PROVIDED ON FIRM ARE REFERENCED TO NAVD 88.
7. ELEVATIONS PROVIDED ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) = 90.00 (NAVD88) FINISHED FLOOR ELEVATIONS ARE PROVIDED ON NAVD88 VERTICAL DATUM.
WETLAND AND BUFFER NOTES:
1. WETLAND LINE, WETLAND BUFFER, WETLAND MITIGATION AREAS, AND UPLAND BUFFER AS DEPICTED ARE NOT PROVIDED TO THESE DRAWINGS BY CONNELLY & WICKER INC.
LOT GRADING REQUIREMENTS:
1. THE GRADING SHOWN ON THIS PLAN IS CONCEPTUAL FOR URBAN DEVELOPMENT (WHD) GRADING REQUIREMENTS AS DESIGNED BY THE ENGINEER OF RECORD. MINIMUM 1% SLOPE). (LDC SECTION 6.06.06.H.2)
2. SLOPE FOR A MINIMUM OF 10 FEET MEASURED PERPENDICULAR FROM WALL.
3. FLORIDA BUILDING CODE (1403.5.1) REQUIRES 6" CLEARANCE BETWEEN EXTERIOR WALL COVERINGS AND THE FINISHED GRADE ADJACENT TO THE WALL. FOUNDATION WALL SLOPE AT MAY EXTEND BELOW TOP OF SLAB LIMITING ELEVATION ASHLARE TO MEET NOTES 1 & 2.
4. ALL THREE REQUIREMENTS MUST BE SATISFIED BEFORE LOT GRADING CAN BE APPROVED.
STORMWATER MANAGEMENT FACILITY – SMF-07
BOTTOM EL. = 81.50
NWL EL. = 81.50
MAX. DEPTH BOT. EL. = 73.50
MAX. DEPTH (100 YR) EL. = 73.50
DHW (100 YR) EL. = 83.54
DHW (25 YR) EL. = 82.86
DHW (10 YR) EL. = 82.56
DHW (MEAN) EL. = 82.06
SMF-07
STORMWATER MANAGEMENT FACILITY – MAINTENANCE ACCESS AND MAINTENANCE
TYPICAL WATER LEVEL
PARK AREA (0.1 AC)
PARK AREA (0.2 AC)
OPEN SPACE TRACT
TRACT F (OPEN SPACE, DRAINAGE, PARK)
TRACT E (OPEN SPACE, DRAINAGE, PARK)
TRACT W (OPEN SPACE, PRESERVATION AREA)
TRACT AK (OPEN SPACE, PRESERVATION AREA)
GRADE AT 4:1 SLOPE TO MATCH EXISTING GRADE AT UPLAND BUFFER (TYP.)
NATURAL/ VEGETATIVE UPLAND BUFFER
SJRWMD JURISDICTIONAL WETLANDS
FEMA FLOOD ZONE AE (EL= 83.6)
FEMA FLOOD ZONE X
FEMA FLOOD ZONE X-SHADED
FEMA FLOOD ZONE X
FEMA FLOOD ZONE AE (EL= 83.6)
FEMA FLOOD ZONE X-SHADED
FEMA FLOOD ZONE X
FEMA FLOOD ZONE AE (EL= 83.6)
FEMA FLOOD ZONE X-SHADED
FEMA FLOOD ZONE X
FEMA FLOOD ZONE AE (EL= 83.6)
FEMA FLOOD ZONE X

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Printed: Nov 21, 2022 - 2:30pm

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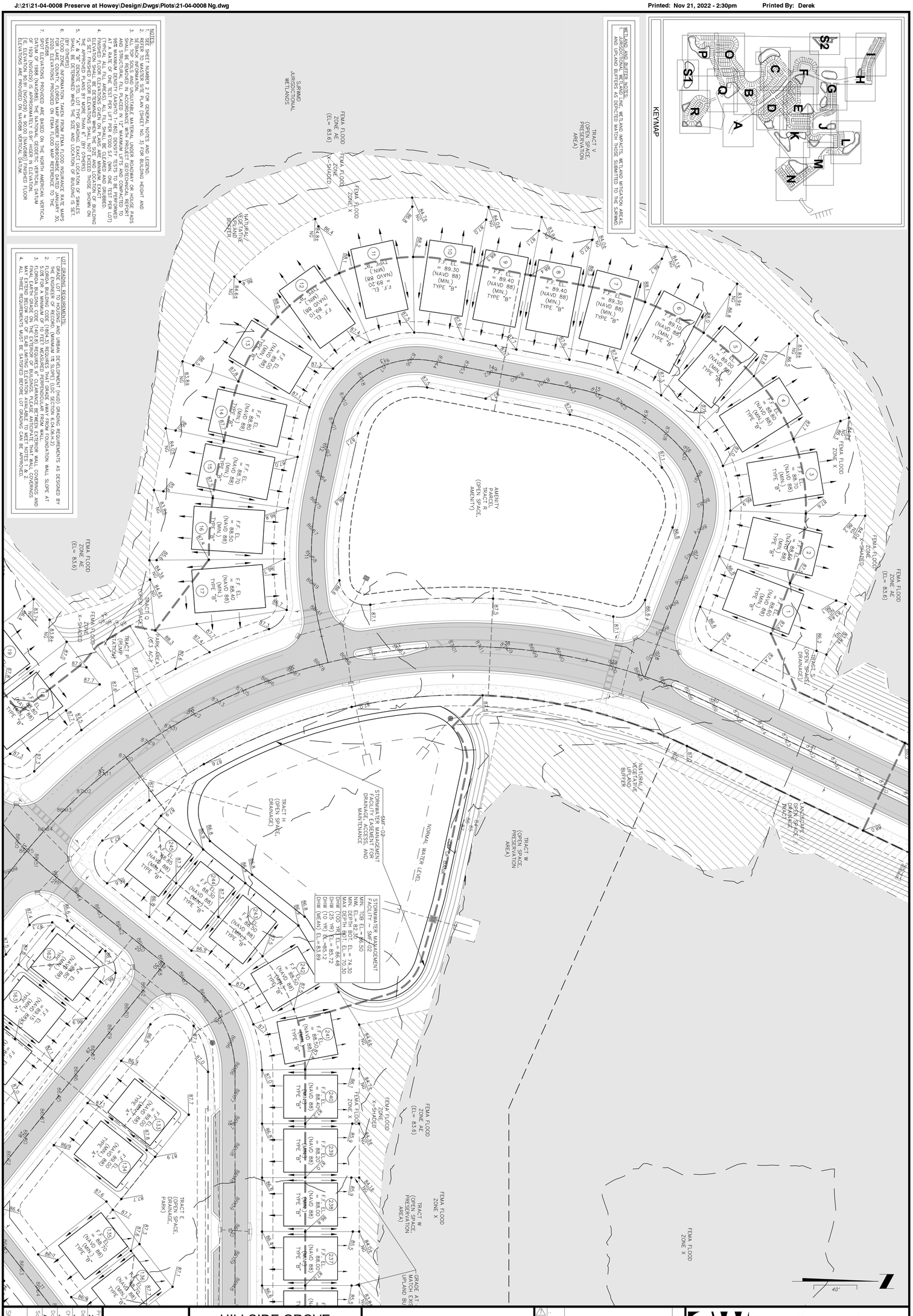

Sheet: 8F	Project No: 21-04-0008	HILLSIDE GROVE HOWEY IN THE HILLS PREPARED FOR LENNAR HOMES - ORLANDO	NEIGHBORHOOD GRADING PLAN	No. Date Revision By	Connelly & Wicker Inc. Planning · Engineering · Landscape Architecture 10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246 (904) 265-3030 FAX: (904) 265-3031 www.cwieng.com Florida Registry 3650 L.A. Number: LC26000311
	Designed: JEW Drawn: JEW Checked: JEW QC: RCW Date: AUGUST 2022 Scale: 1" = 40'	JUSTIN ELLERY WILLIAMS P.E. NUMBER: 69260 Reg. Engineer			

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KEYMAP

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.

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.

40'

SJRWMD JURISDICTIONAL WETLANDS

TRACT T (OPEN SPACE, DRAINAGE)

OPEN SPACE TRACT

OPEN SPACE TRACT

TOP OF BANK

NORMAL WATER LEVEL

FEMA FLOOD ZONE X

ANAGEMENT
–08
6.00
: EL.= 75.00

MAX DEPTH BOT. EL.= 71.00
DHW (100 YR) EL.= 85.07
DHW (25 YR) EL.= 84.66
DHW (10 YR) EL.=84.36
DHW (MEAN) EL.= 83.88

SMF-08 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE

TRACT S (OPEN SPACE, DRAINAGE)

SJRWMD JURISDICTIONAL WETLANDS

FEMA FLOOD ZONE AE (EL= 83.6)

FEMA FLOOD ZONE X-SHADED

SMF-09 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE

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.= 85.37
DHW (25 YR) EL.= 84.73
DHW (10 YR) EL.=84.39
DHW (MEAN) EL.= 83.89

NATURAL/ VEGETATIVE UPLAND BUFFER

NATURAL VEGETATIVE UPLAND BUFFER

FEMA FLOOD ZONE AE (EL= 83.6)

OPEN SPACE TRACT

SJRWMD JURISDICTIONAL WETLANDS

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.=84.39
DHW (MEAN) EL.= 83.89

SMF-10 WATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE

HATCHED AREA IS FOR CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES ONLY. NOT A PART OF THIS PERMIT.

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
A1			
A2			
A3			
A4			
A5			
A6			

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	

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OPEN SPACE TRACT

HATCHED AREA IS PHASE 2 CONSTRUCTION AND SHOWN FOR INFORMATIONAL PURPOSES ONLY

NATURAL VEGETATIVE UPLAND BUFFER

TOP OF BANK

NORMAL WATER LEVEL

SMF-11 STORMWATER MANAGEMENT FACILITY EASEMENT FOR DRAINAGE, ACCESS, AND MAINTENANCE

TRACT S (OPEN SPACE, DRAINAGE)

OPEN SPACE TRACT

TRACT V (OPEN SPACE, PRESERVATION AREA)

FEMA FLOOD ZONE X-SHADED

FEMA FLOOD ZONE AE (EL= 83.6)

SJRWMD JURISDICTIONAL WETLANDS

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.= 83.89

TRACT T (OPEN SPACE, DRAINAGE)

TRACT Z (OPEN SPACE, PRESERVATION AREA)

TRACT S (OPEN SPACE, DRAINAGE)

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.
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.

KEYMAP

Connelly & Wicker Inc.
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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
A1			
A2			
A3			
A4			
A5			
A6			

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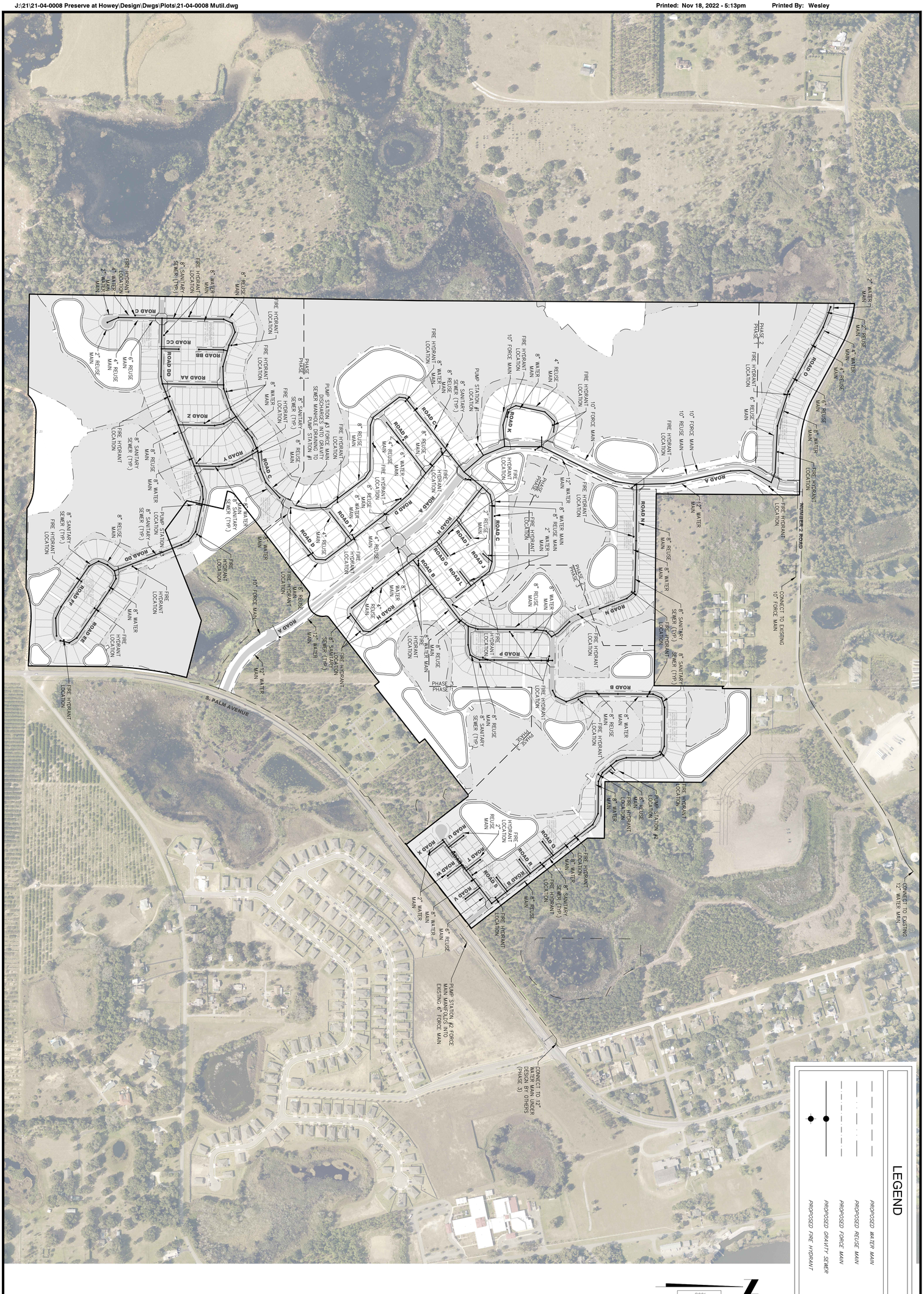
Project No.:	21-04-0008
Designed:	JEW
Drawn:	JEW
Checked:	JEW
O.C.:	RCW
Date:	AUGUST 2022
Scale:	1" = 40'
Sheet	8H

J:\21\21-04-0008 Preserve at Howey\Design\Dwgs\Plots\21-04-0008 Mutil.dwg Printed: Nov 18, 2022 - 5:13pm Printed By: Wesley



Sheet 9

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

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

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

MASTER UTILITY PLAN

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

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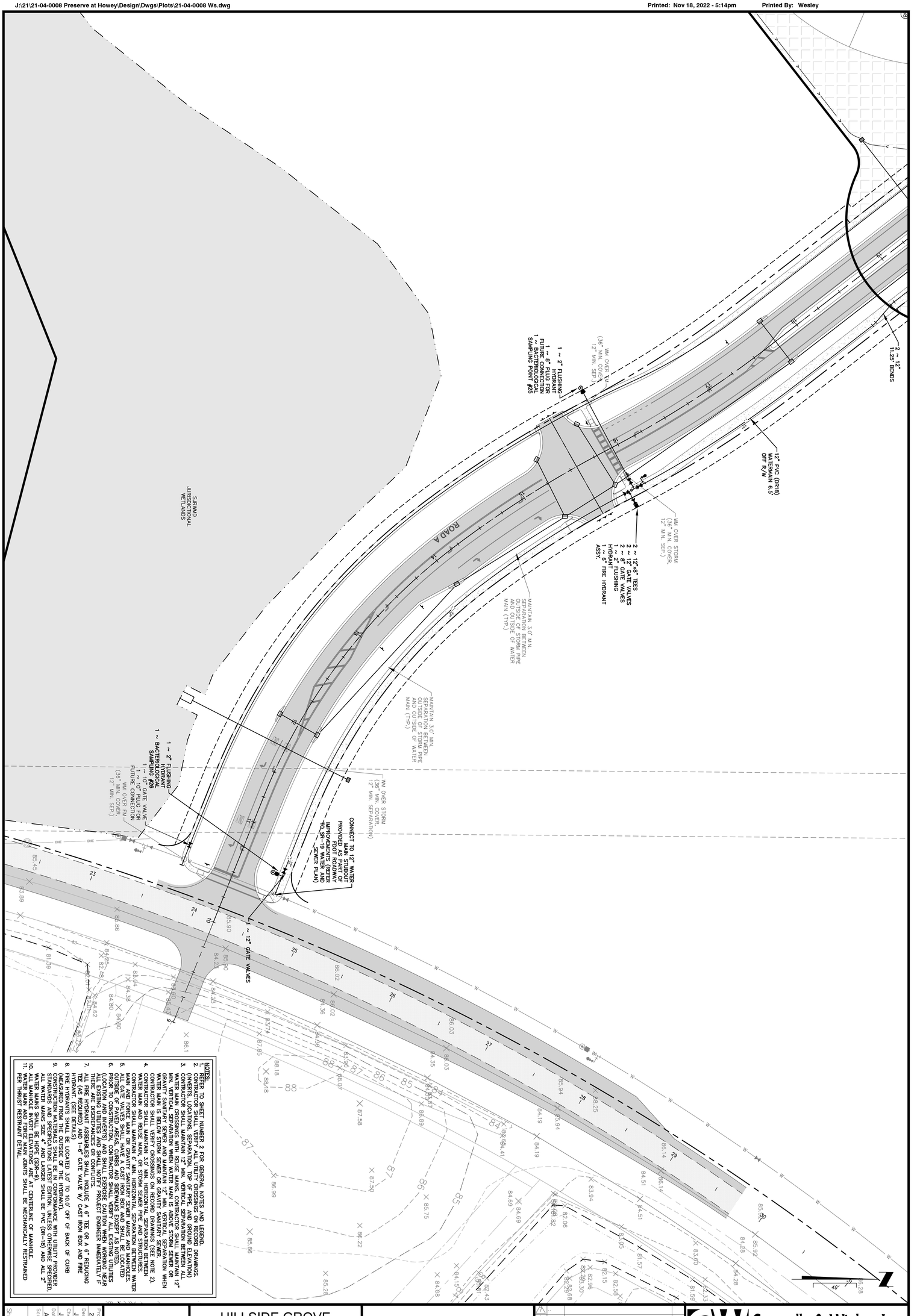

NOTES:

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 AND STORM SEWER. 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.
4. CONTRACTOR SHALL VERIFY CROSSINGS ON RECORD DRAWINGS (SEE NOTE 2). CONTRACTOR SHALL MAINTAIN 3.0' MIN. HORIZONTAL SEPARATION BETWEEN WATER MAIN AND STORM SEWER.
5. CONTRACTOR SHALL MAINTAIN 6' MIN. HORIZONTAL SEPARATION BETWEEN WATER MAIN AND FORCE MAIN OR GRAVITY SANITARY SEWER MAINS AND MANHOLES.
6. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES OUTSIDE OF PAVED AREAS, CURBS, AND SIDEWALKS EXCEPT AS NOTED. ALL EXISTING UTILITIES AND SHALL NOTIFY PROJECT ENGINEER IMMEDIATELY IF THERE ARE ANY DISCREPANCIES.
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 AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST CITY STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE PROVIDED.
10. ALL WATER MAINS SIZE 4" AND LARGER SHALL BE PVC (DR=18) AND ALL 2" WATER MAINS SHALL BE SCHEDULE 40 PVC.
11. ALL MANHOLE RIM ELEVATIONS SHALL BE AT CENTERLINE OF MANHOLE.
12. WATER MAIN AND FORCE MAIN JOINTS SHALL BE MECHANICALLY RESTRAINED PER THRUST RESTRAINT DETAIL.

Sheet 10A	Project No. 21-04-0008	HILLSIDE GROVE HOWEY IN THE HILLS PREPARED FOR LENNAR HOMES - ORLANDO	WATER AND SEWER PLAN	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
Date: AUGUST 2022 Scale: 1" = 40'	Designed: JEW Drawn: JEW Checked: JEW Q.C.: RCW	PE NAME P.E. NUMBER: PE NUMBER Reg. Engineer	No. Date Revision By	

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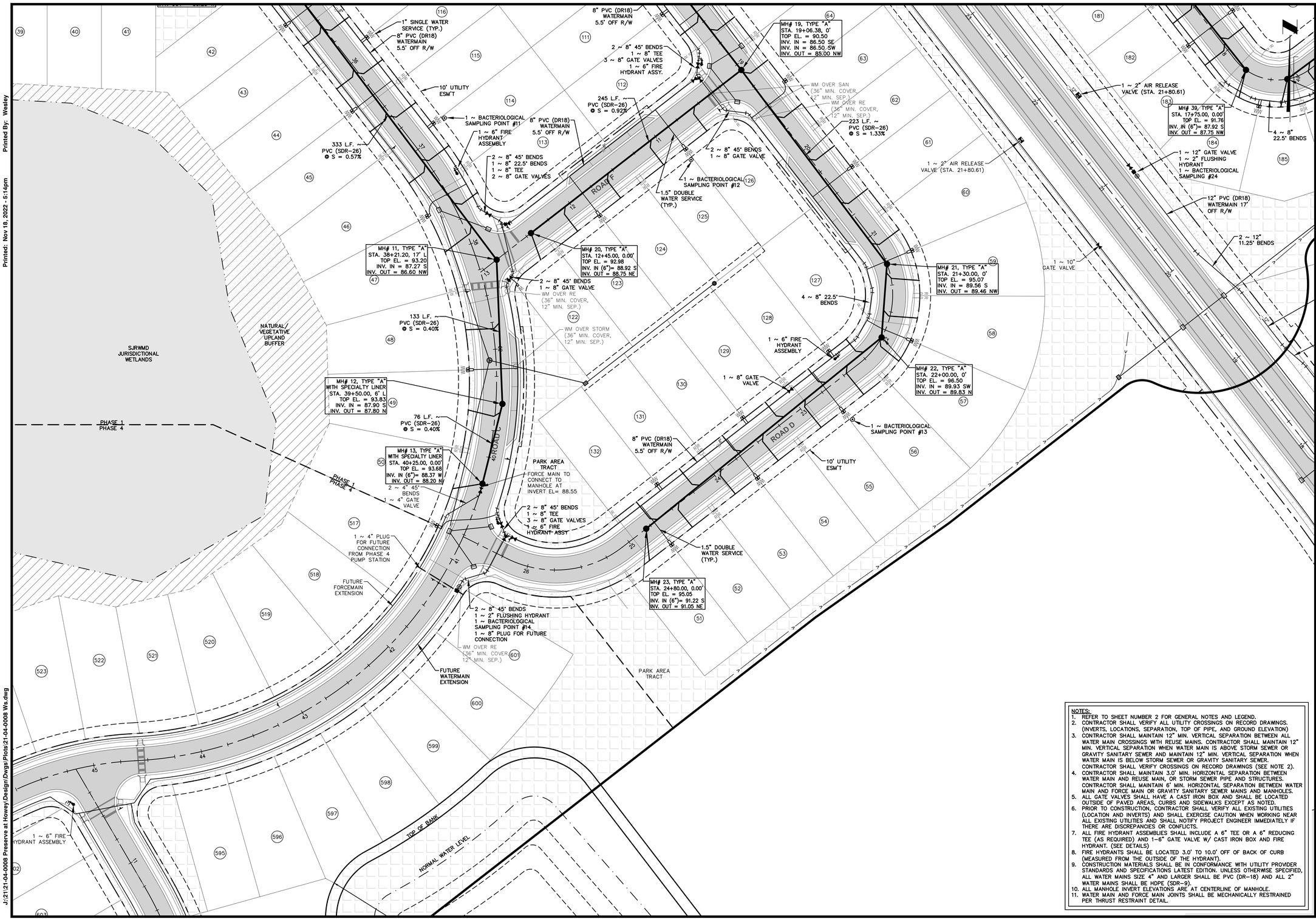

NOTES:

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.

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No.	Date	Revision	By
1			
2			
3			
4			
5			
6			

WATER AND SEWER PLAN

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

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

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

Printed: Nov 18, 2022 - 5:14pm Printed By: Wesley

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

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.

MATCH LINE

S.JRWMD JURISDICTIONAL WETLANDS

OPEN SPACE TRACT

NATURAL/ VEGETATIVE UPLAND BUFFER

TOP OF BANK

NORMAL WATER LEVEL

40'

SMF-01 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE

25' DRAINAGE / ACCESS EASEMENT

MH# 5, TYPE "A"
STA. 27+85.00, 0'
TOP EL. = 87.41
INV. IN = 80.40 S
INV. OUT = 80.30 NE

44 L.F. ~ PVC (SDR-26) @ S = 0.40%

MH# 6, TYPE "A"
STA. 28+30.00, 0'
TOP EL. = 87.45
INV. IN = 80.68 SE
INV. OUT = 80.58 N

239 L.F. ~ PVC (SDR-26) @ S = 0.40%

10' UTILITY ESM'T

1 ~ 8" GATE VALVE

8" PVC (DR18) WATERMAIN 5.5' OFF R/W

4 ~ 8" 22.5° BENDS
1 ~ 6" FIRE HYDRANT ASSY.

1 ~ BACTERIOLOGICAL SAMPLING POINT #08

224 L.F. ~ PVC (SDR-26) @ S = 0.40%

2 ~ 8" 45° BENDS
1 ~ 8" TEE
2 ~ 8" GATE VALVES

MH# 4, TYPE "A"
STA. 25+45.00, 0'
TOP EL. = 88.33
INV. IN = 79.34 SW
INV. OUT = 79.24 NE

1.5" DOUBLE WATER SERVICE (TYP.)

212 L.F. ~ PVC (SDR-26) @ S = 0.40%

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

1 ~ BACTERIOLOGICAL SAMPLING POINT #07

195 L.F. ~ PVC (SDR-26) @ S = 0.40%

2 ~ 10" 45° BENDS

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.

WM OVER RE (36" MIN. COVER, 12" MIN. SEP.)

12" PVC (DR18) WATERMAIN 17' OFF R/W

WM OVER PM & RE (36" MIN. COVER, 12" MIN. SEP.)

WM OVER RE (36" MIN. COVER, 12" MIN. SEP.)

2 ~ 10" 45° BENDS

2 ~ 8" 45° BENDS
1 ~ 8" 11.25° BEND

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

2 ~ 8" 45° BENDS

WM OVER STORM (36" MIN. COVER, 12" MIN. SEP.)

WM OVER SAN (36" MIN. COVER, 12" MIN. SEP.)

214 L.F. ~ PVC (SDR-26) @ S = 0.40%

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

10' UTILITY ESM'T

1 ~ 2" AIR RELEASE VALVE (STA. 30+25)

1 ~ 12" GATE VALVE
1 ~ 2" FLUSHING HYDRANT
1 ~ BACTERIOLOGICAL SAMPLING #03

ROAD A

ROAD B

ROAD C

ROAD D

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 (OUTSIDE OF PIPE TO OUTSIDE OF STRUCTURE, TYP.)

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

1 ~ 2" AIR RELEASE VALVE (STA. 30+25)

2 ~ 8" 45° BENDS
1 ~ 8" TEE
2 ~ 8" GATE VALVES
1 ~ 8" 11.25° BEND

185 L.F. ~ PVC (SDR-26) @ S = 0.40%

10' UTILITY ESM'T

1 ~ BACTERIOLOGICAL SAMPLING POINT #09

225 L.F. ~ PVC (SDR-26) @ S = 0.60%

WM OVER SAN (36" MIN. COVER, 12" MIN. SEP.)

2 ~ 8" 45° BENDS
1 ~ 8" GATE VALVE

WM OVER RE (36" MIN. COVER, 12" MIN. SEP.)

8" PVC (DR18) WATERMAIN 5.5' OFF R/W

1 ~ 6" FIRE HYDRANT ASSEMBLY

MH# 15, TYPE "A"
STA. 12+25.00, 0'
TOP EL. = 88.81
INV. IN = 83.19 SW
INV. OUT = 83.09 NE

1.5" DOUBLE WATER SERVICE (TYP.)

215 L.F. ~ PVC (SDR-26) @ S = 0.40%

MH# 17, TYPE "A"
STA. 14+00.00, 0'
TOP EL. = 88.09
INV. IN = 82.88 SE
INV. OUT = 82.78 NW

1" SINGLE WATER SERVICE (TYP.)

1 ~ 6" FIRE HYDRANT ASSEMBLY

150 L.F. ~ PVC (SDR-26) @ S = 0.40%

1 ~ BACTERIOLOGICAL SAMPLING POINT #10

8" PVC (DR18) WATERMAIN 5.5' OFF R/W

MH# 18, TYPE "A"
STA. 15+50.00, 0'
TOP EL. = 87.54
INV. IN = 83.57 SE
INV. OUT = 83.47 NW

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%

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

WM OVER SAN (36" MIN. COVER, 12" MIN. SEP.)

2 ~ 8" 45° BENDS
1 ~ 8" 22.5° BENDS
2 ~ 8" 11.25° BENDS
1 ~ 8" GATE VALVE

PARK AREA TRACT

1 ~ 6" FIRE HYDRANT ASSEMBLY

10' UTILITY ESM'T

5 ~ 8" 11.25° BENDS

65 L.F. ~ PVC (SDR-26) @ S = 0.84%

MH# 7, TYPE "A"
STA. 30+55.00, 0'
TOP EL. = 88.23
INV. IN = 81.67 E
INV. OUT = 81.57 NW

59 L.F. ~ PVC (SDR-26) @ S = 0.40%

MH# 8, TYPE "A"
STA. 31+15.00, 0'
TOP EL. = 88.44
INV. IN = 82.01 E
INV. OUT = 81.91 W

310 L.F. ~ PVC (SDR-26) @ S = 0.40%

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

1 ~ 8" GATE VALVE

1" SINGLE WATER SERVICE (TYP.)

8" PVC (DR18) WATERMAIN 5.5' OFF R/W

10' UTILITY ESM'T

MATCH LINE

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

Printed: Nov 18, 2022 - 5:15pm Printed By: Wesley

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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
1			
2			
3			
4			
5			
6			

WATER AND SEWER PLAN

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

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

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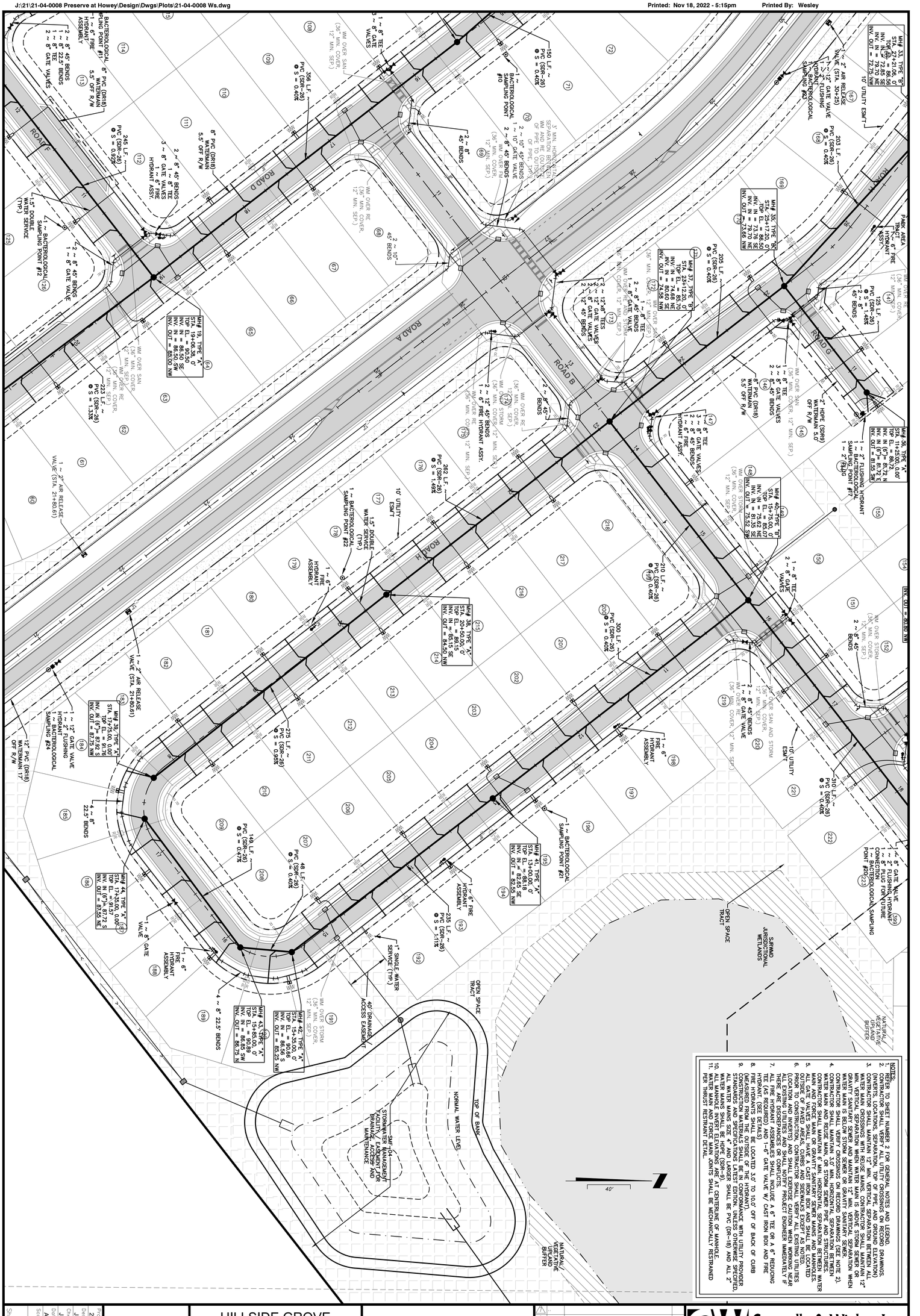
Project No.:	21-04-0008
Designed:	JEW
Drawn:	JEW
Checked:	JEW
O.C.:	RCW
Date:	AUGUST 2022
Scale:	1" = 40'
Sheet	10C



NOTES:

1. REFER TO SHEET NUMBER 2 FOR GENERAL NOTES AND LEGEND.
2. REFER TO SHEET NUMBERS 10A THROUGH 10C FOR UTILITY PLAN DRAWINGS. CONTRACTOR SHALL MAINTAIN 3.0' MIN. HORIZONTAL SEPARATION BETWEEN ALL WATER MAINS AND FORCE MAIN OR GRAVITY SANITARY SEWER MAINS AND MANHOLES. CONTRACTOR SHALL MAINTAIN 6' MIN. HORIZONTAL SEPARATION BETWEEN WATER MAIN AND STORM SEWER MAINS AND MANHOLES.
3. CONTRACTOR SHALL MAINTAIN 12" MIN. VERTICAL SEPARATION BETWEEN ALL (INVERTS, LOCATIONS, SEPARATION, TOP OF PIPE, AND GROUND ELEVATION) GRAVITY SANITARY SEWER AND MANTAIN 12" MIN. VERTICAL SEPARATION WHEN WATER MAIN CROSSES OVER SANITARY SEWER. CONTRACTOR SHALL MAINTAIN 12" MIN. VERTICAL SEPARATION WHEN WATER MAIN IS ABOVE STORM SEWER OR 36" MIN. VERTICAL SEPARATION WHEN WATER MAIN IS BELOW STORM SEWER.
4. CONTRACTOR SHALL VERIFY CROSSINGS ON RECORD DRAWINGS (SEE NOTE 2).
5. ALL EXISTING UTILITIES AND SHALL NOTIFY PROJECT ENGINEER IMMEDIATELY IF (LOCATION AND INVERTS) AND SHALL EXERCISE CAUTION WHEN WORKING NEAR OUTSIDE OF PAVED AREAS, CURBS, AND SIDEWALKS EXCEPT AS NOTED.
6. 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 AT LOCATIONS SHOWN ON THE PLANS.
7. FIRE HYDRANTS SHALL BE LOCATED 3.0' TO 10.0' OFF OF BACK OF CURB (MEASURED FROM THE OUTSIDE OF THE HYDRANT).
8. ALL WATER MAINS SIZE 4" AND LARGER SHALL BE PVC (DR-18) AND ALL 2" STANDARDS AND SPECIFICATIONS LATEST EDITION, UNLESS OTHERWISE SPECIFIED.
9. WATER MAIN AND FORCE MAIN JOINTS SHALL BE MECHANICALLY RESTRAINED PER THRUST RESTRAINT DETAIL.
10. ALL MANHOLE INVERT ELEVATIONS ARE AT CENTERLINE OF MANHOLE.
11. WATER MAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH UTILITY PROVIDER

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

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

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

WATER AND SEWER PLAN

No.	Date	Revision	By
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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.

PHASE 2
PHASE 3
OPEN SPACE TRACT
TOP OF BANK
NORMAL WATER LEVEL
SMF-07 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
PHASE 2
PHASE 1
SJRWMD JURISDICTIONAL WETLANDS
NATURAL/ VEGETATIVE UPLAND BUFFER
PHASE 3
PHASE 1
PARK AREA TRACT N
PARK AREA TRACT D
ROAD B
ROAD P
ROAD C
ROAD H
ROAD G
PARK AREA TRACT K
PARK AREA TRACT M
OPEN SPACE TRACT
NATURAL/ VEGETATIVE UPLAND BUFFER
DIRECTION OF FUTURE CONNECTION
1" SINGLE WATER SERVICE (TYP.)
1 ~ 6" FIRE HYDRANT ASSEMBLY
20' DRAINAGE ACCESS EASEMENT
1.5" DOUBLE WATER SERVICE (TYP.)
8" PVC (DR18) WATERMAIN 5.5' OFF R/W
WM OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
WM OVER RE (36" MIN. COVER, 12" MIN. SEP.)
WM OVER STORM (36" MIN. COVER, 12" MIN. SEP.)
MH# 26, TYPE "A" STA. 18+36.05, 0' TOP EL. = 86.81 INV. IN = 76.03 E INV. OUT = 75.93 W
1 ~ BACTERIOLOGICAL SAMPLING POINT #15
1 ~ 8"x2" TEE 2 ~ 8" GATE VALVES 1 ~ 2" GATE VALVE
MH# 27, TYPE "A" STA. 14+36.05, 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%
MH# 29, TYPE "A" STA. 13+65.74, 0' TOP EL. = 86.73 INV. IN = 78.11 SE INV. OUT = 78.01 W
161 L.F. ~ PVC (SDR-26) @ S = 0.40%
1 ~ 8" FIRE HYDRANT ASSY.
1 ~ 8"x2" TEE 2 ~ 8" GATE VALVES 1 ~ 2" GATE VALVE
MH# 30, TYPE "A" STA. 12+05.06, 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)
130 L.F. ~ PVC (SDR-26) @ S = 1.50%
2 ~ 8" 45° BENDS 1 ~ 8" TEE 3 ~ 8" GATE VALVES
1 ~ 8" GATE VALVE 1 ~ 2" FLUSHING HYDRANT 1 ~ 8" PLUG FOR FUTURE CONNECTION 1 ~ BACTERIOLOGICAL SAMPLING POINT #20
310 L.F. ~ PVC (SDR-26) @ S = 0.40%
MH# 28, TYPE "A" STA. 10+85.00, 0.00' TOP EL. = 86.56 INV. IN (6")= 81.07 S INV. OUT = 80.90 NE
83 L.F. ~ PVC (SDR-26) @ S = 1.65%
1 ~ 2" FLUSHING HYDRANT 1 ~ BACTERIOLOGICAL SAMPLING POINT #18 1 ~ 2" PLUG
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. = 85.59 INV. IN (6")= 80.97 E INV. OUT = 80.80 NW
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 ~ 8" 45° BENDS
2" HDPE (SDR9) WATERMAIN 5.0' OFF R/W
1 ~ 2" FLUSHING HYDRANT 1 ~ BACTERIOLOGICAL SAMPLING POINT #19 1 ~ 2" PLUG
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 1 ~ 2" PLUG
2 ~ 8" 45° BENDS
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
10' UTILITY ESM'T
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%
400 L.F. ~ PVC (SDR-26) @ S = 0.40%
160 L.F. ~ PVC (SDR-26) @ S = 1.50%
63 L.F. ~ PVC (SDR-26) @ S = 0.40%

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

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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

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

Printed: Nov 18, 2022 - 5:16pm Printed By: Wesley

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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.
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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.

1 ~ 2" AIR RELEASE VALVE (STA. 41+75).
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)
1 ~ 2" AIR RELEASE VALVE (STA. 41+75)
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
2 ~ 10" 45° BENDS
1.5" DOUBLE WATER SERVICE (TYP.)
73 L.F. ~ PVC (SDR-26) @ S = 0.40%
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
10' UTILITY ESM'T
93 L.F. ~ PVC (SDR-26) @ S = 0.40%
12" PVC (DR18) WATERMAIN 17' OFF R/W
NATURAL/ VEGETATIVE UPLAND BUFFER
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
1 ~ 8" GATE VALVE
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.)
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 ~ 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
204 L.F. ~ PVC (SDR-26) @ S = 0.40%
67 L.F. ~ PVC (SDR-26) @ S = 0.40%
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
1 ~ 8" GATE VALVE
1 ~ 2" AIR RELEASE VALVE (STA. 37+85)
1 ~ 6" FIRE HYDRANT ASSY.
1 ~ 2" FLUSHING HYDRANT
1 ~ BACTERIOLOGICAL SAMPLING POINT #05
10' UTILITY ESM'T
PARK AREA TRACT
10" PVC (DR18) FORCEMAIN 6.0' OFF R/W
TOP OF BANK
1 ~ 2" AIR RELEASE VALVE (STA. 37+85)
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
2 ~ 8" 45° BENDS
2 ~ 10" 45° BENDS
4 ~ 8" 22.5° BENDS
254 L.F. ~ PVC (SDR-26) @ S = 0.40%
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.)
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.
1 ~ 6" FIRE HYDRANT ASSEMBLY
WM OVER FM, RE, STORM (36" MIN. COVER, 12" MIN. SEP.)
WM OVER STORM (36" MIN. COVER, 12" MIN. SEP.)
SMF-02 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
4 ~ 12" 45° BENDS
NATURAL/ VEGETATIVE UPLAND BUFFER
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. = 86.79 INV. IN = 79.39 W INV. IN = 70.24 N INV. OUT = 70.14 S
158 L.F. ~ PVC (SDR-26) @ S = 0.40%
SJRWMD JURISDICTIONAL WETLANDS
109 L.F. ~ PVC (SDR-26) @ S = 0.40%
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
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
MH# 25, TYPE "A" STA. 19+00.00, 0' TOP EL. = 87.05 INV. IN = 75.68 E INV. OUT = 75.58 SW
4 ~ 8" 11.25° BENDS
10' UTILITY ESM'T
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
MAINTAIN 3.0' MIN. SEPARATION BETWEEN OUTSIDE OF FORCE MAIN AND OUTSIDE OF REUSE MAIN (TYP.)
MH# 24, TYPE "A" 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
63 L.F. ~ PVC (SDR-26) @ S = 0.40%
400 L.F. ~ PVC (SDR-26) @ S = 0.40%
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
WM OVER STORM (36" MIN. COVER, 12" MIN. SEP.)
165 L.F. ~ PVC (SDR-26) @ S = 0.40%
4 ~ 12" 22.5° BENDS
PARK AREA TRACT K
WM OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
WM OVER STORM (36" MIN. COVER, 12" MIN. SEP.)
2 ~ 8" 45° BENDS
WM OVER RE (36" MIN. COVER, 12" MIN. SEP.)
PARK AREA TRACT
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.)
286 L.F. ~ PVC (SDR-26) @ S = 0.40%
8" PVC (DR18) WATERMAIN 5.5' OFF R/W
1.5" DOUBLE WATER SERVICE (TYP.)
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
STATION TRACT
88 L.F. ~ PVC (SDR-26) @ S = 0.40%
176 L.F. ~ PVC (SDR-26) @ S = 0.40%
ROAD C
WM OVER SAN, STORM (36" MIN. COVER, 12" MIN. SEP.)
160 L.F. ~ PVC (SDR-26) @ S = 1.50%
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.
WM OVER RE (36" MIN. COVER, 12" MIN. SEP.)
2 ~ 8" 45° BENDS
ROAD H
ROAD I
2 ~ 10" 45° BENDS
12" PVC (DR18) WATERMAIN 17' OFF R/W
1 ~ BACTERIOLOGICAL SAMPLING POINT #16
PHASE 2
PHASE 1
1 ~ 2" AIR RELEASE VALVE (STA. 30+25)

Z
40'

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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

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

Printed: Nov 18, 2022 - 5:16pm Printed By: Wesley

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

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
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%
TOP OF BANK
NORMAL WATER LEVEL
ROAD A
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)
OPEN SPACE TRACT
MH# 57, TYPE "A"
STA. 45+92.66, 14' R
TOP EL. = 88.77
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%
25' DRAINAGE / ACCESS EASEMENT
OPEN SPACE TRACT
SJRWMD JURISDICTIONAL WETLANDS
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)
MH# 55, TYPE "A"
STA. 42+85.00, 14' R
TOP EL. = 86.84
INV. IN = 73.03 NE
INV. OUT = 72.93 SW
1 ~ 10" GATE VALVE
4 ~ 10" 11.25° BENDS (AS REQ'D)
1 ~ 2" AIR RELEASE VALVE (STA. 41+75).
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)
1 ~ 2" AIR RELEASE VALVE (STA. 41+75)
OPEN SPACE TRACT
SJRWMD JURISDICTIONAL WETLANDS
PHASE 2
PHASE 3

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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

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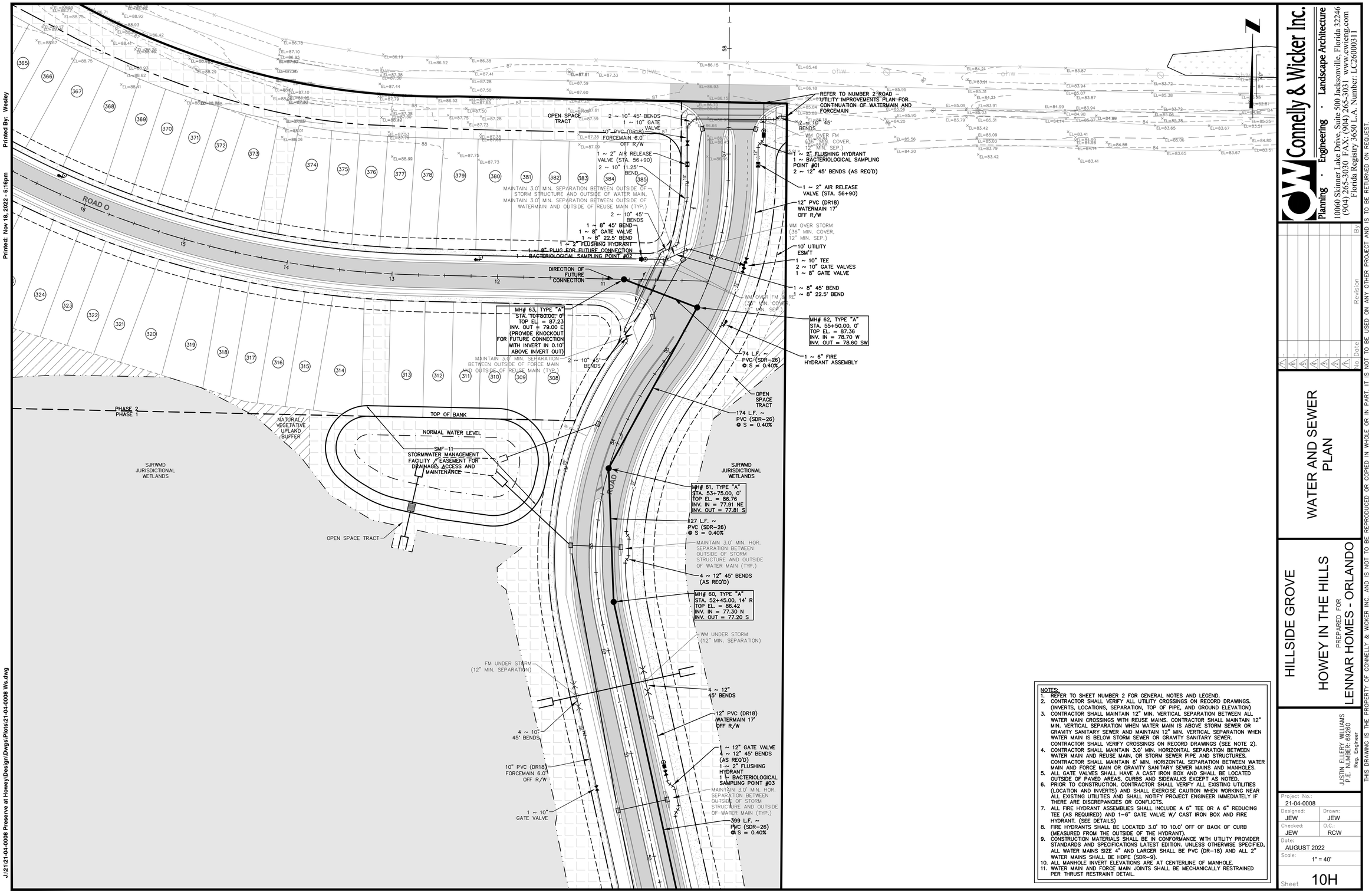

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9. CONSTRUCTION MATERIALS SHALL BE IN CONFORMANCE WITH UTILITY PROVIDER STANDARDS AND SPECIFICATIONS LATEST EDITION. UNLESS OTHERWISE SPECIFIED, ALL WATER MAINS SIZE 4" AND LARGER SHALL BE PVC (DR-18) AND ALL 2" WATER MAINS SHALL BE HDPE (SDR-9).
10. ALL MANHOLE INVERT ELEVATIONS ARE AT CENTERLINE OF MANHOLE.
11. WATER MAIN AND FORCE MAIN JOINTS SHALL BE MECHANICALLY RESTRAINED PER THRUST RESTRAINT DETAIL.

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No.	Date	Revision	By
A1			
A2			
A3			
A4			
A5			
A6			

WATER AND SEWER 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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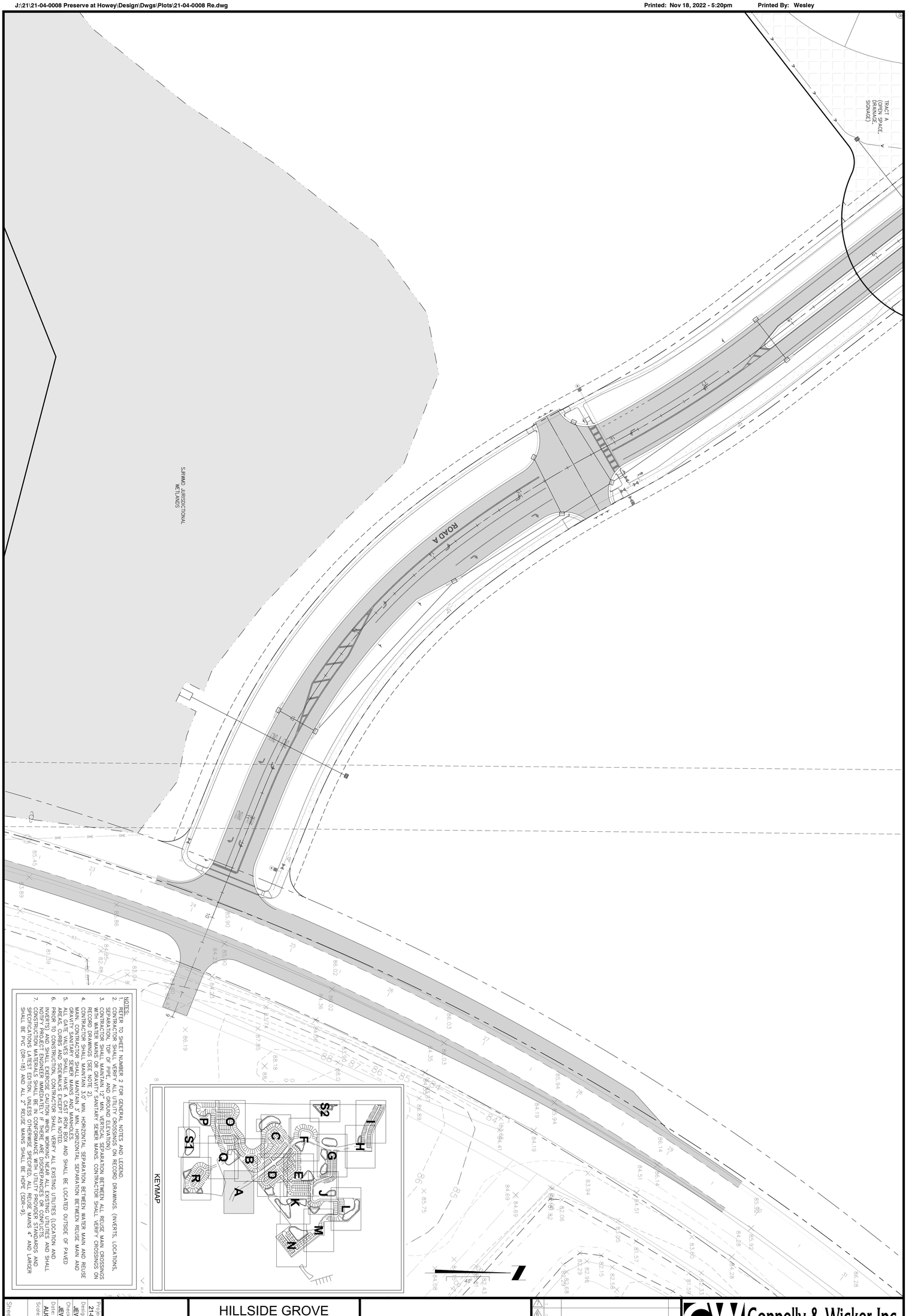

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5. ALL REUSE PIPING SHALL BE LOCATED IN PAVED AREAS, CURBS AND SIDEWALKS EXCEPT AS NOTED.
6. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES (LOCATION AND SIZE) AND SHALL NOTIFY PROJECT ENGINEER IMMEDIATELY IF THERE ARE DISCREPANCIES OR CONFLICTS.
7. CONSTRUCTION MATERIALS SHALL BE IN CONFORMANCE WITH UTILITY PROVIDER STANDARDS AND SPECIFICATIONS. ALL REUSE MAINS 4" AND LARGER SHALL BE PVC (DR-18) AND ALL 2" REUSE MAINS SHALL BE HDPE (SDR-9).

Sheet 11A	Project No. 21-04-0008	JUSTIN ELLERY WILLIAMS P.E. NUMBER: 69260 Reg. Engineer	HILLSIDE GROVE HOWEY IN THE HILLS PREPARED FOR LENNAR HOMES - ORLANDO
Designed: JEW	Drawn: JEW		RECLAIMED WATER DISTRIBUTION SYSTEM PLAN
Checked: JEW	O.C.: RCW		
Date: AUGUST 2022	Scale: 1" = 40'		

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TRACT J (OPEN SPACE)

TRACT V (OPEN SPACE, PRESERVATION AREA)

SJRWMD JURISDICTIONAL WETLANDS

NATURAL/ VEGETATIVE UPLAND BUFFER

PHASE 1
PHASE 4

8" PVC (DR18) REUSE MAIN 7' OFF R/W

10' UTILITY ESM'T

1" SINGLE REUSE SERVICE (TYP.)

ROAD F

ROAD C

ROAD D

1 ~ 8" X 4" TEE
2 ~ 8" GATE VALVES
1 ~ 4" GATE VALVE

REUSE OVER SAN (36" MIN. COVER, 12" MIN. SEP.)

2 ~ 4" 45° BENDS

4" PVC (DR18) REUSE MAIN 7' OFF R/W

1 ~ 4" 45° BEND
1 ~ 4" 22.5° BEND

4 ~ 8" 22.5° BENDS

1.5" DOUBLE REUSE SERVICE (TYP.)

REUSE OVER FM (36" MIN. COVER, 12" MIN. SEP.)

TRACT I (OPEN SPACE, DRAINAGE)

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

2 ~ 8" 45° BENDS

2 ~ 8" 22.5° BENDS

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

TOP OF BANK

NORMAL WATER LEVEL

4 ~ 4" 22.5° BEND

TRACT B (OPEN SPACE, DRAINAGE, SIGNAGE)

TRACT A (OPEN SPACE, DRAINAGE, SIGNAGE)

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).

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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

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

NOTES:
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2. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS ON RECORD DRAWINGS. (INVERTS, LOCATIONS, SEPARATION, TOP OF PIPE, AND GROUND ELEVATION)
3. CONTRACTOR SHALL MAINTAIN 10' MIN. HORIZONTAL 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. MAIN CONTRACTOR SHALL MAINTAIN 3' 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 REUSE MAINS AND APPURTENANCES SHALL BE LOCATED OUTSIDE OF PAVED AREAS, CURBS AND SIDEWALKS EXCEPT AS NOTED.
6. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES (LOCATION AND ELEVATION). CONTRACTOR SHALL WORK AROUND ALL EXISTING UTILITIES AND SHALL NOTIFY PROJECT ENGINEER IMMEDIATELY IF THERE ARE DISCREPANCIES OR CONFLICTS.
7. ALL REUSE MAINS SHALL BE COLORED PURPLE (PANTONE 512) OR WRAPPED WITH PURPLE POLYWRAP. ALL REUSE MAINS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE FDEP SPECIFICATIONS, UNLESS OTHERWISE SPECIFIED. ALL REUSE MAINS 4" AND LARGER SHALL BE PVC (DR-18) AND ALL 2" REUSE MAINS SHALL BE HDPE (SDR-9).

KEYMAP

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

RECLAIMED WATER DISTRIBUTION SYSTEM PLAN

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

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Project No.: 21-04-0008
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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
TRACT G (OPEN SPACE)
2 ~ 4" 45° BENDS
1 ~ 4" PLUG TAPPED 2"
2" HDPE (SDR9) REUSE MAIN 5' OFF R/W
TRACT F (OPEN SPACE, DRAINAGE, PARK)
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
1 ~ 8" TEE
3 ~ 8" GATE VALVES
SJRWMD JURISDICTIONAL WETLANDS
TRACT X (OPEN SPACE, PRESERVATION AREA)
1.5" DOUBLE REUSE SERVICE (TYP.)
2 ~ 8" 45° BENDS
TRACT B (OPEN SPACE, DRAINAGE, SIGNAGE)
4" PVC (DR18) REUSE MAIN 7' OFF R/W
1" SINGLE REUSE SERVICE (TYP.)
2 ~ 8" 45° BENDS
1 ~ 8" X 4" TEE
1 ~ 4" GATE VALVE
TRACT C (OPEN SPACE)
TRACT O (OPEN SPACE)
2 ~ 4" 45° BENDS
1 ~ 4" GATE VALVE
1 ~ 8" X 4" TEE
1 ~ 4" GATE VALVE
1 ~ 8" GATE VALVE
2 ~ 8" 45° BENDS
REUSE OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
1 ~ 8" TEE
1 ~ 8" 45° BENDS
2 ~ 8" GATE VALVES
1 ~ 8"x4" REDUCER
2 ~ 8" 45° BENDS
2.0" SINGLE REUSE SERVICE
2 ~ 4" 45° BENDS
1 ~ 4" GATE VALVE
REUSE OVER FM (36" MIN. COVER, 12" MIN. SEP.)
2 ~ 8" 45° BENDS
2 ~ 8" 45° BENDS
1 ~ 8" TEE
1 ~ 8"x4" REDUCER
TRACT B (OPEN SPACE, DRAINAGE, SIGNAGE)
8" PVC (DR18) REUSE MAIN 7' OFF R/W
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.)
2 ~ 4" 45° BENDS
4" PVC (DR18) REUSE MAIN 7' OFF R/W
4" PVC (DR18) REUSE MAIN 7' OFF R/W
1.5" DOUBLE REUSE SERVICE (TYP.)
TRACT B (OPEN SPACE, DRAINAGE, SIGNAGE)
1.5" DOUBLE REUSE SERVICE (TYP.)
10' UTILITY ESM'T
1" SINGLE REUSE SERVICE (TYP.)
1.5" DOUBLE REUSE SERVICE (TYP.)
4 ~ 4" 22.5° BENDS
4 ~ 4" 22.5° BEND
40' DRAINAGE ACCESS EASEMENT
TRACT B (OPEN SPACE, DRAINAGE, SIGNAGE)
1" SINGLE REUSE SERVICE (TYP.)
SMF-04 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
TOP OF BANK
NORMAL WATER LEVEL

KEYMAP

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No.	Date	Revision	By

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

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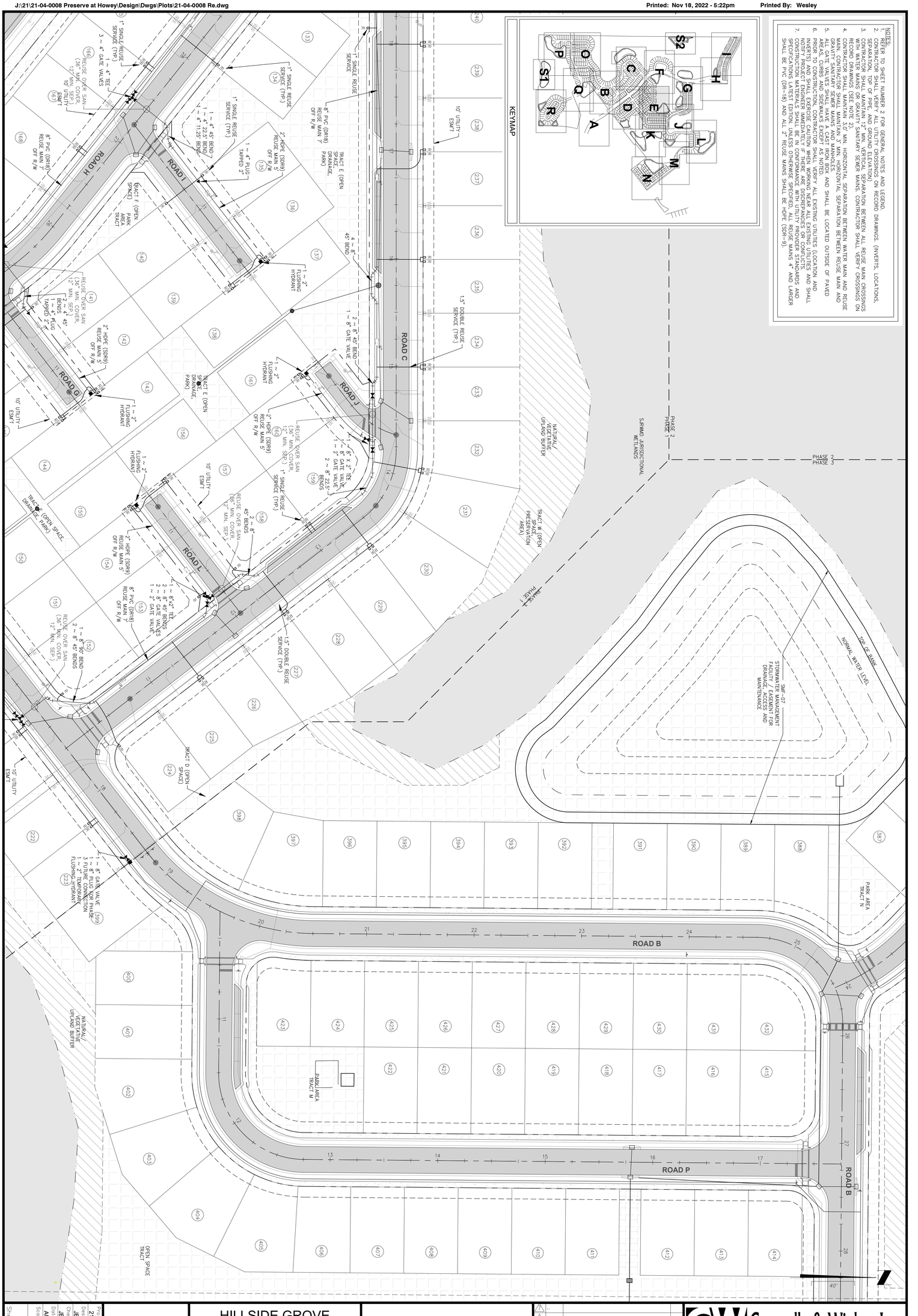
Project No.:	21-04-0008
Designed:	JEW
Drawn:	JEW
Checked:	JEW
O.C.:	RCW
Date:	AUGUST 2022
Scale:	1" = 40'

Sheet 11D



Sheet 11E	JUSTIN ELLERY WILLIAMS P.E. NUMBER: 69260 Reg. Engineer	HILLSIDE GROVE HOWEY IN THE HILLS PREPARED FOR LENNAR HOMES - ORLANDO	RECLAIMED WATER DISTRIBUTION SYSTEM PLAN	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

Project No. 21-04-0008 | Drawn: JEW | Checked: RCW | Date: AUGUST 2022 | Scale: 1" = 40'

No.	Date	Revision	By
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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 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).

KEYMAP

1 ~ 2" AIR RELEASE VALVE (STA 41+75)
TRACT S (OPEN SPACE, DRAINAGE)
2 ~ 10" 45° BENDS
1 ~ 10" X 4" TEE
1 ~ 10" GATE VALVE
1 ~ 4" GATE VALVE
5 ~ 4" 11.25° BEND
1" SINGLE REUSE SERVICE (TYP.)
10' UTILITY ESM'T
LANDSCAPE OPEN SPACE DRAINAGE TRACT
1" SINGLE REUSE SERVICE (TYP.)
REUSE OVER FM (36" MIN. COVER, 12" MIN. SEP.)
2 ~ 10" 45° BENDS
1.5" SINGLE REUSE SERVICE
ROAD A
NATURAL/ VEGETATIVE UPLAND BUFFER
4" PVC (DR18) REUSE MAIN 7' OFF R/W
REUSE OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
PHASE 2
PHASE 1
AMENITY PARCEL TRACT R (OPEN SPACE, AMENITY)
1 ~ 2" AIR RELEASE VALVE (STA 37+85)
TRACT W (OPEN SPACE, PRESERVATION AREA)
TOP OF BANK
NORMAL WATER LEVEL
2 ~ 10" 45° BEND
REUSE OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
SMF-62 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE
NATURAL/ VEGETATIVE UPLAND BUFFER
ROAD K
3 ~ 4" 22.5° BEND
2 ~ 4" 11.25° BEND
SJRWMD JURISDICTIONAL WETLANDS
TRACT H (OPEN SPACE, DRAINAGE)
1.5" DOUBLE REUSE SERVICE (TYP.)
10' UTILITY ESM'T
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
NATURAL/ VEGETATIVE UPLAND BUFFER
ROAD C
2 ~ 8" 22.5° BENDS
2 ~ 8" 45° BENDS
1" SINGLE REUSE SERVICE
8" PVC (DR18) REUSE MAIN 7' OFF R/W
TRACT E (OPEN SPACE, DRAINAGE, PARK)
REUSE OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
TRACT Q (OPEN SPACE)
TRACT Q PUMP STATION
1" SINGLE REUSE SERVICE (TYP.)
2" HDPE (SDR9) REUSE MAIN 5' OFF R/W
1 ~ 4" PLUG TAPPED 2"
REUSE OVER SAN (36" MIN. COVER, 12" MIN. SEP.)
1 ~ 8"x4" TEE
2 ~ 8" GATE VALVES
1 ~ 4" GATE VALVE
2 ~ 8" 45° BENDS
ROAD H
1" SINGLE REUSE SERVICE (TYP.)
TRACT V (OPEN SPACE, PRESERVATION AREA)
2 ~ 10" 45° BENDS
1 ~ 10" GATE VALVE
1 ~ 10"x8" TEE
1 ~ 8" GATE VALVE
1 ~ 10"x8" REDUCER
REUSE OVER FM (36" MIN. COVER, 12" MIN. SEP.)
MAINTAIN 3.0' MIN. SEPARATION BETWEEN OUTSIDE OF REUSE MAIN AND OUTSIDE OF WATER MAIN (TYP.)
2 ~ 8" 45° BENDS
1 ~ 4" 45° BEND
1 ~ 4" 22.5° BEND
1 ~ 4" 11.25° BEND
ROAD I

40'

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Florida Registry 3650 L.A. Number: LC26000311

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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 11F	

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NOTES:
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2. CONTRACTOR SHALL VERIFY ALL UTILITY CROSSINGS ON RECORD DRAWINGS. (INVERTS, LOCATIONS, SEPARATION, TOP OF PIPE, AND GROUND ELEVATION)
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KEYMAP

SJRWMD JURISDICTIONAL WETLANDS

TRACT T (OPEN SPACE, DRAINAGE)

OPEN SPACE TRACT

ROAD A

ROAD N

2.0" SINGLE REUSE SERVICE

2 ~ 8" 45° BENDS
1 ~ 8" PLUG FOR FUTURE CONNECTION
1 ~ 2" TEMPORARY FLUSHING HYDRANT

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

TRACT S (OPEN SPACE, DRAINAGE)

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

MJ@ 24"=90.45°

MJ@ 24"=80.65°

1 ~ 2" AIR RELEASE VALVE (STA 41+75)

PHASE 2
PHASE 3

40'

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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

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

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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 (96" 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 ~ 3" PLUG FOR FUTURE CONNECTION

1 ~ 12" 11.25° BEND

2.0" SINGLE REUSE SERVICE

1 ~ 12" 11.25° BEND

TOP OF BANK

NORMAL WATER LEVEL

SMF-11 STORMWATER MANAGEMENT FACILITY / EASEMENT FOR DRAINAGE, ACCESS AND MAINTENANCE

TRACT S (OPEN SPACE, DRAINAGE)

OPEN SPACE TRACT

2 ~ 12" 11.25° BENDS

REUSE MAIN UNDER STORM (12" MIN SEPARATION)

4 ~ 12" 45° BENDS

MCP 24"=80.89'

MCP 24"=81.42'

OPEN SPACE TRACT

2 ~ 12" 45° BENDS
1 ~ 12" 11.25° BEND

TRACT T (OPEN SPACE, DRAINAGE)

TRACT V (OPEN SPACE, PRESERVATION AREA)

TRACT Z (OPEN SPACE, PRESERVATION AREA)

SJRWMD JURISDICTIONAL WETLANDS

PHASE 2
PHASE 1

ROAD O

ROAD A

ohw

KEYMAP

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No.	Date	Revision	By
A1			
A2			
A3			
A4			
A5			
A6			

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
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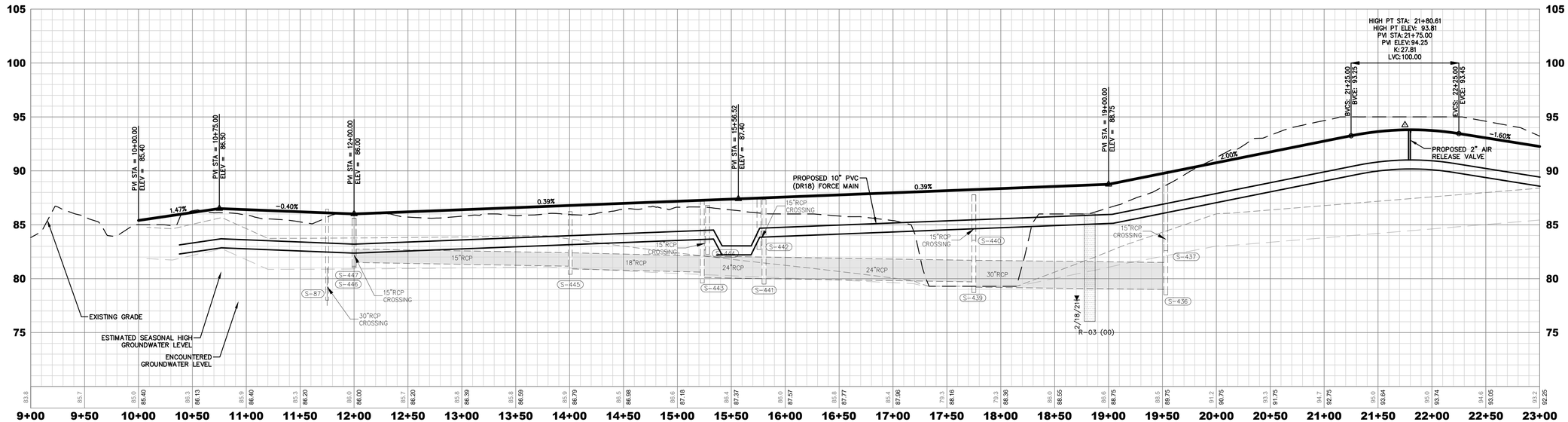
SOIL BORING LEGEND

- Fine SAND (SP)
- Silty Fine SAND (SM)
- SANDY Clay (CL)
- Clayey Fine SAND (SC)
- Fine SAND with Clay (SP-SC)
- GROUNDWATER LEVEL AT TIME OF DRILLING
- NE GROUNDWATER NOT ENCOUNTERED AT TIME OF DRILLING
- A-3 AASHTO SOIL CLASSIFICATION
- SP UNIFIED SOIL CLASSIFICATION SYSTEM

NOTES:
1. GEOTECHNICAL INFORMATION AND ROADWAY AUGER BORINGS TAKEN FROM PROJECT GEOTECHNICAL REPORT (REFER TO SHEET NO. 2)
2. PROPOSED PAVEMENT ELEVATIONS SHOWN REFER TO FINAL WEARING SURFACE ELEVATIONS.

SCALES:
1"=5' VERTICAL
1"=50' HORIZONTAL



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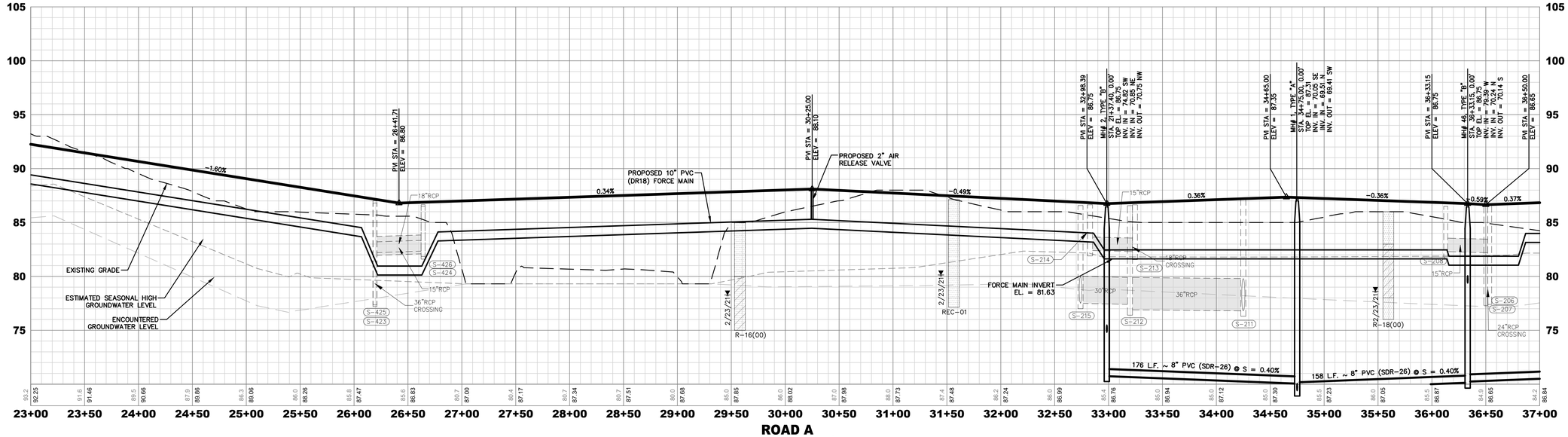
SCALE: 1"=50' VERT., 1"=5' HORZ.



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(23+00.00–37+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
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ROADWAY & SEWER PROFILES

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

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

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

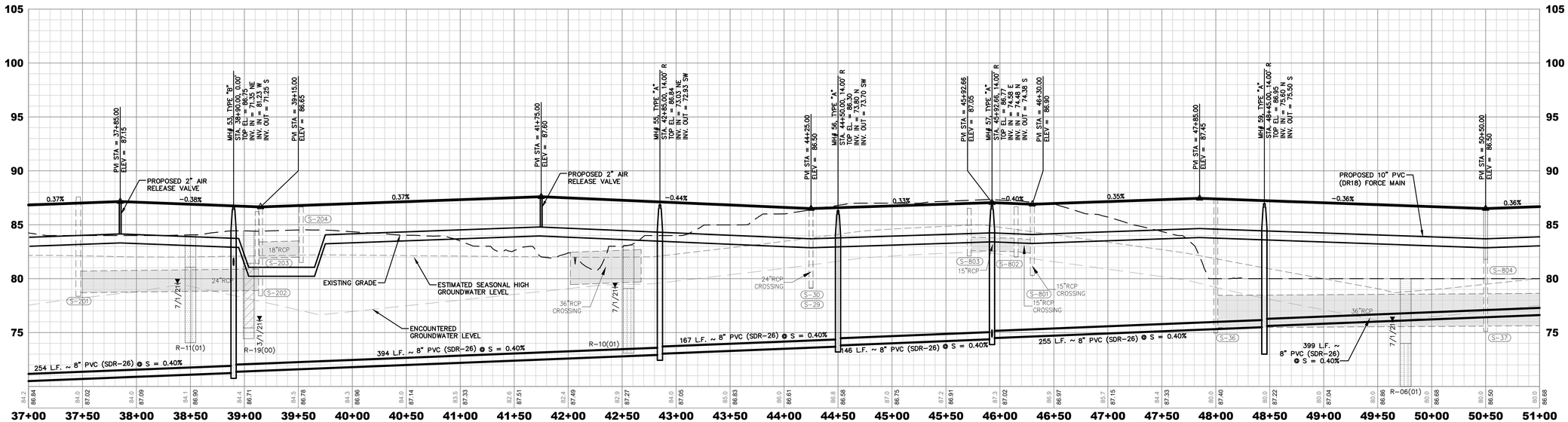
Printed: Nov 18, 2022 - 5:28pm Printed By: Wesley

SOIL BORING LEGEND

- Fine SAND (SP)
- Silty Fine SAND (SM)
- SANDY Clay (CL)
- Clayey Fine SAND (SC)
- Fine SAND with Clay (SP-SC)
- GROUNDWATER LEVEL AT TIME OF DRILLING
- NE GROUNDWATER NOT ENCOUNTERED AT TIME OF DRILLING
- A-3 AASHTO SOIL CLASSIFICATION
- SP UNIFIED SOIL CLASSIFICATION SYSTEM

NOTES:
1. GEOTECHNICAL INFORMATION AND ROADWAY AUGER BORINGS TAKEN FROM PROJECT GEOTECHNICAL REPORT (REFER TO SHEET NO. 2)
2. PROPOSED PAVEMENT ELEVATIONS SHOWN REFER TO FINAL WEARING SURFACE ELEVATIONS.

SCALES:
1"=5' VERTICAL
1"=50' HORIZONTAL



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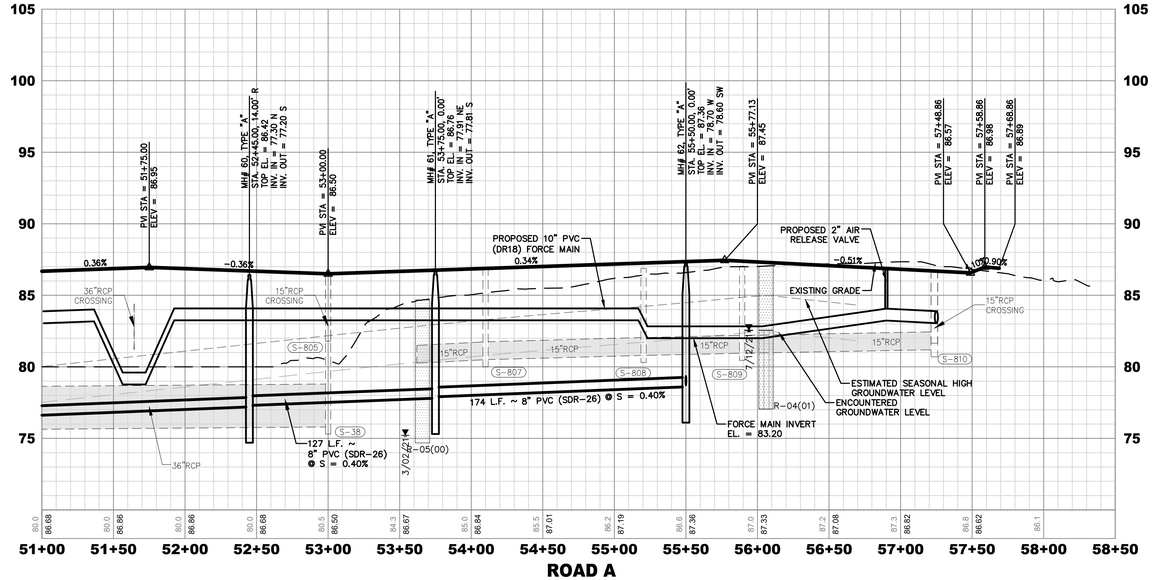
SCALE: 1"=50' VERT., 1"=5' HORZ.



ROAD A
(51+00.00–58+50.00)
SCALE: 1"=50' VERT., 1"=5' HORZ.

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ROADWAY & SEWER PROFILES

HILLSIDE GROVE
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LENNAR HOMES - ORLANDO

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

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- Fine SAND (SP)
- Silty Fine SAND (SM)
- SANDY Clay (CL)
- NE GROUNDWATER NOT ENCOUNTERED AT TIME OF DRILLING
- Clayey Fine SAND (SC)
- Fine SAND with Clay (SP-SC)
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- A-3 AASHTO SOIL CLASSIFICATION
- SP UNIFIED SOIL CLASSIFICATION SYSTEM

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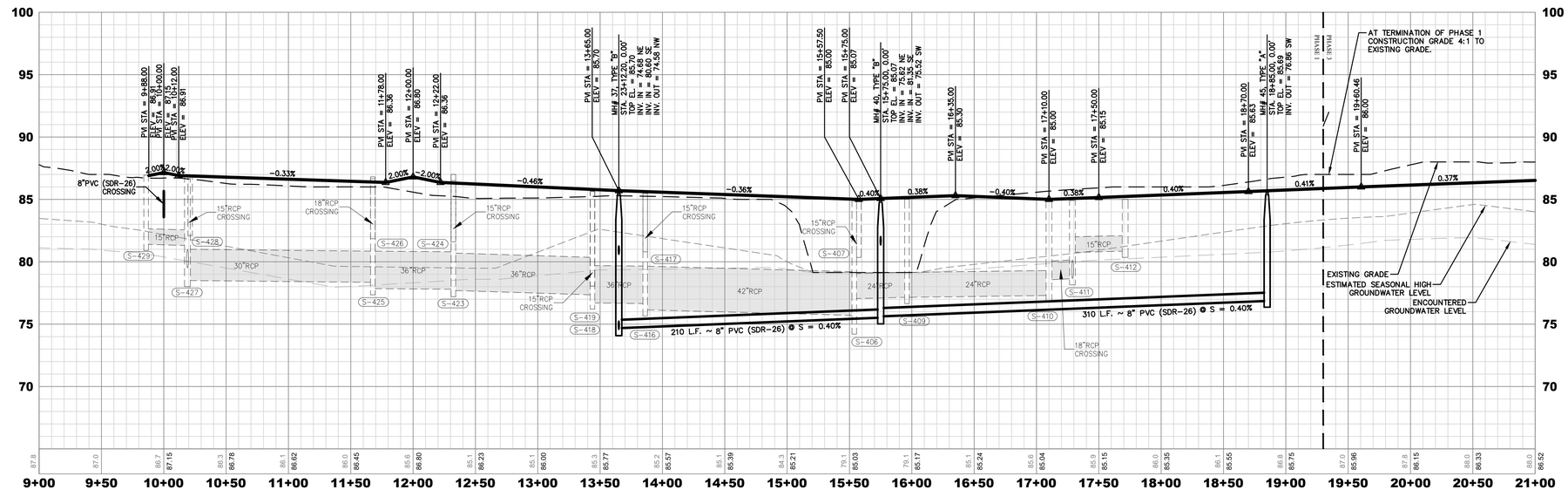
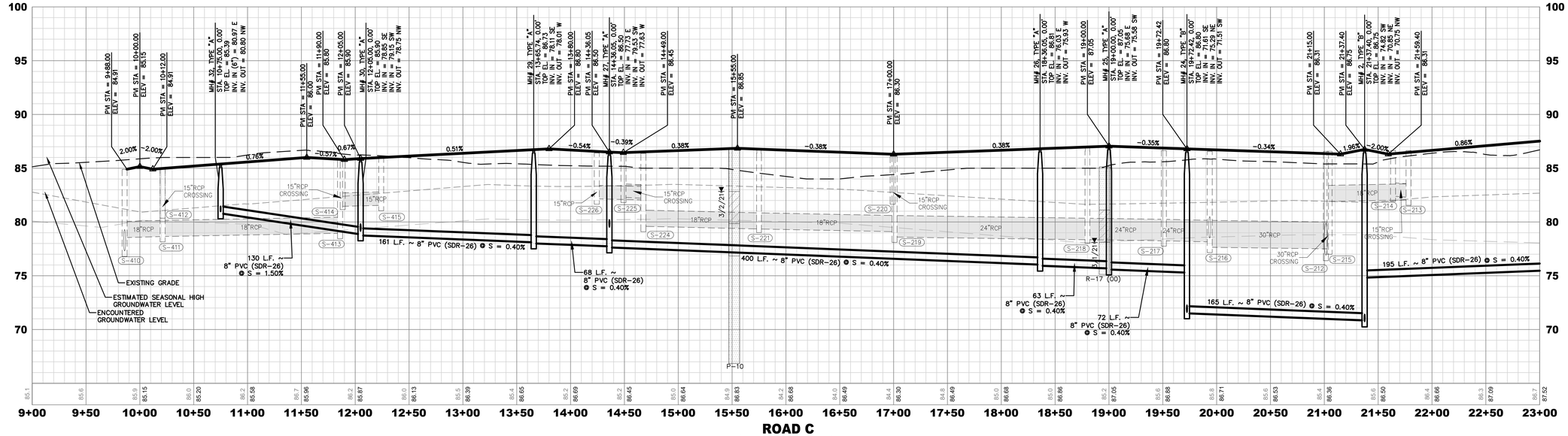


ROAD B
(9+00.00-21+00.00)
SCALE: 1"=50' VERT., 1"=5' HORZ.



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

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ROADWAY & SEWER PROFILES

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HOWEY IN THE HILLS
PREPARED FOR
LENNAR HOMES - ORLANDO

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SOIL BORING LEGEND

- Fine SAND (SP)
- Silty Fine SAND (SM)
- SANDY Clay (CL)
- NE GROUNDWATER NOT ENCOUNTERED AT TIME OF DRILLING
- Clayey Fine SAND (SC)
- Fine SAND with Clay (SP-SC)
- GROUNDWATER LEVEL AT TIME OF DRILLING
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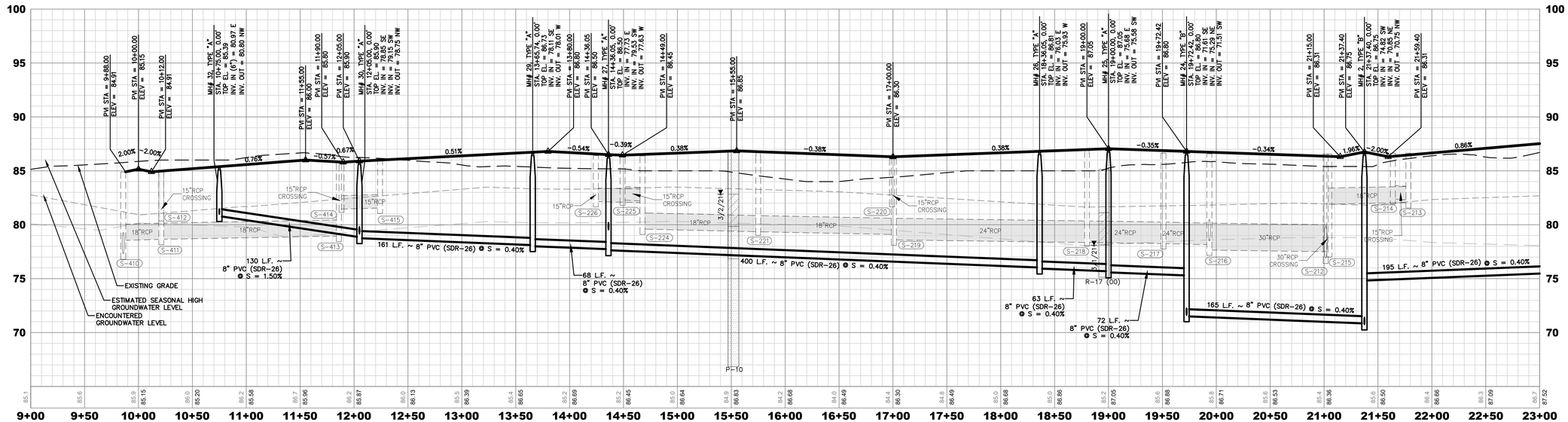
SCALES:
1"=5' VERTICAL
1"=50' HORIZONTAL



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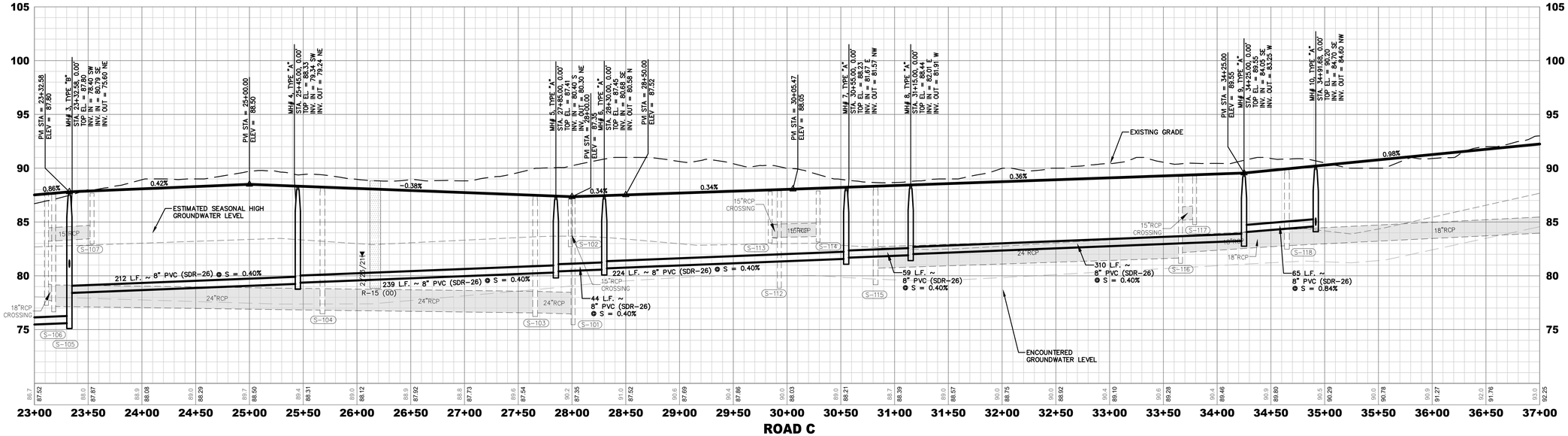
(9+00.00–23+00.00)
SCALE: 1"=50' VERT., 1"=5' HORZ.



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

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(904) 265-3030 FAX: (904) 265-3031 www.cwleng.com
C.A. Number: 3650 L.A. Number: LC26000311

No	Date	Revision	By
1			
2			
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4			
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6			

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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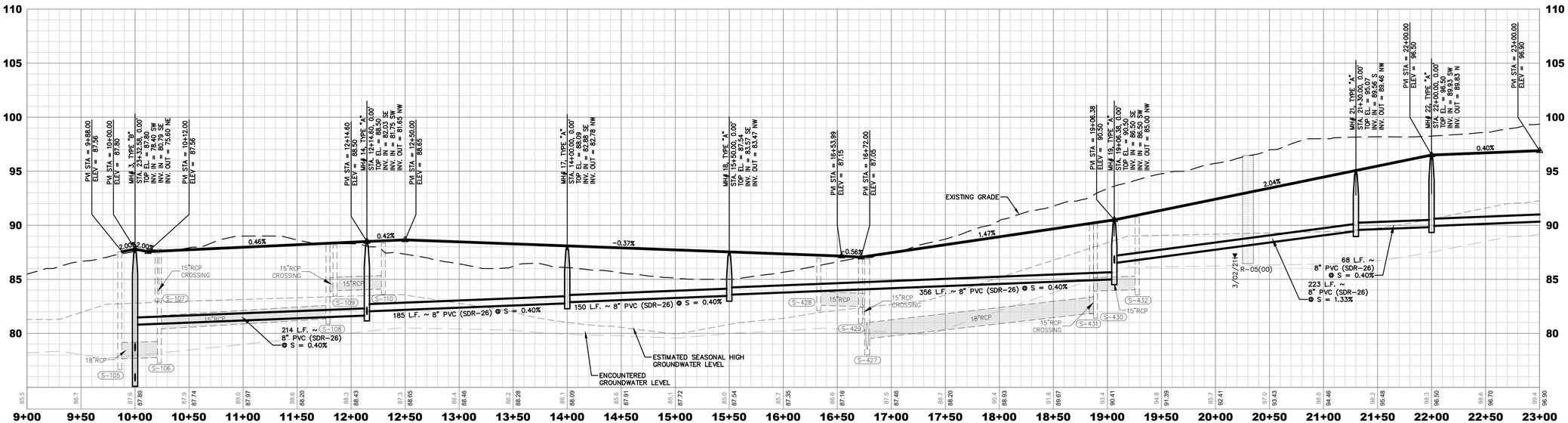
SOIL BORING LEGEND			
Fine SAND (SP)	Silty Fine SAND (SM)	SANDY Clay (CL)	NE GROUNDWATER NOT ENCOUNTERED AT TIME OF DRILLING
Clayey Fine SAND (SC)	Fine SAND with Clay (SP-SC)	GROUNDWATER LEVEL AT TIME OF DRILLING	A-3 AASHTO SOIL CLASSIFICATION
			SP UNIFIED SOIL CLASSIFICATION SYSTEM

NOTES:
1. GEOTECHNICAL INFORMATION AND ROADWAY AUGER BORINGS TAKEN FROM PROJECT GEOTECHNICAL REPORT (REFER TO SHEET NO. 2)
2. PROPOSED PAVEMENT ELEVATIONS SHOWN REFER TO FINAL WEARING SURFACE ELEVATIONS.

SCALES:
1"=5' VERTICAL
1"=50' HORIZONTAL



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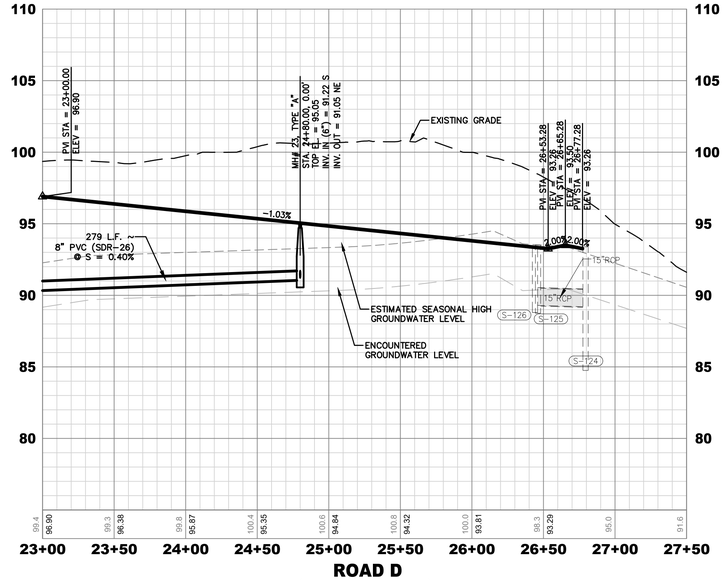
SCALE: 1"=50' VERT., 1"=5' HORZ.



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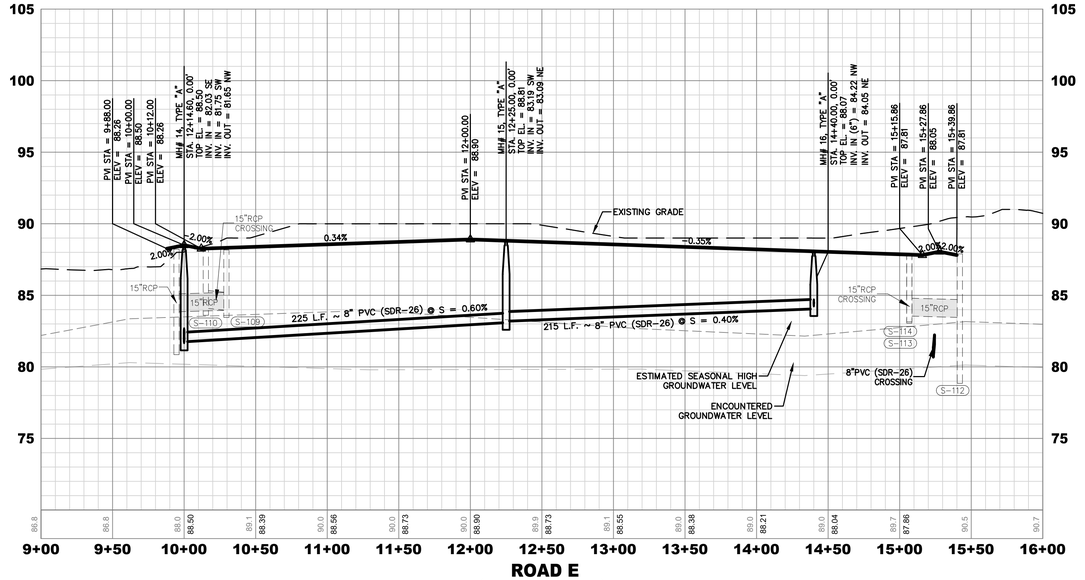

ROAD E
(9+00.00-16+00.00)
SCALE: 1"=50' VERT., 1"=5' HORZ.

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ROADWAY & SEWER PROFILES

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

JUSTIN ELLERY WILLIAMS
P.E. NUMBER69260
Reg. Engineer

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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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SOIL BORING LEGEND			
Fine SAND (SP)	Silty Fine SAND (SM)	SANDY Clay (CL)	NE GROUNDWATER NOT ENCOUNTERED AT TIME OF DRILLING
Clayey Fine SAND (SC)	Fine SAND with Clay (SP-SC)	GROUNDWATER LEVEL AT TIME OF DRILLING	A-3 AASHTO SOIL CLASSIFICATION
			SP UNIFIED SOIL CLASSIFICATION SYSTEM

NOTES:
1. GEOTECHNICAL INFORMATION AND ROADWAY AUGER BORINGS TAKEN FROM PROJECT GEOTECHNICAL REPORT (REFER TO SHEET NO. 2)
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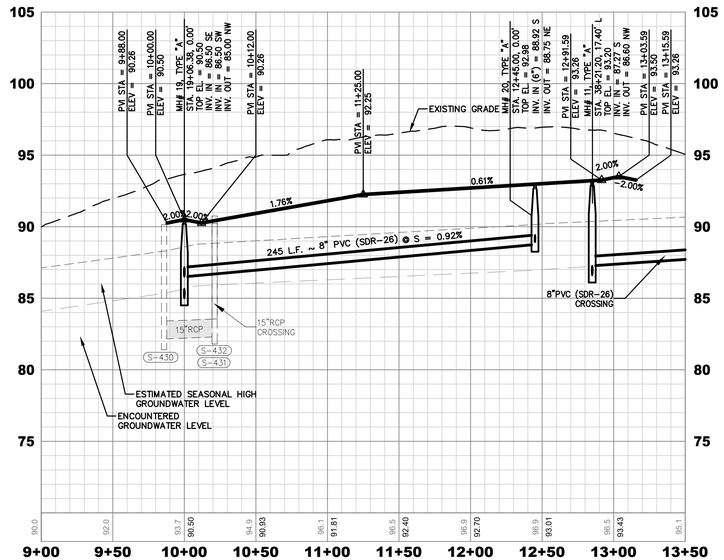
SCALES:
1"=5' VERTICAL
1"=50' HORIZONTAL



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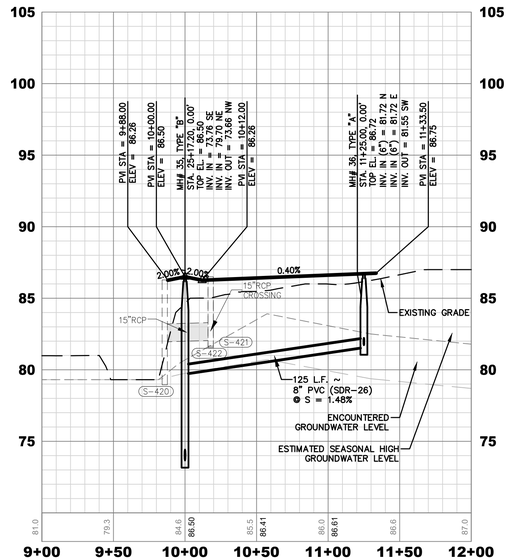
SCALE: 1"=50' VERT., 1"=5' HORZ.



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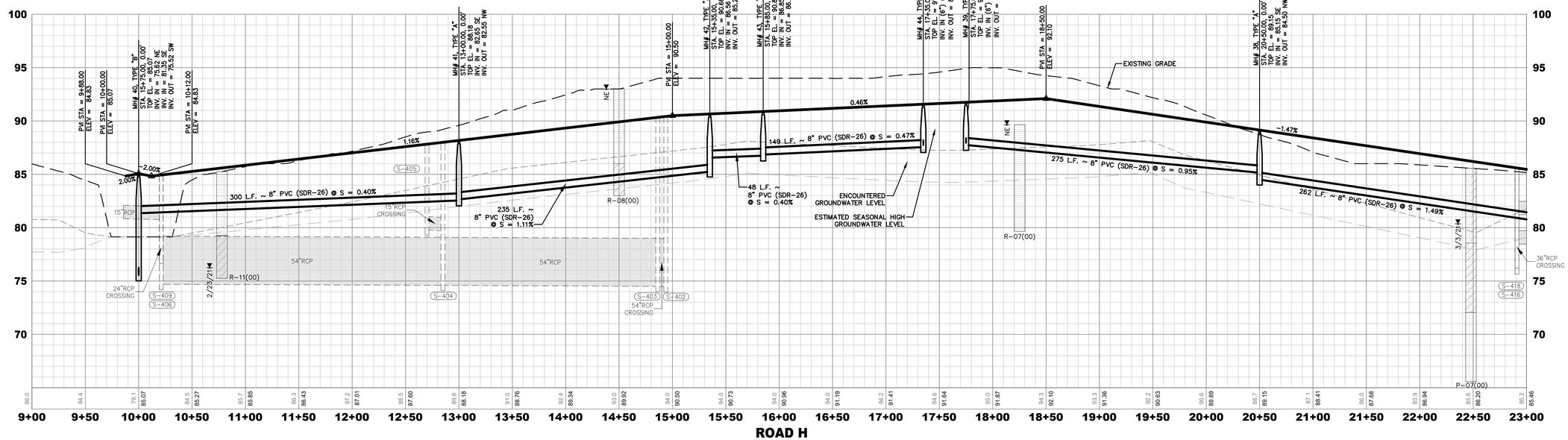
SCALE: 1"=50' VERT., 1"=5' HORZ.



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

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ROADWAY & SEWER PROFILES

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

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

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SOIL BORING LEGEND

- Fine SAND (SP)
- Silty Fine SAND (SM)
- SANDY Clay (CL)
- Clayey Fine SAND (SC)
- Fine SAND with Clay (SP-SC)
- GROUNDWATER LEVEL AT TIME OF DRILLING
- NE GROUNDWATER NOT ENCOUNTERED AT TIME OF DRILLING
- A-3 AASHTO SOIL CLASSIFICATION
- SP UNIFIED SOIL CLASSIFICATION SYSTEM

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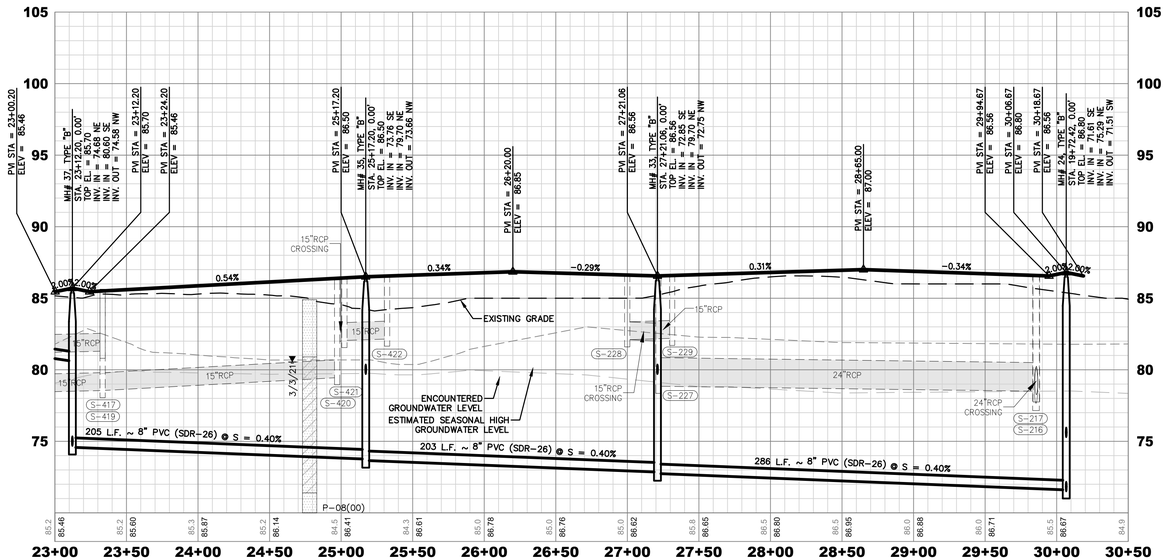
1"=50' HORIZONTAL



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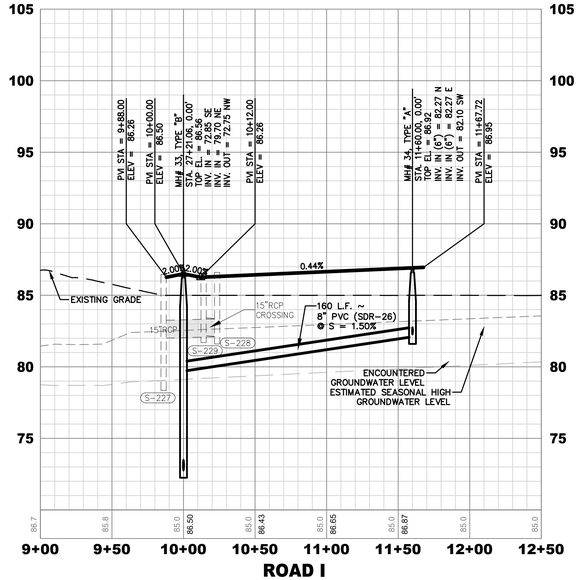
SCALE: 1"=50' VERT., 1"=5' HORZ.



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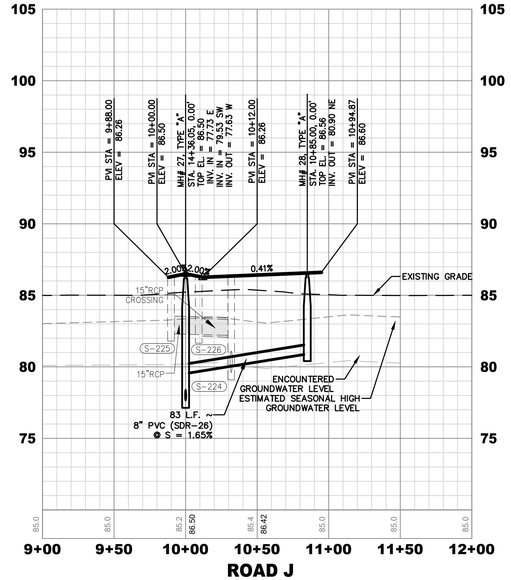
SCALE: 1"=50' VERT., 1"=5' HORZ.



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

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ROADWAY & SEWER PROFILES

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

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

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

SOIL BORING LEGEND

- Fine SAND (SP)
- Silty Fine SAND (SM)
- SANDY Clay (CL)
- NE GROUNDWATER NOT ENCOUNTERED AT TIME OF DRILLING
- Clayey Fine SAND (SC)
- Fine SAND with Clay (SP-SC)
- GROUNDWATER LEVEL AT TIME OF DRILLING
- A-3 AASHTO SOIL CLASSIFICATION
- SP UNIFIED SOIL CLASSIFICATION SYSTEM

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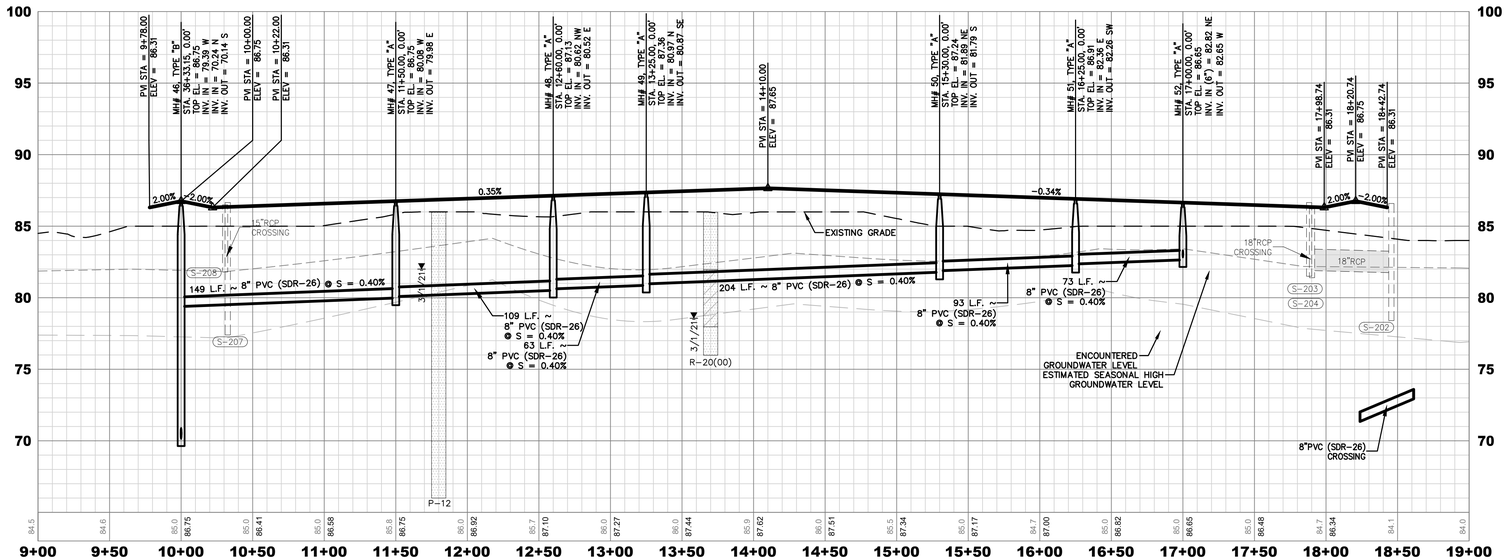
SCALES:
1"=5' VERTICAL
1"=50' HORIZONTAL



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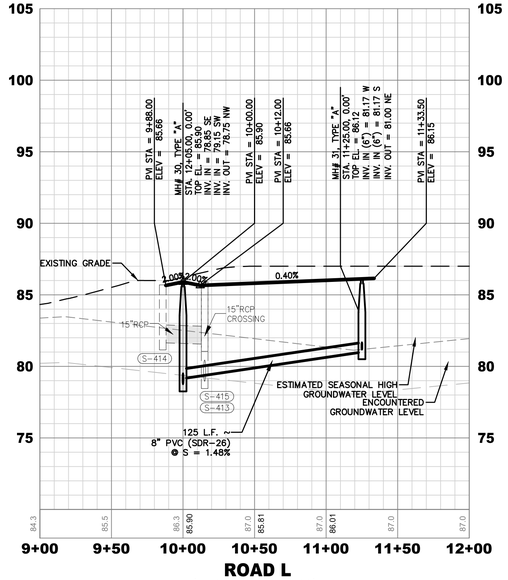
SCALE: 1"=50' VERT., 1"=5' HORZ.



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

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3			
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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 12H	

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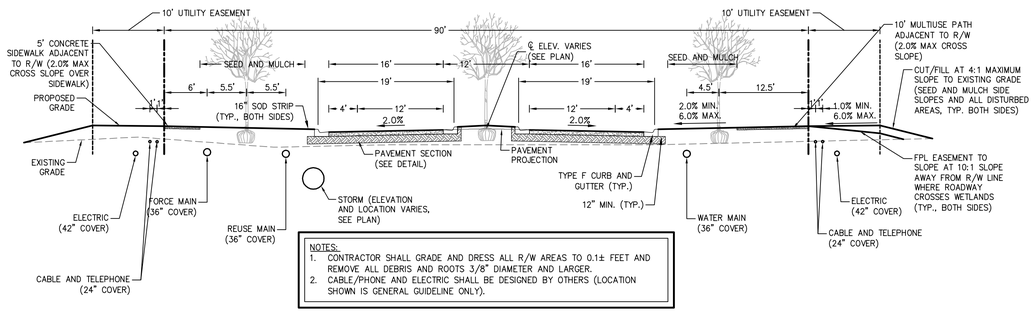
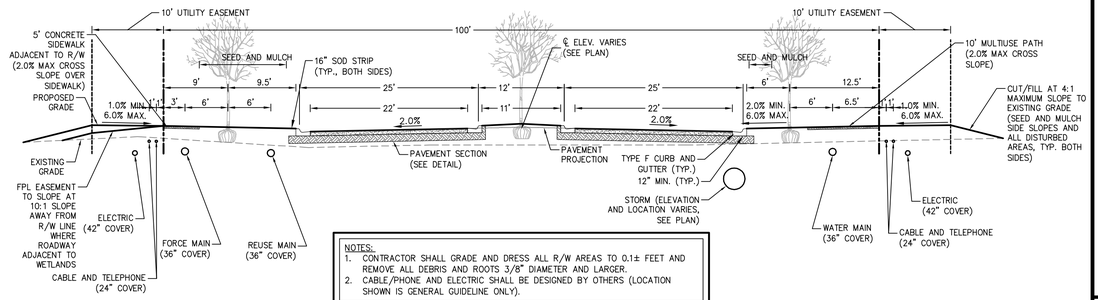


NOTES:
1. CONTRACTOR SHALL GRADE AND DRESS ALL R/W AREAS TO 0.1± FEET AND REMOVE ALL DEBRIS AND ROOTS 3/8" DIAMETER AND LARGER.
2. CABLE/PHONE AND ELECTRIC SHALL BE DESIGNED BY OTHERS (LOCATION SHOWN IS GENERAL GUIDELINE ONLY).

TYPICAL ROADWAY CROSS SECTION FOR 90' RIGHT OF WAY

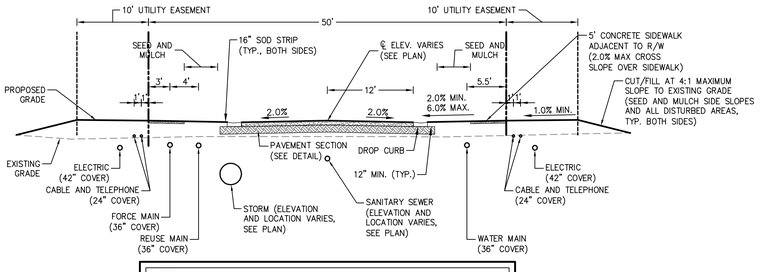
N.T.S.



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)

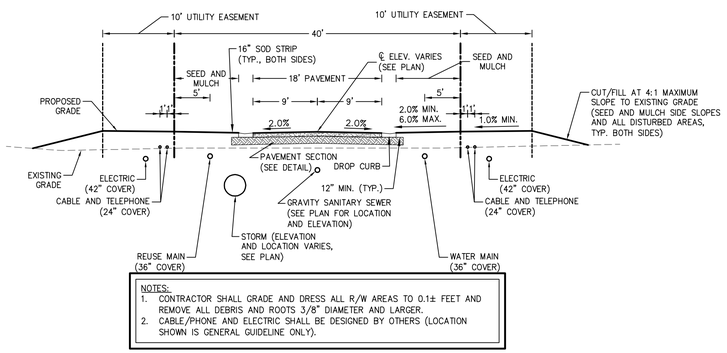
N.T.S.



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

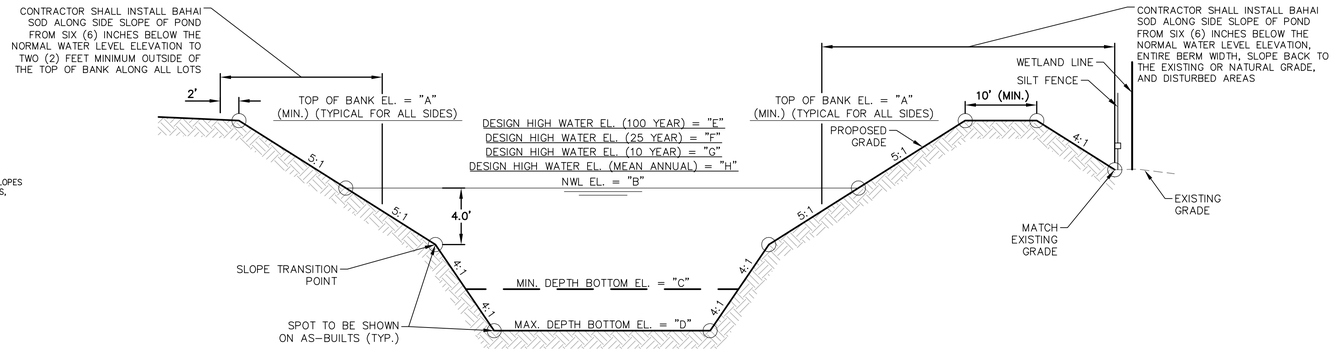
N.T.S.



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.



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	86.48	85.12	85.94	83.20	83.16	83.54	85.07	85.37	85.41
"F"	DHW EL. (25 YR.)	85.51	85.72	84.31	84.46	82.71	82.71	82.86	84.66	84.73	84.74
"G"	DHW EL. (10 YR.)	85.13	85.12	83.65	83.67	82.42	82.43	82.46	84.36	84.39	84.39
"H"	DHW EL. (MEAN ANNUAL)	84.72	83.89	82.78	82.78	82.05	82.05	82.06	83.88	83.89	83.89

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	84.57	85.55	84.83	85.36	85.09
"F"	DHW EL. (25 YR.)	85.10	84.57	82.56	82.87	84.11	84.85	84.28	84.38	84.31
"G"	DHW EL. (10 YR.)	84.65	84.39	82.27	82.52	83.80	84.39	83.70	83.73	83.74
"H"	DHW EL. (MEAN ANNUAL)	83.89	84.16	81.95	82.10	83.43	83.83	82.89	82.91	82.91

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.

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Florida Registry: 3650 L.A. Number LC26000311

No	Date	Revision	By
A			
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PAVING AND DRAINAGE DETAILS

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

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

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Printed: Nov 21, 2022 - 2:50pm Printed By: Derek
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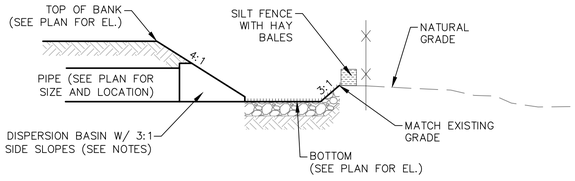
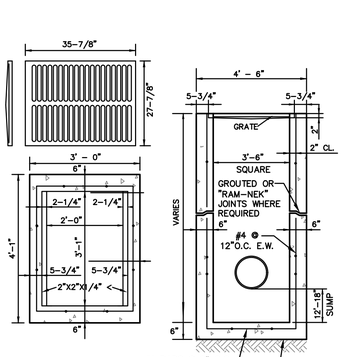


NOTES:
1. CONTRACTOR SHALL PROVIDE 1' MIN. DEPTH OF STONE (SIZE 3"–6" DIAMETER) OVER TOP OF FILTER FABRIC ALONG ENTIRE BOTTOM OF DISPERSION BASIN. 2" OF FILL TO BE PLACED OVER BEDDING STONE AND LEVELED IN PREPARATION FOR SODDING.
2. CONTRACTOR SHALL PROVIDE SILT FENCE AND HAY BALES ALONG ENTIRE PERIMETER 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

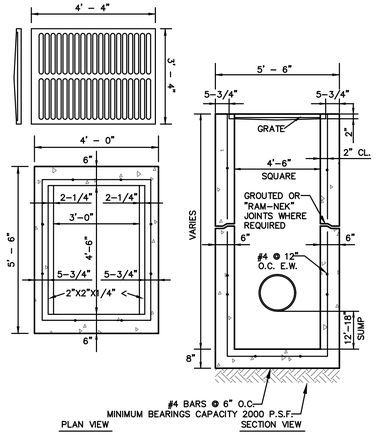
N.T.S.



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

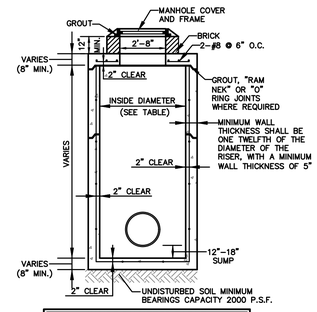
N.T.S.



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.

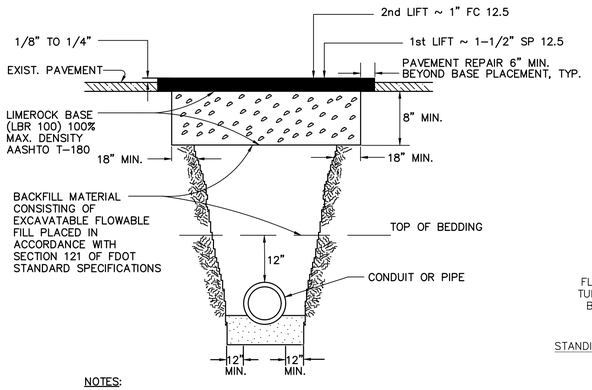


INSIDE DIAMETER TABLE								
J-1	J-1A	J-1B	J-1C	J-1D	J-1E	J-1F		
4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"		

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

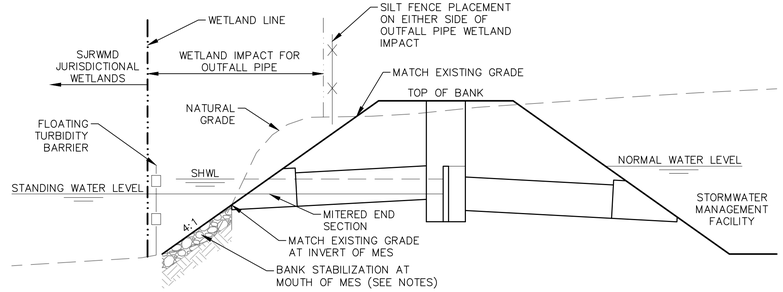
N.T.S.



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

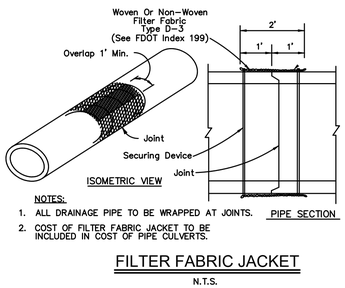
N.T.S.



NOTES:
1. CONTRACTOR SHALL PROVIDE 1' MIN. DEPTH OF STONE (SIZE 3"–6" DIAMETER) OVER TOP OF FILTER FABRIC AT MOUTH OF MITERED END SECTION.
2. CONTRACTOR SHALL PROVIDE FLOATING TURBIDITY BARRIER WHERE WORK SHALL OCCUR BELOW STANDING WATER LEVEL WITHIN WETLANDS.
3. THE CONTRACTOR SHALL STAKE LIMITS OF CONSTRUCTION AND PLACE SILT FENCE AND FLOATING TURBIDITY BARRIERS PRIOR TO CONSTRUCTION AND SHALL AVOID IMPACTS OUTSIDE LIMITS SHOWN ON PLANS.

TYPICAL STORMWATER POND OUTFALL DETAIL

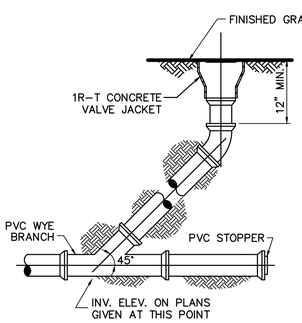
N.T.S.



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

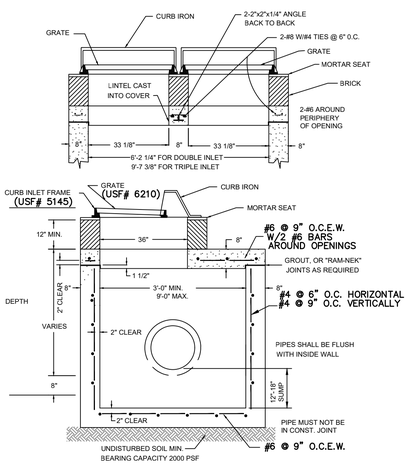
FILTER FABRIC JACKET

N.T.S.



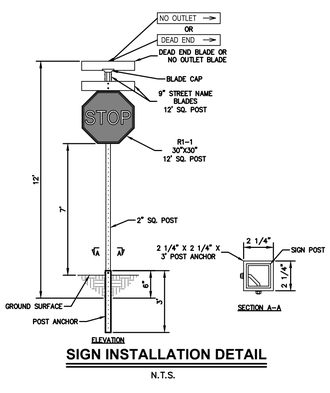
CLEANOUT DETAIL

N.T.S.



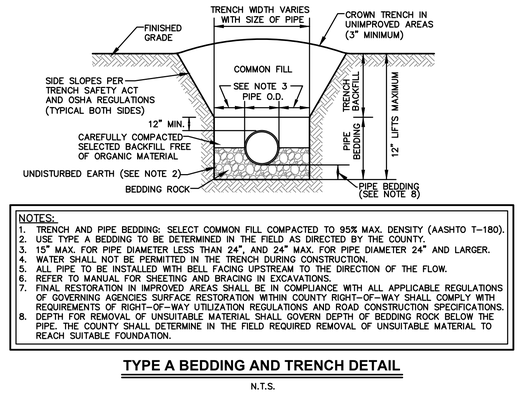
TYPE "B" DOUBLE CURB INLET

N.T.S.



SIGN INSTALLATION DETAIL

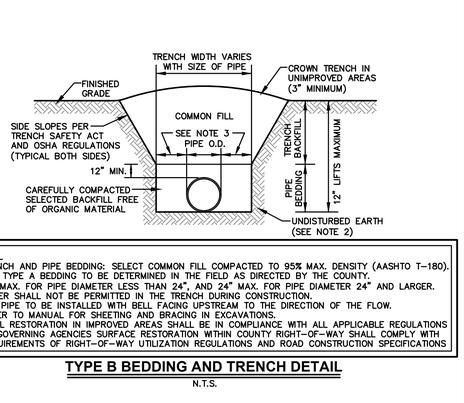
N.T.S.



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.



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.
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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 Regristy: 3650 L.A. Number LC26000311

No.	Date	Revision	By

PAVING AND DRAINAGE DETAILS

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

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

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

Printed: Nov 18, 2022 - 5:30pm Printed By: Wesley
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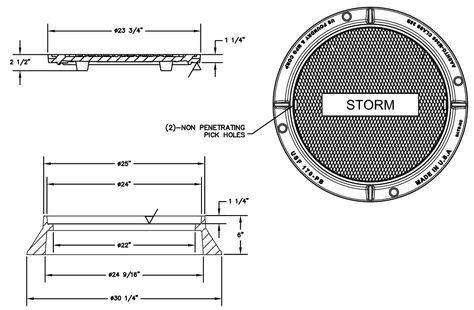
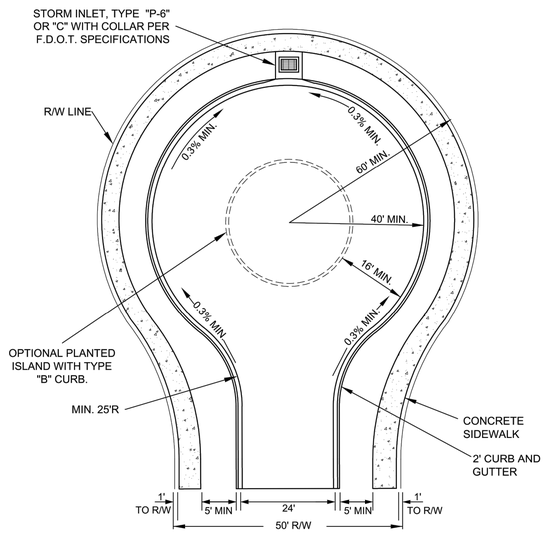
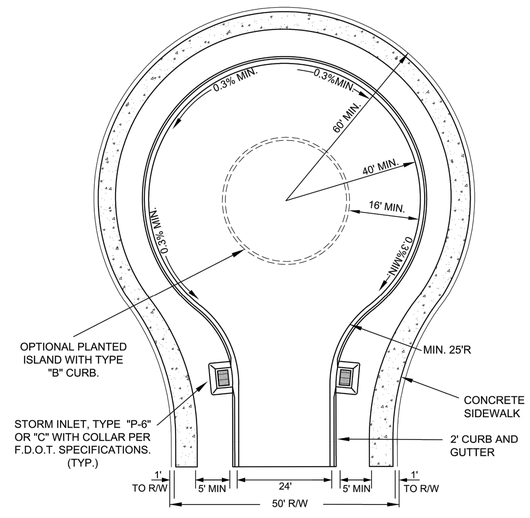


*MODEL USF 170–PB RING AND CE–PB COVER
RING NO. 8021468
COVER NO. 8017533
MATERIAL AASHTO M306 GRAY IRON CLASS35B

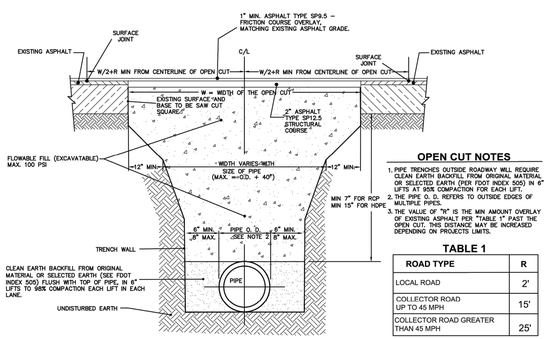
STORMWATER MANHOLE COVER
NOT TO SCALE



CUL-D-SAC WITH SINGLE STORM INLET
(N.T.S.)



CUL-DE-SAC WITH TWO STORM INLETS
(N.T.S.)



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.

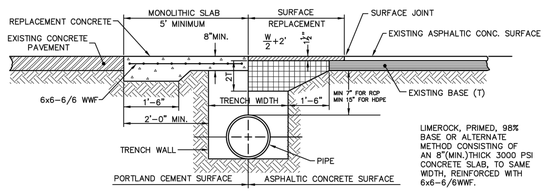
TABLE 1

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.

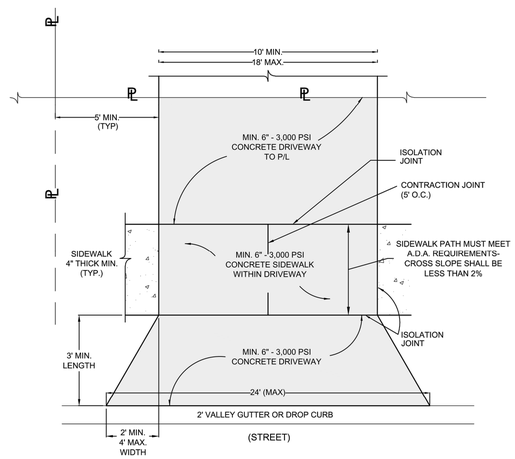
OPEN CUT & REPAIR (N.T.S.)



*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.)



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.
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Florida Regristy: 3650 L.A. Number LC26000311

No.	Date	Revision	By
1			
2			
3			
4			
5			

PAVING AND DRAINAGE DETAILS

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

JUSTIN ELLERY WILLIAMS
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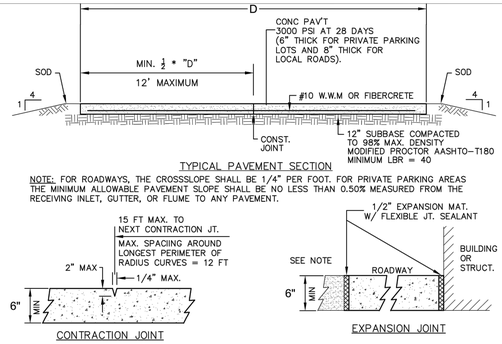
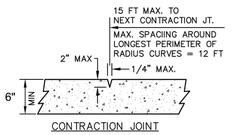
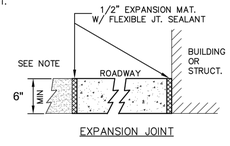


TYPICAL PAVEMENT SECTION

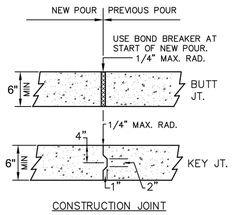
NOTE: FOR ROADWAYS, THE CROSSSLOPE SHALL BE 1/4" PER FOOT. FOR PRIVATE PARKING AREAS THE MINIMUM ALLOWABLE PAVEMENT SLOPE SHALL BE NO LESS THAN 0.50% MEASURED FROM THE RECEIVING INLET, GUTTER, OR FLUME TO ANY PAVEMENT.



CONTRACTION JOINT



EXPANSION JOINT

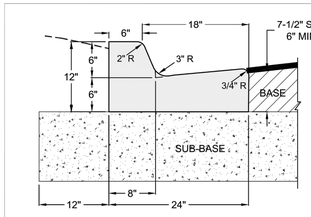


CONSTRUCTION JOINT

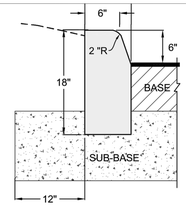
NOTES:

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.

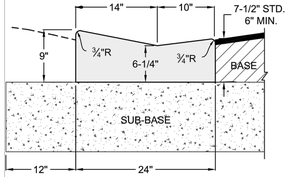
CONCRETE PAVEMENT (N.T.S.)



TYPE "F" CURB



TYPE "D" CURB

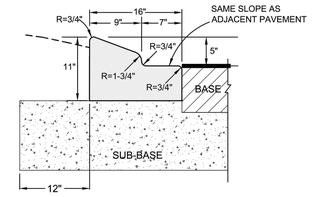


DROP CURB (MIAMI TYPE)

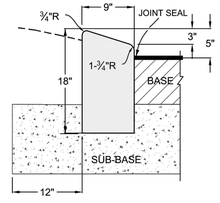
NOTES:

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.

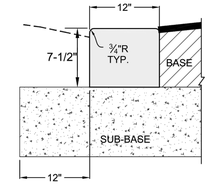
CONCRETE CURB (1) (N.T.S.)



TYPE "A" CURB

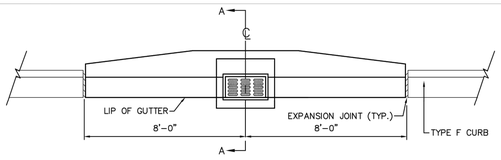


TYPE "B" CURB

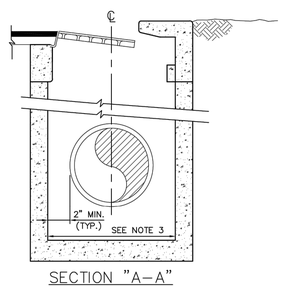


RIBBON CURB

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



PLAN

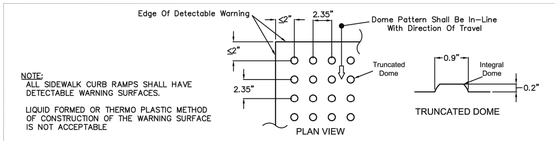


SECTION "A-A"

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.)

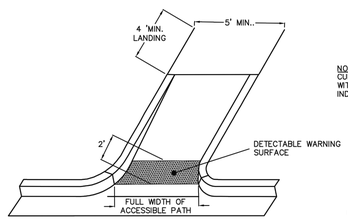


NOTE:
ALL SIDEWALK CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES.

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

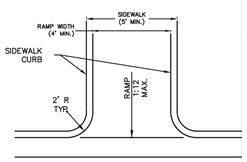
LENGTH OF SURFACE SHALL BE 2' IN THE DIRECTION OF TRAVEL WITH A WIDTH EQUAL TO THE WIDTH OF THE ACCESSIBLE WALKWAY.

CURB RAMP DETECTABLE WARNING SURFACE

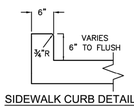


PICTORAL VIEW
CURB RAMP TYPE CR-E
FDOT INDEX 304

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



PLAN VIEW
CURB RAMP TYPE CR-E
FDOT INDEX 304



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

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Florida Registry: 3650 L.A. Number LC26000311

No.	Date	Revision	By
1			
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PAVING AND DRAINAGE DETAILS

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

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

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

Printed: Nov 18, 2022 - 5:30pm Printed By: Wesley
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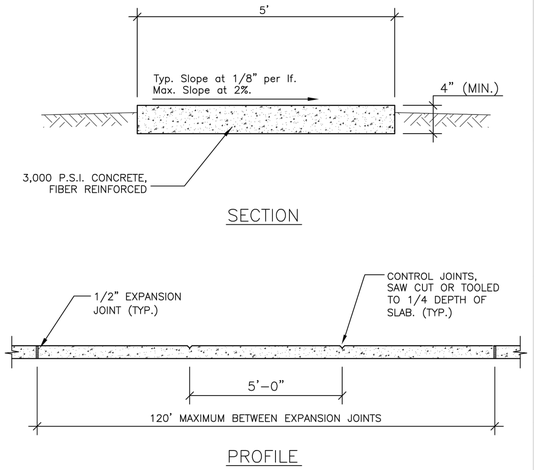
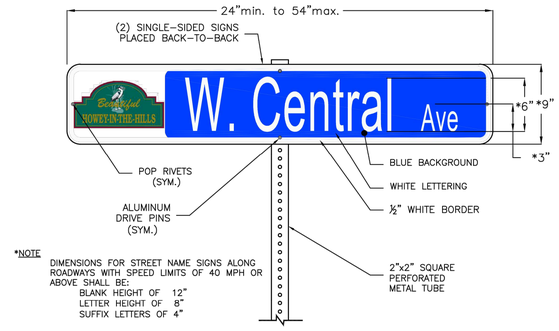


SIDEWALK (N.T.S.)

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 5 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



*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"

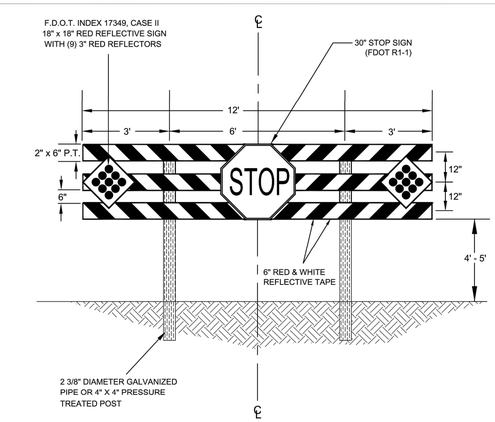
SIGN BLANKS:
- .063" ALUMINUM
- ALUMINUM CHEMICALLY TREATED TO MEET ATSM B449 STANDARD (PRE-TREATMENT FOR PAINT OR REFLECTIVE SHEETING)
- DIMENSIONS ARE TO BE 9" or 12" HEIGHT X 24" MINIMUM TO 54" MAXIMUM LENGTH. BLANK LENGTH TO BE DETERMINED BY ROAD NAME LENGTH AND BE ESTABLISHED IN 6" INCREMENTS, I.E.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

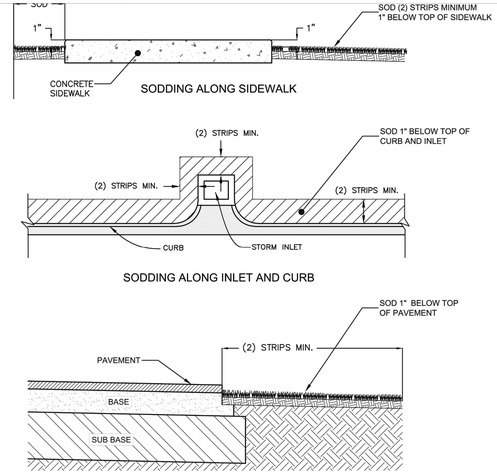
STREET SIGN (N.T.S.)



NOTES:

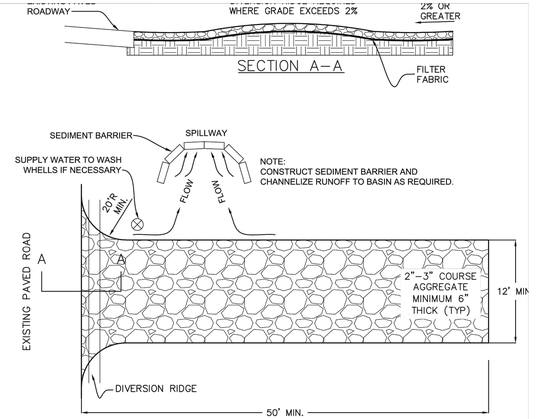
* BARRICADE TO BE USED FOR CITY AND PRIVATE STREETS, NOT APPLICABLE FOR MAJOR STREETS.
* A DEAD END SIGN (F.D.O.T. W14-1) SHALL BE POSTED AT A SUFFICIENT ADVANCE DISTANCE TO PERMIT VEHICLE OPERATOR TO TURN OFF. IF POSSIBLE AT THE NEAREST INTERSECTING STREET.
* BARRICADE SIGNS AND MARKERS SHALL BE IN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

ROAD BARRICADE (N.T.S.)



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.)



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
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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	

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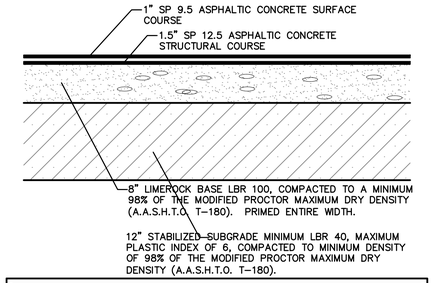
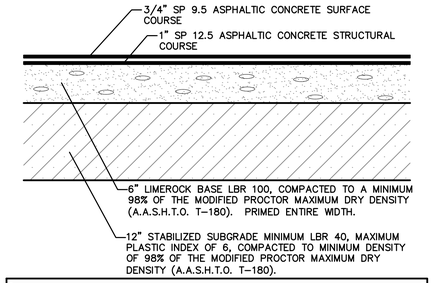


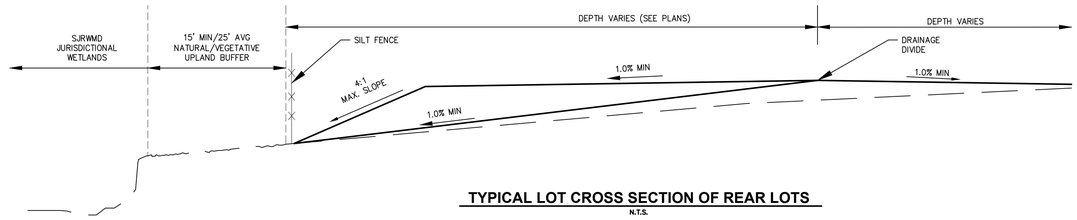
NOTES:
1. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED.
2. SOIL ANALYSIS MAY INDICATE THE NEED FOR THICKER BASE COURSES THAN THOSE HEREIN. THE PAVEMENT THICKNESS SHOWN HEREIN ARE NOT INTENDED TO BE ABSOLUTE, BUT ARE PRELIMINARY CRITERIA AND MAY BE MODIFIED TO ACCOMMODATE THE BEARING CAPACITY OF VARIOUS SUBGRADES.
3. ALL ASPHALTIC CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 331 AND/OR 333, F.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.

TYPICAL PAVEMENT SECTION - (ROAD A)
N.T.S.

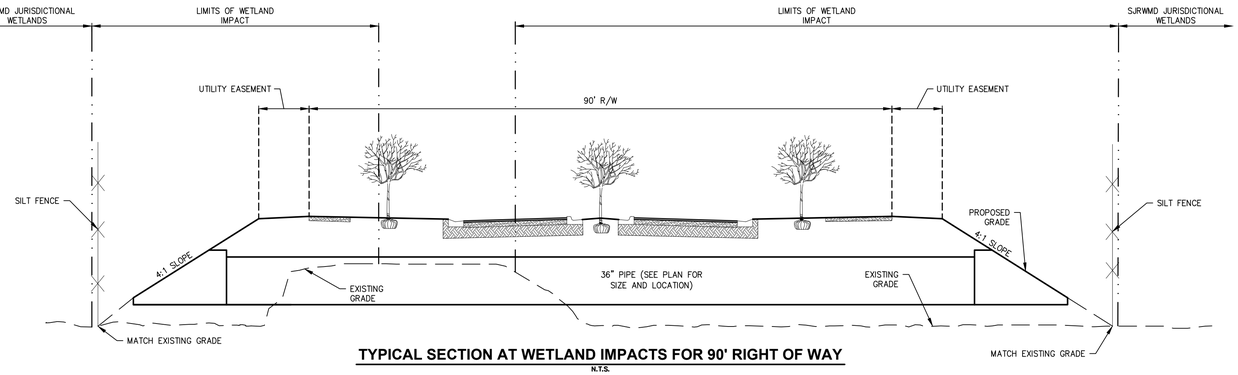


NOTES:
1. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED.
2. SOIL ANALYSIS MAY INDICATE THE NEED FOR THICKER BASE COURSES THAN THOSE HEREIN. THE PAVEMENT THICKNESS SHOWN HEREIN ARE NOT INTENDED TO BE ABSOLUTE, BUT ARE PRELIMINARY CRITERIA AND MAY BE MODIFIED TO ACCOMMODATE THE BEARING CAPACITY OF VARIOUS SUBGRADES.
3. ALL ASPHALTIC CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 331 AND/OR 333, F.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.

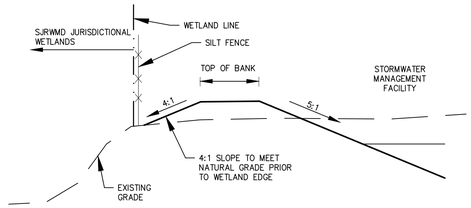
TYPICAL PAVEMENT SECTION - (RESIDENTIAL ROADS)
N.T.S.



TYPICAL LOT CROSS SECTION OF REAR LOTS
N.T.S.



TYPICAL SECTION AT WETLAND IMPACTS FOR 90' RIGHT OF WAY
N.T.S.



NOTE: REFER TO TYPICAL CROSS SECTION THRU STORMWATER MANAGEMENT FACILITY FOR OTHER DETAILS

TYPICAL REAR POND BANK CROSS SECTION
N.T.S.

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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 13F

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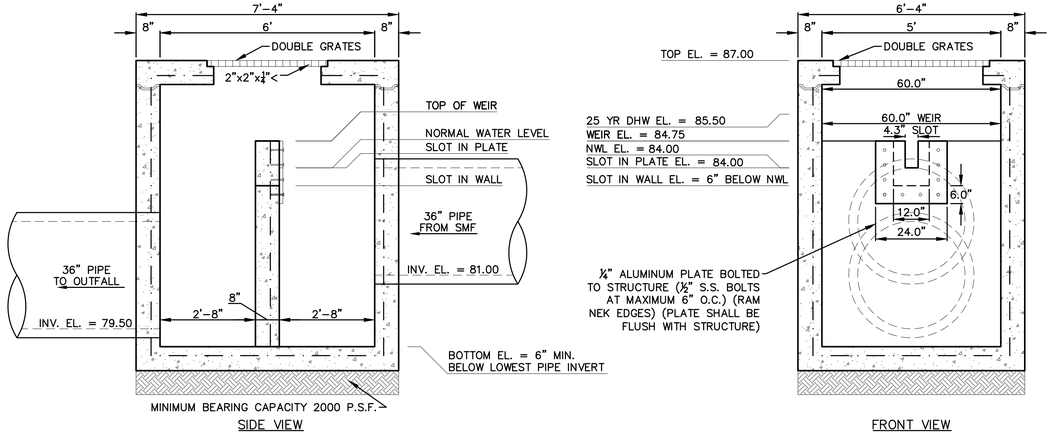
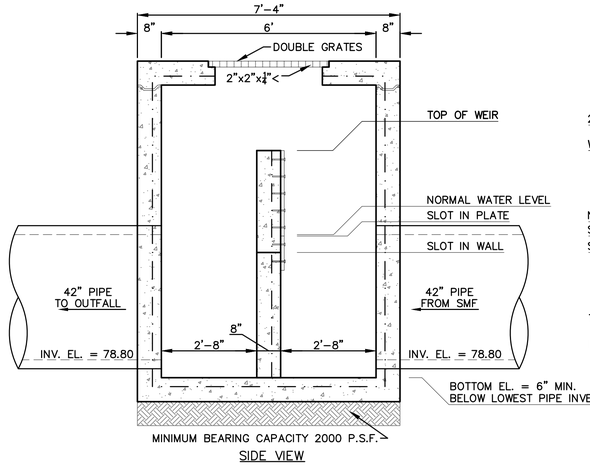


SIDE VIEW

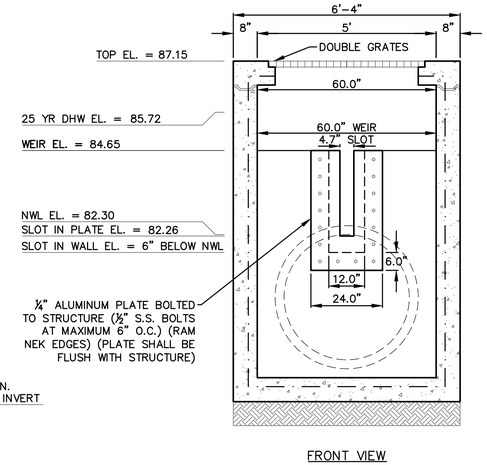
FRONT VIEW

NOTES:
1. CONCRETE DESIGN STRENGTH 4,000 PSI, TO BE CONSTRUCTED PER FDOT STANDARD SPECIFICATIONS FOR CONCRETE INLET WITH A PRECAST TOP SLAB, WITH ALL APPLICABLE REINFORCING.
2. ALL BOLTS TO BE STAINLESS STEEL.
3. PIPES MUST NOT BE IN CONSTRUCTION JOINTS.
4. PIPE SHALL BE FLUSH WITH INSIDE WALL.
5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS ON "AS-BUILTS".

SMF-01 CONTROL STRUCTURE
(S-2) MODIFIED TYPE "J" INLET
N.T.S.



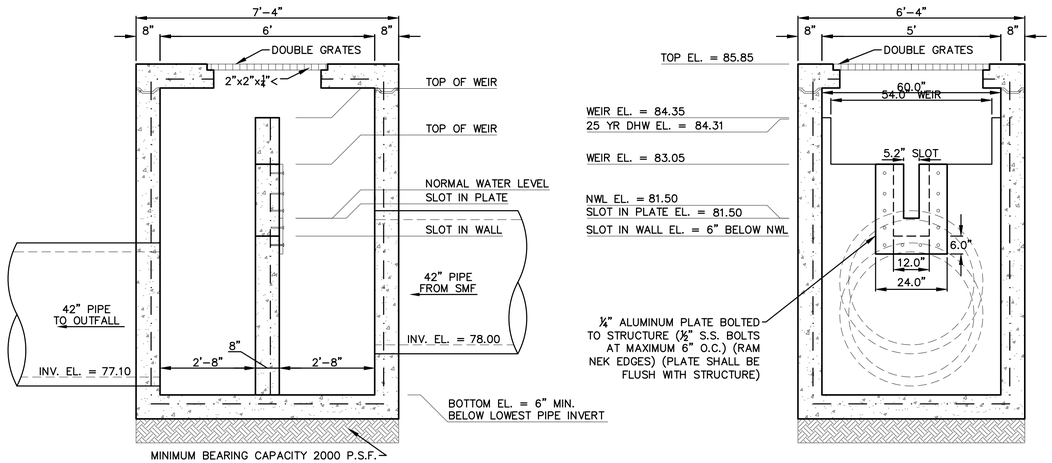
SIDE VIEW



FRONT VIEW

NOTES:
1. CONCRETE DESIGN STRENGTH 4,000 PSI, TO BE CONSTRUCTED PER FDOT STANDARD SPECIFICATIONS FOR CONCRETE INLET WITH A PRECAST TOP SLAB, WITH ALL APPLICABLE REINFORCING.
2. ALL BOLTS TO BE STAINLESS STEEL.
3. PIPES MUST NOT BE IN CONSTRUCTION JOINTS.
4. PIPE SHALL BE FLUSH WITH INSIDE WALL.
5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS ON "AS-BUILTS".

SMF-02 CONTROL STRUCTURE
(S-5) MODIFIED TYPE "J" INLET
N.T.S.

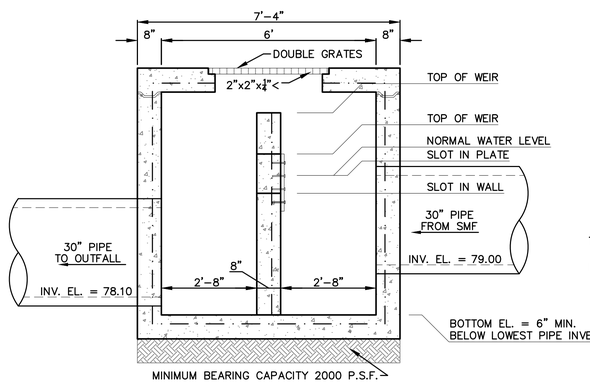


SIDE VIEW

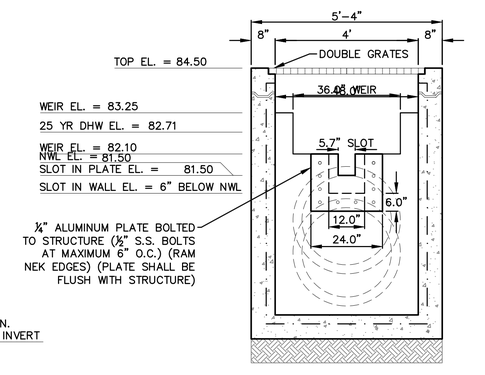
FRONT VIEW

NOTES:
1. CONCRETE DESIGN STRENGTH 4,000 PSI, TO BE CONSTRUCTED PER FDOT STANDARD SPECIFICATIONS FOR CONCRETE INLET WITH A PRECAST TOP SLAB, WITH ALL APPLICABLE REINFORCING.
2. ALL BOLTS TO BE STAINLESS STEEL.
3. PIPES MUST NOT BE IN CONSTRUCTION JOINTS.
4. PIPE SHALL BE FLUSH WITH INSIDE WALL.
5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS ON "AS-BUILTS".

SMF-03 CONTROL STRUCTURE
(S-8) MODIFIED TYPE "J" INLET
N.T.S.



SIDE VIEW



FRONT VIEW

NOTES:
1. CONCRETE DESIGN STRENGTH 4,000 PSI, TO BE CONSTRUCTED PER FDOT STANDARD SPECIFICATIONS FOR CONCRETE INLET WITH A PRECAST TOP SLAB, WITH ALL APPLICABLE REINFORCING.
2. ALL BOLTS TO BE STAINLESS STEEL.
3. PIPES MUST NOT BE IN CONSTRUCTION JOINTS.
4. PIPE SHALL BE FLUSH WITH INSIDE WALL.
5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS ON "AS-BUILTS".

SMF-05 CONTROL STRUCTURE
(S-13) MODIFIED TYPE "J" INLET
N.T.S.

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
Florida Registry: 3650 L.A. Number LC26000311

No.	Date	Revision	By

PAVING AND DRAINAGE DETAILS

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

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

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

Printed: Nov 18, 2022 - 5:30pm Printed By: Wesley

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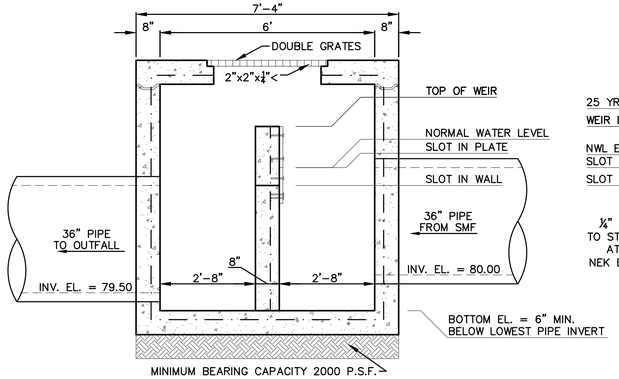
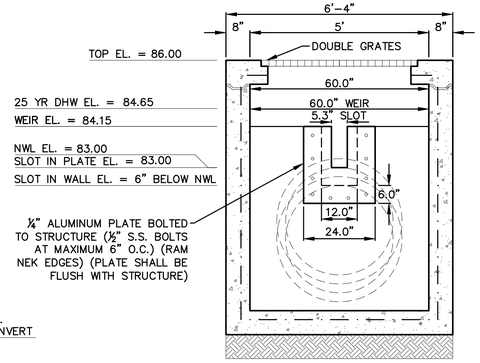


SIDE VIEW



FRONT VIEW

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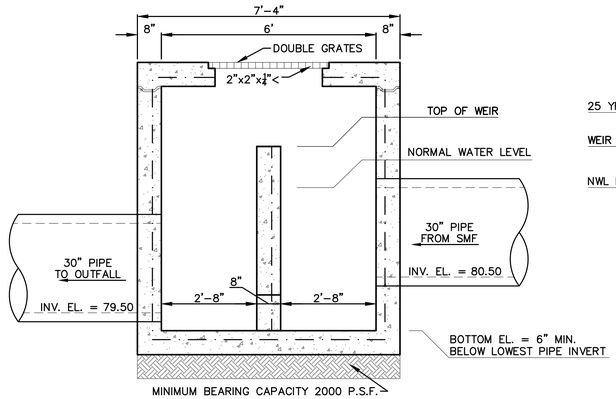
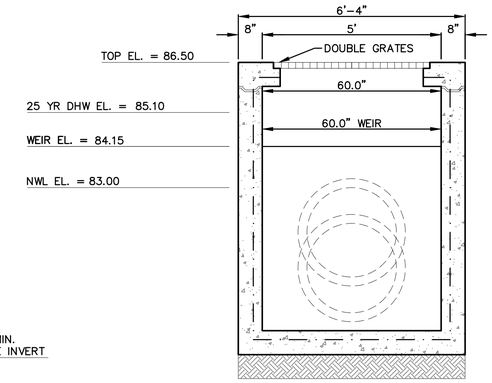
SMF-08 CONTROL STRUCTURE
(S-26) MODIFIED TYPE "J" INLET
N.T.S.



SIDE VIEW



FRONT VIEW

NOTES:
1. CONCRETE DESIGN STRENGTH 4,000 PSI, TO BE CONSTRUCTED PER FDOT STANDARD SPECIFICATIONS FOR CONCRETE INLET WITH A PRECAST TOP SLAB, WITH ALL APPLICABLE REINFORCING.
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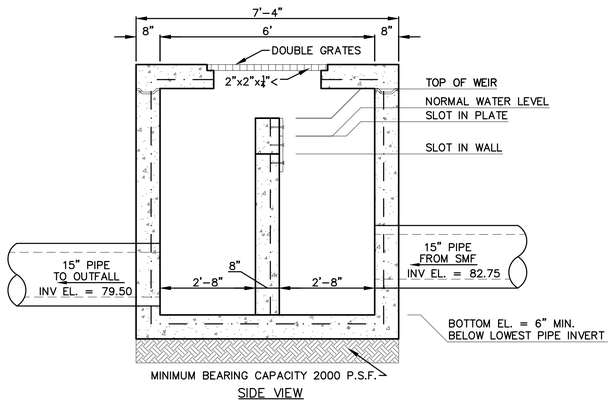
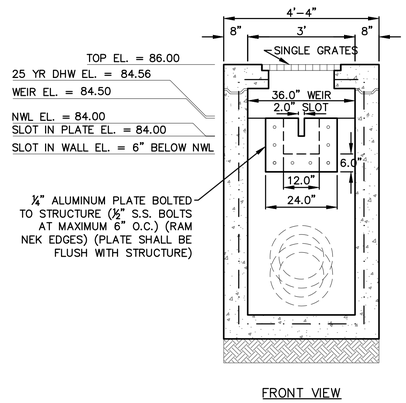
SMF-11 CONTROL STRUCTURE
(S-41) MODIFIED TYPE "J" INLET
N.T.S.



SIDE VIEW



FRONT VIEW

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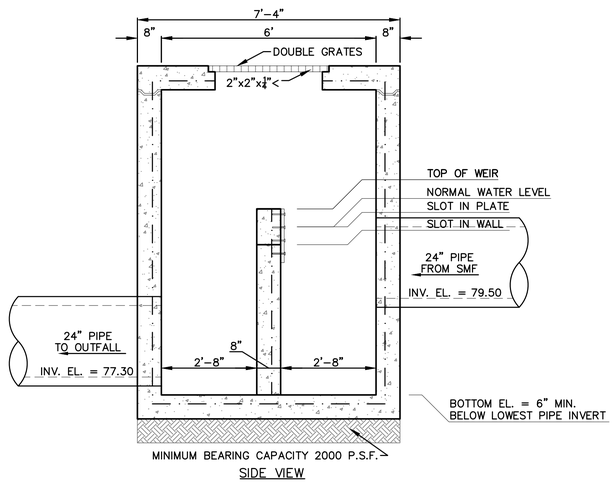
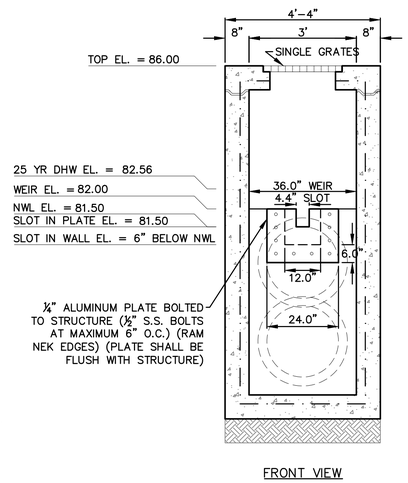
SMF-12 CONTROL STRUCTURE
(S-44) MODIFIED TYPE "J" INLET
N.T.S.



SIDE VIEW



FRONT VIEW

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SMF-13 CONTROL STRUCTURE
(S-49) MODIFIED TYPE "J" INLET
N.T.S.

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Florida Registry: 3650 L.A. Number LC26000311

No.	Date	Revision	By

PAVING AND DRAINAGE DETAILS

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

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

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Printed: Nov 18, 2022 - 5:30pm Printed By: Wesley

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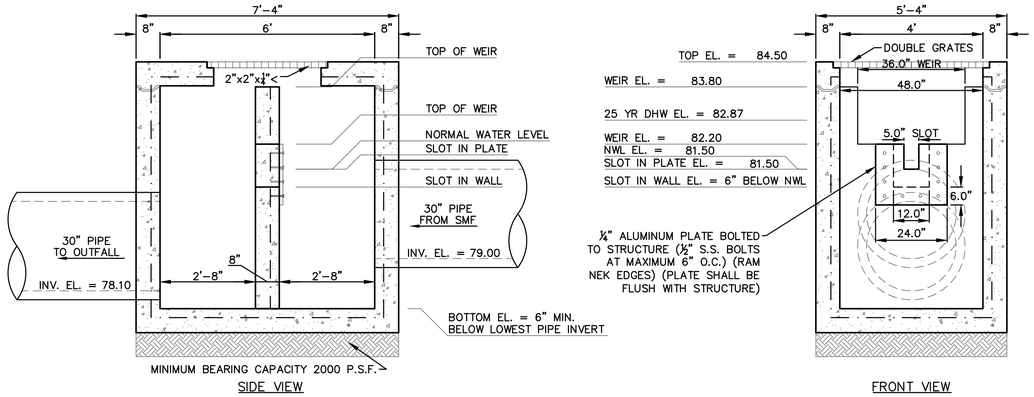

SIDE VIEW

FRONT VIEW

NOTES:
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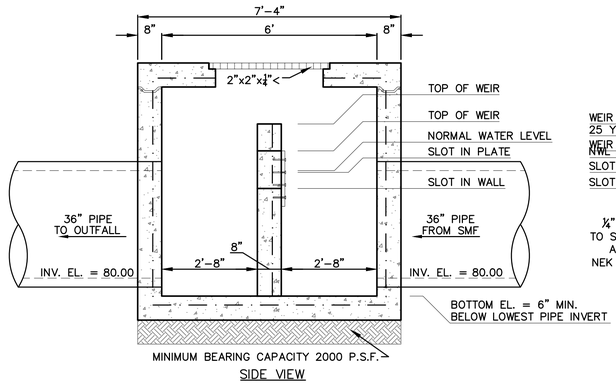
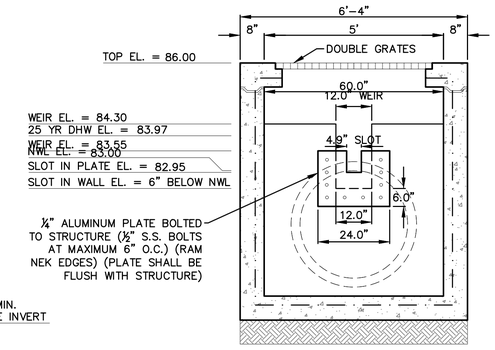
SMF-14 CONTROL STRUCTURE
(S-52) MODIFIED TYPE "J" INLET
N.T.S.



SIDE VIEW



FRONT VIEW

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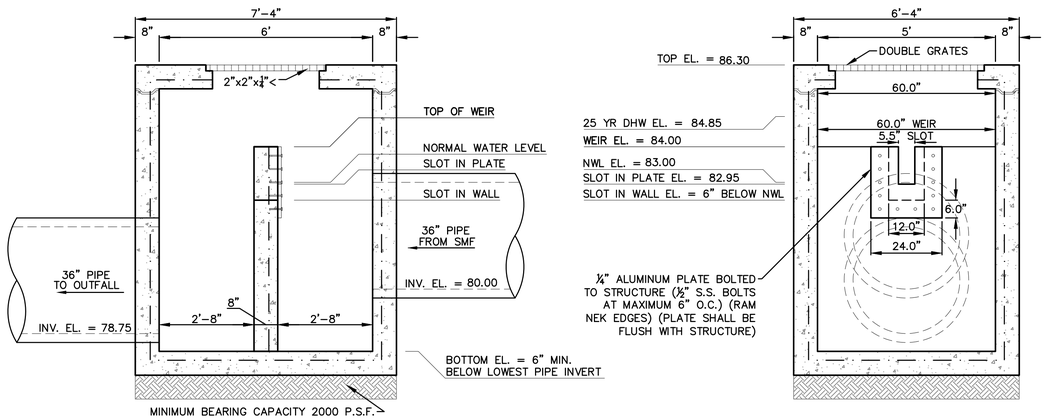
SMF-15 CONTROL STRUCTURE
(S-55) MODIFIED TYPE "J" INLET
N.T.S.



SIDE VIEW

FRONT VIEW

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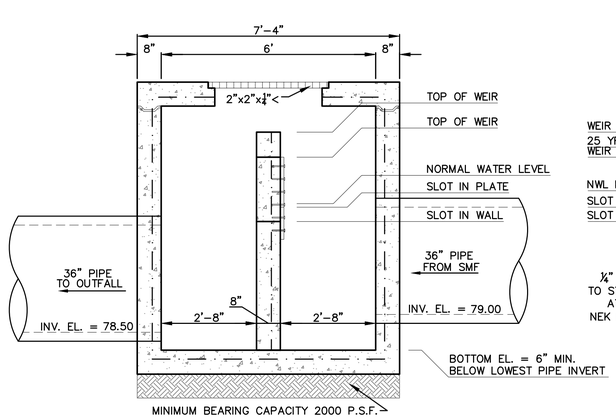
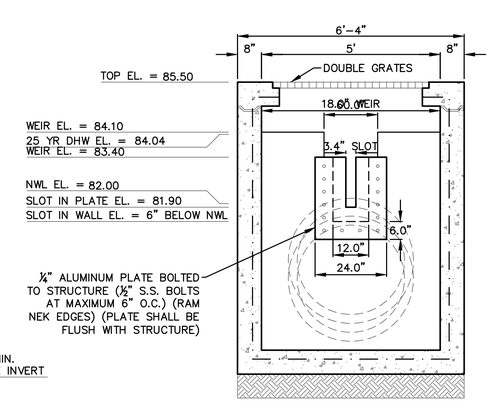
SMF-16 CONTROL STRUCTURE
(S-58) MODIFIED TYPE "J" INLET
N.T.S.



SIDE VIEW



FRONT VIEW

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SMF-17 CONTROL STRUCTURE
(S-61) MODIFIED TYPE "J" INLET
N.T.S.

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No.	Date	Revision	By
1			
2			
3			
4			
5			
6			

PAVING AND DRAINAGE DETAILS

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

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

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Sheet 13I

Printed: Nov 18, 2022 - 5:30pm Printed By: Wesley
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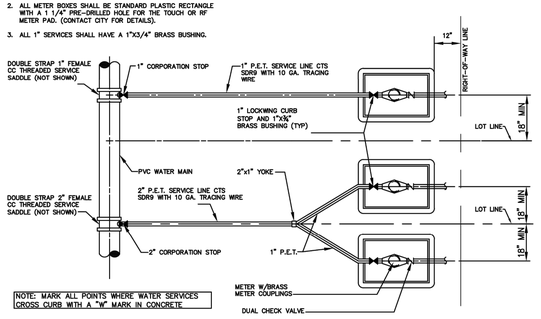
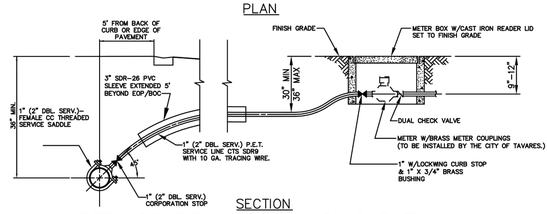
NOTES:

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.



PLAN

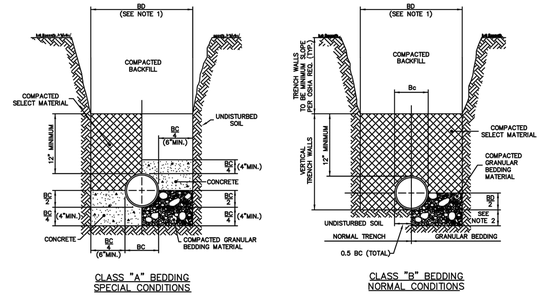


SECTION

SERVICE CONNECTION–SINGLE FAMILY

NOT TO SCALE

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



CLASS "A" BEDDING SPECIAL CONDITIONS

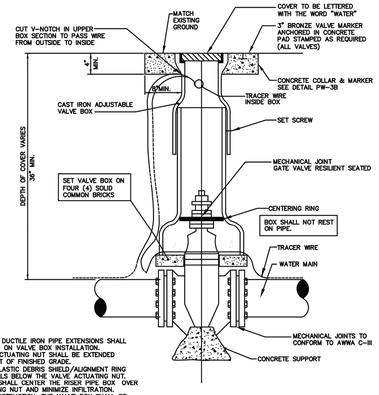
CLASS "B" BEDDING NORMAL CONDITIONS

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

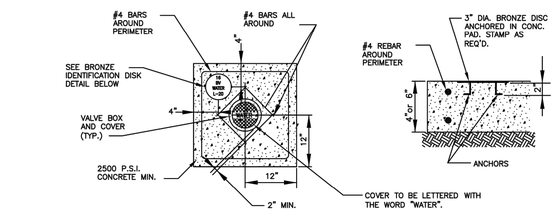


NOTES:

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 MID-RANGE TO ALLOW FOR FUTURE BOX ADJUSTMENTS.
5. VALVE BOX SHALL BE A TWO PIECE SCREW TYPE.

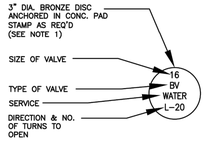
GATE VALVE AND BOX

NOT TO SCALE



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.



BRONZE IDENTIFICATION DISC DETAIL

VALVE COLLAR

NOT TO SCALE

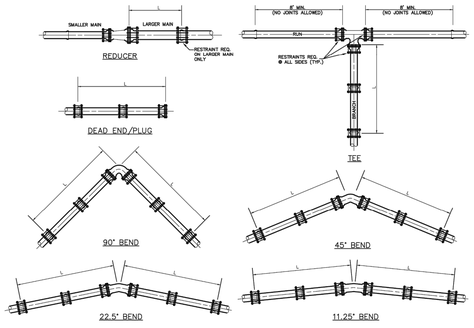


TABLE OF THRUST RESTRAINT LENGTHS

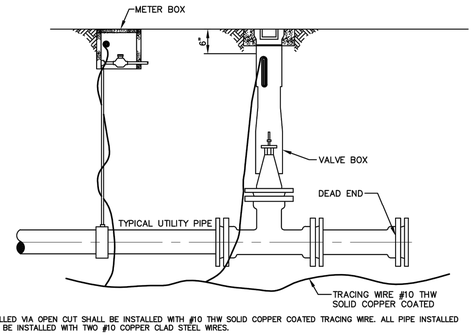
PIPE SIZE (DUCTILE)	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEES		DEAD END @ PLUG		REDUCER		
	P.V.C. DJ	DUCTILE IRON DJ	P.V.C. DJ	DUCTILE IRON DJ	P.V.C. DJ	DUCTILE IRON DJ	P.V.C. DJ	DUCTILE IRON DJ	P.V.C. DJ	DUCTILE IRON DJ	P.V.C. DJ	DUCTILE IRON DJ	PIPE SIZES	P.V.C. DJ	DUCTILE IRON DJ
4	20'	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'	28'	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



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

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

WATER AND SEWER DETAILS

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

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

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Project No.:	21-04-0008
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Drawn:	JEW
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Date:	AUGUST 2022
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Sheet 14A

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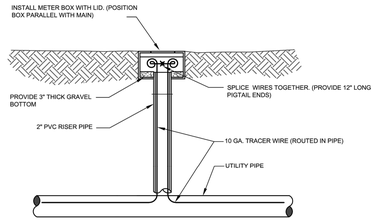
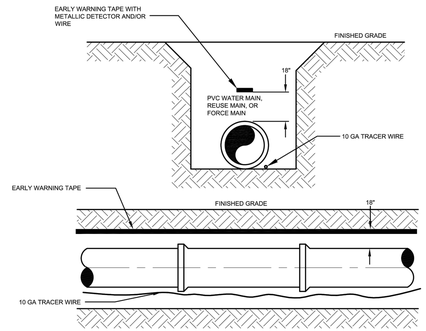


TRACER WIRE BOX UTILIZING METER BOX

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

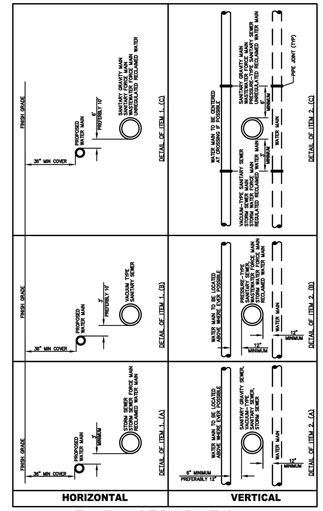


NOTES:

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 (NSF) SEAL OF APPROVAL.

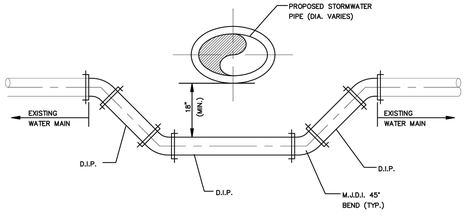
UTILITY PIPE LOCATION MATERIAL – TAPE

NOT TO SCALE



UTILITY SEPARATION

NOT TO SCALE

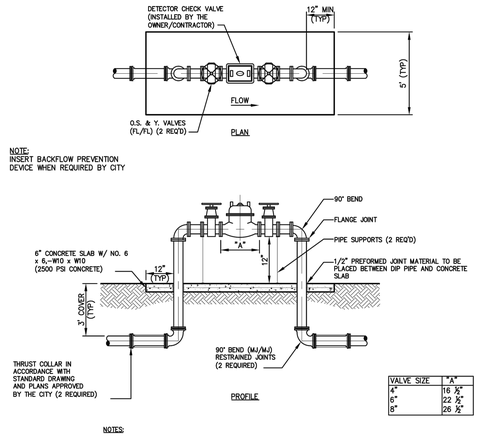


NOTES:

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



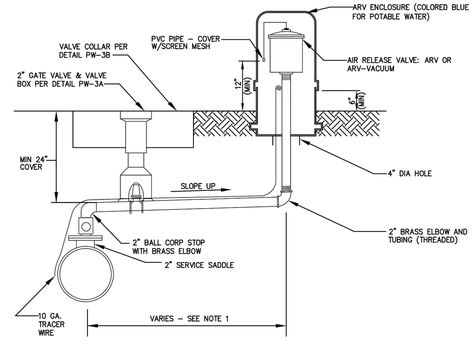
VALVE SIZE	"A"
4"	16 ½"
6"	22 ½"
8"	28 ½"

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



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

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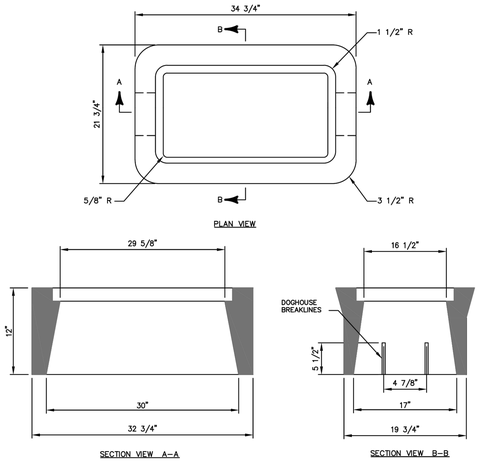
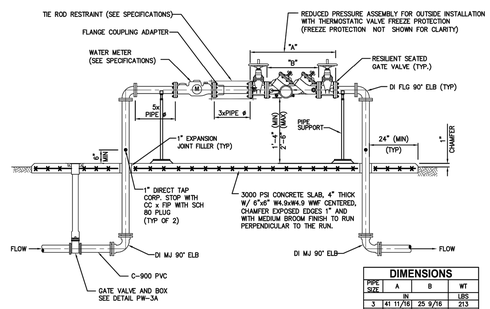


NOTE:
METER BOX SHALL BE COMPLETE WITH POLYMER COVER AND LID

JUMBO POLYMER METER BOX

NOT TO SCALE

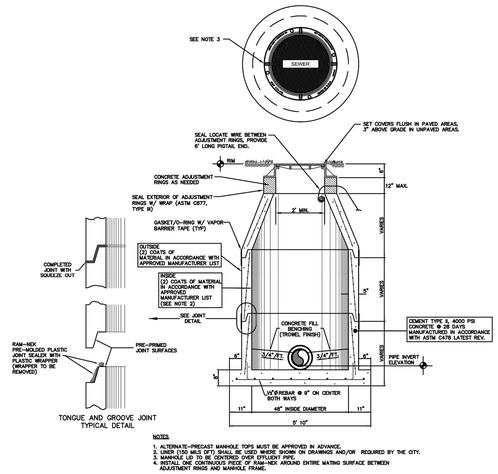


DIMENSIONS			
PIPE SIZE	A	B	WT
	IN		LBS
3	41 11/16	25 9/16	213
4	50 7/16	32 5/16	360
6	59 11/16	38 9/16	601
8	69 3/16	46 1/16	892
10	84 3/16	58 1/16	1563

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

REDUCED PRESSURE BACKFLOW PREVENTER W/ WATER METER DETAIL

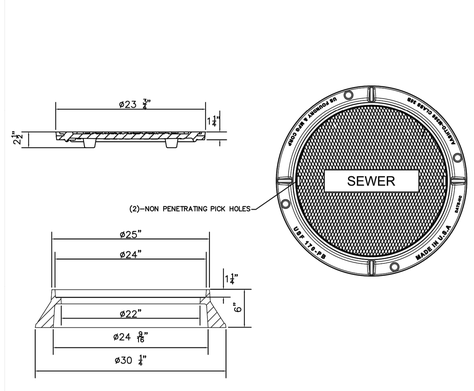
NOT TO SCALE



NOTES:
1. ALTERNATE-PRECAST MANHOLE TOPS MUST BE APPROVED IN ADVANCE.
2. LINER (100 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

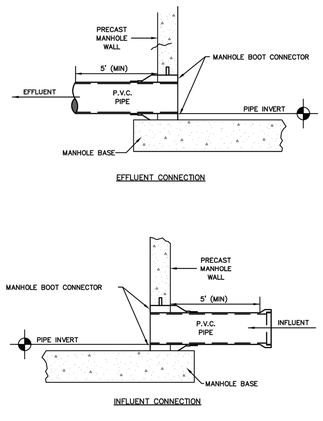
NOT TO SCALE



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

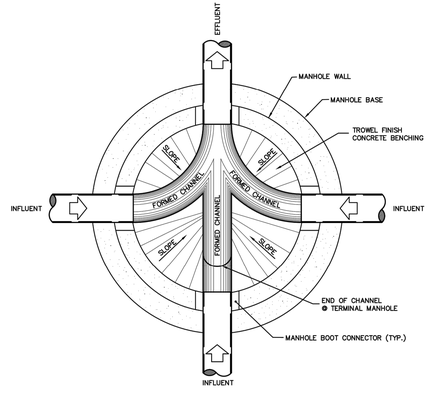
SANITARY MANHOLE COVER

NOT TO SCALE



PIPE CONNECTION TO PRECAST SANITARY MANHOLE

NOT TO SCALE



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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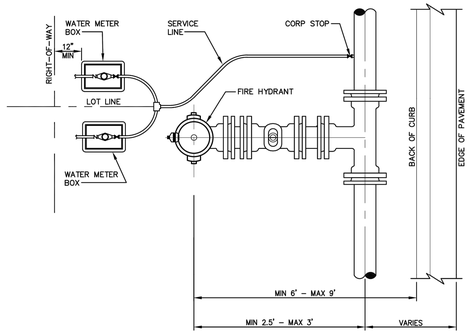
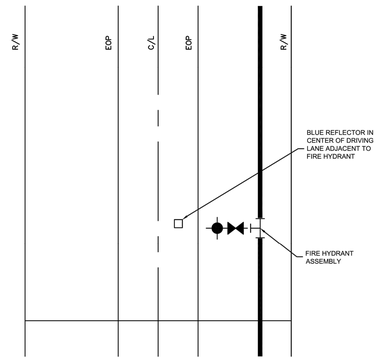


NOTES:

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.

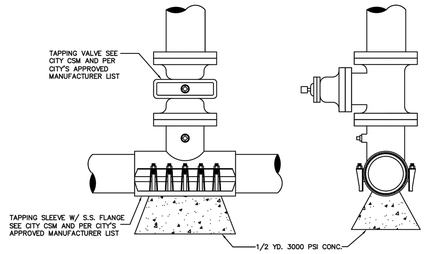
TYPICAL WATER SERVICE AND HYDRANT LOCATION

NOT TO SCALE



FIRE HYDRANT REFLECTOR

NOT TO SCALE



WET TAP SLEEVE AND TAPPING VALVE

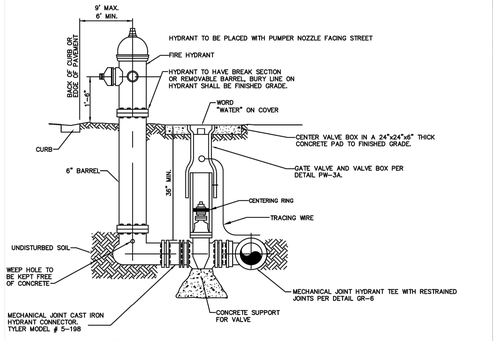
NOT TO SCALE

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 #B54E30)
   - 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



FIRE HYDRANT WITH VALVE

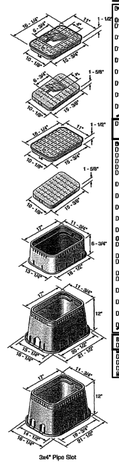
NOT TO SCALE
(STANDARD FIRE HYDRANT ASSEMBLY)

NDS METER BOXES

STANDARD COMMERCIAL GRADE

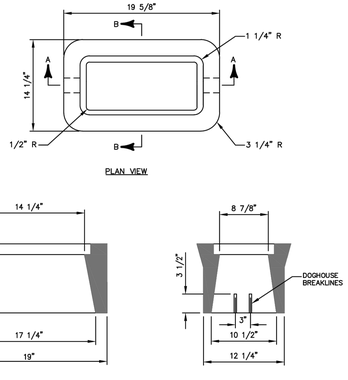
NDS D1200 Meter Boxes (cont.)

Part Number	Description - Marking	Color (Box/Cover)	Pallet Qty	Weight (lbs)	Product Class
D1200P-CRSRP	14"x19"x12" Standard Box, Drop-In Meter Reader Plastic w/ Cast Iron Reader Cover - Reclaimed Water	Purple/Purple	72	10.20	20MB
Overlapping Box & Cover					
D1200-OLSS	14"x19"x12" Standard Box, Overlapping Solid Plastic Cover - Water Meter	Black/Black	72	9.20	20ME
D1200-OLKSLSS	14"x19"x12" Standard Box, Overlapping Slot 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 Reader Cover - Water Meter	Black/Black	72	10.00	20ME
D1200-OLSP	14"x19"x12" Standard Box, Overlapping Solid Plastic Cover - Reclaimed Water	Black/Purple	72	9.20	200V
D1200P-OLSP	14"x19"x12" Standard Box, Overlapping Solid Plastic Cover - Reclaimed Water	Purple/Purple	72	9.20	200V
D1200-OLRB	14"x19"x12" Standard Box, Overlapping Meter Reader Plastic w/ Cast Iron Reader Cover - Water Meter	Black/Black	72	9.20	20ME
D1200-OLCRI	14"x19"x12" Standard Box, Overlapping Meter Reader Plastic w/ Cast Iron Reader Cover - Water Meter	Black/Black	72	10.40	20ME
D1200-CICRI	14"x19"x12" Standard Box, Overlapping Meter Reader Cast Iron w/ Cast Iron Reader Cover - Water Meter	Black/Black	72	10.38	20ME
Drop In Cover Only					
D1200-DIOLSS	14"x19" Drop-In Solid Plastic Cover - Water Meter	Black	216	2.20	20ME
D1200-DIOLSSRL	14"x19" Drop-In Solid Plastic Cover - Screw	Black	216	2.20	20ME
D1200-DIOLSSGRL	14"x19" Drop-In Solid Plastic Cover - Screw	Green	216	2.20	20ME
D1200-DIOLTSBL	14"x19" Drop-In Blue Touch Read Cover - Water Meter	Blue	216	2.20	20MB
D1200-DISPL	14"x19" Drop-In Solid Plastic Cover - Reclaimed Water	Purple	216	2.20	200V
D1200-DIRRL	14"x19" Drop-In Meter Reader w/ Plastic Reader Cover - Water Meter	Black	216	2.20	20ME
D1200-DIRLRDL	14"x19" Drop-In Meter Reader w/ Plastic Reader Cover - Water Meter	Black	216	2.20	20ME
D1200-DIRP LID	14"x19" Drop-In Meter Reader w/ Plastic Reader Cover - Reclaimed Water	Purple	216	2.20	20MB
D1200-DICRLID	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-OICRI LID	14"x19" Overlapping Cast Iron Lid w/ Cast Iron Reader - Water Meter	Black	216	2.40	20ME
D1200-OLSSL D1200-OLLOCSLID	14"x19" Overlapping Solid Plastic Cover - Water Meter 14"x19" Overlapping Locking Solid Plastic Cover - Water Meter	Black Black	216 216	2.40 2.40	20ME 20ME
D1200-OLBLL D1200-OLSPL	14"x19" Overlapping Solid Plastic Cover - Water Meter 14"x19" Overlapping Solid Plastic Cover - Reclaimed Water	Blue Purple	216 216	2.40 2.40	20ME 200V
D1200-CIL	14"x19" Overlapping Meter Reader Solid Cast Iron Cover - Water Meter	Black	216	12.20	20ME
D1200-OLRRL	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 LID	14"x19" Overlapping Meter Reader Plastic w/ Cast Iron Reader Cover - Water Meter	Black	216	3.80	20ME
Box Only					
D1200-BOD	14"x19"x12" Standard Box	Black	72	6.80	20ME
D1200-BOGD	14"x19"x12" Standard Box with Grid Slots	Black	72	7.00	20ME
D1200-BOBD	14"x19"x12" Standard Bolt Down Box	Black	72	7.00	20ME
D1200P-BOD	14"x19"x12" Standard Box	Purple	72	6.80	200V
D1200D-BID	Extension Box	Black	72	6.80	20DV
D1200-EXT	14"x19"x6" Extension Box	Black	72	4.00	20ME



SINGLE PLASTIC METER BOX

NOT TO SCALE



NOTE:
METER BOX SHALL BE COMPLETE WITH POLYMER COVER LID

SINGLE POLYMER METER BOX

NOT TO SCALE

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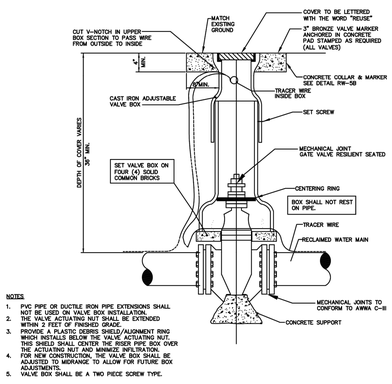
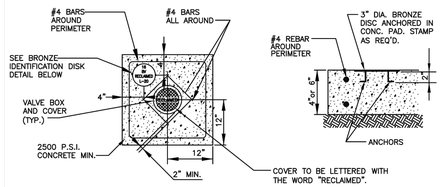


NOTES:

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. AFTER INSTALLATION, THE VALVE BOX SHALL BE ADJUSTED TO MID-RANGE TO ALLOW FOR FUTURE BOX ADJUSTMENTS.
5. VALVE BOX SHALL BE A TWO PIECE SCREW TYPE.

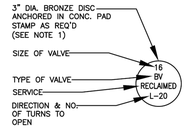
GATE VALVE AND BOX

NOT TO SCALE



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.



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 62CELL 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.

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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
1			
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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

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

Sheet 14E

Printed: Nov 18, 2022 - 5:31pm Printed By: Wesley
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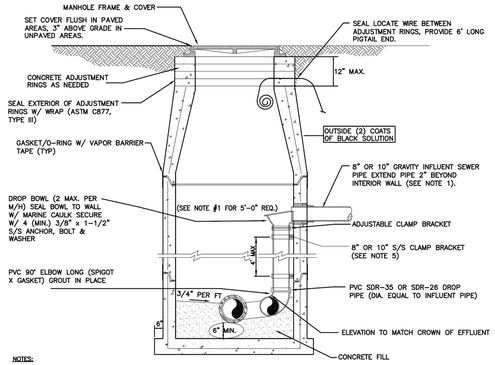
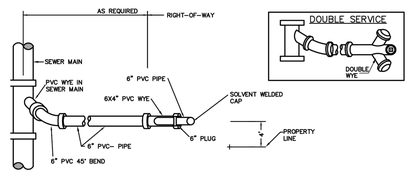


NOTES:

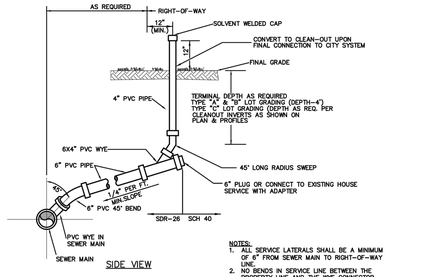
1. THIS ASSEMBLY IS FOR 8" OR 10" GRAVITY INFLUENT LINES ONLY. NO DROPS ALLOWED FOR FORCE MAINS. MAXIMUM OF 2 INSIDE DROP BOWLS PER MANHOLE. A 5'-0" DIA. MANHOLE (6" THICK WALLS) IS REQUIRED. THE INSIDE DROP FOR 8" HIGH-LINE SHALL BE CONSTRUCTED SIMILAR TO ABOVE.
2. PRECAST MANHOLE SECTIONS TO BE MANUFACTURED 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



PLAN VIEW

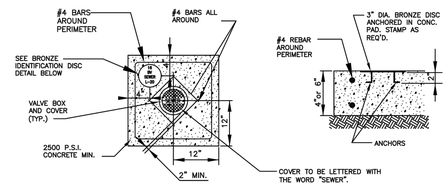


SIDE VIEW

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.

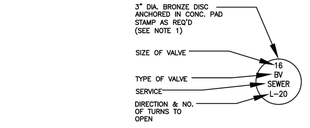
SANITARY SEWER SERVICE

PVC SEWER SERVICE – NOT TO SCALE



NOTE:

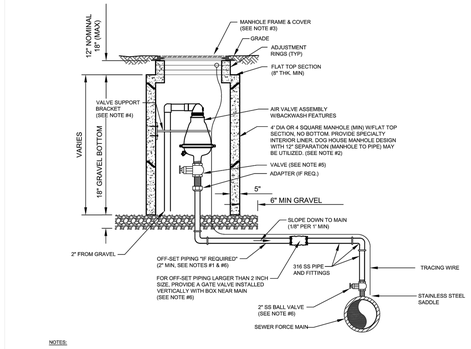
1. BRONZE IDENTIFICATION DISC SHALL BE REQUIRED FOR ALL VALVES.
2. 6" THICK CONCRETE PAD IN ROADWAY OR PAVED AREAS.



BRONZE IDENTIFICATION DISC DETAIL

VALVE COLLAR

NOT TO SCALE

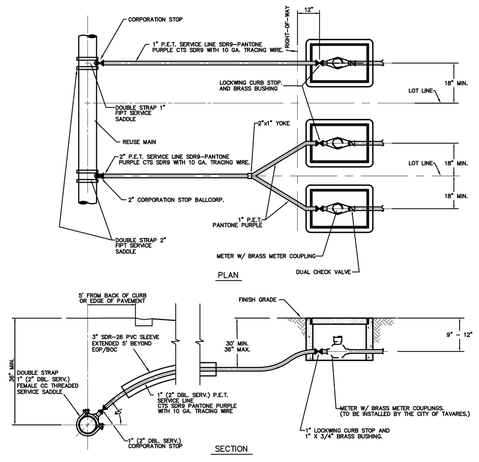


NOTES:

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 3/8" THICK END PLATES (CONTOURED TO MATCH ATTACHING SURFACES), 3" ANGLE IRON FOR SUPPORT ARM AND TWO U-BOLTS 3/4" DIA TO ATTACH AROUND AIR VALVE. SECURE TO CONCRETE MANHOLE WALL WITH (2) 3/8" DIA X 2" LONG SS 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

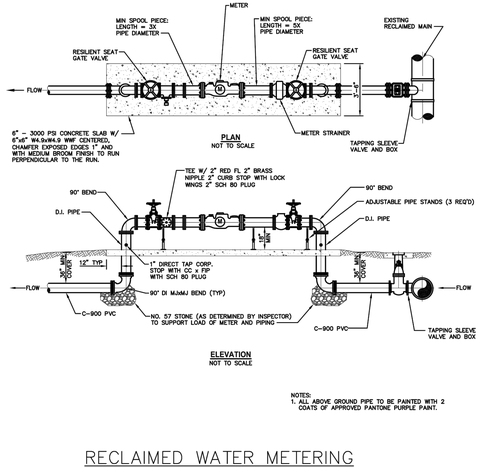
NOT TO SCALE



RECLAIMED WATER SERVICE CONNECTION

NOT TO SCALE

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



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.)

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WATER AND SEWER DETAILS

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

JUSTIN ELLERY WILLIAMS
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Scale:
Sheet 14F

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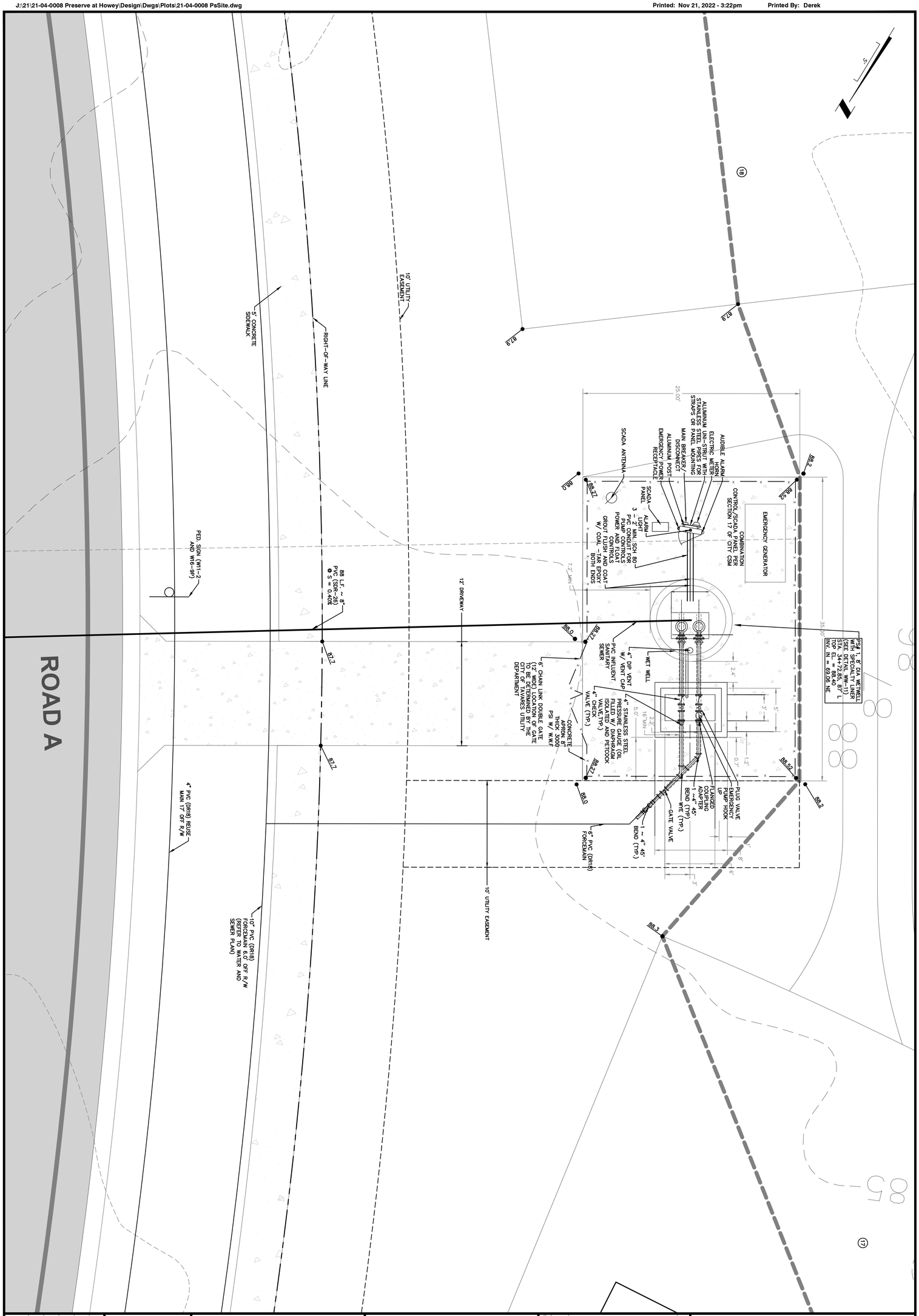

Sheet 15	Project No.: 21-04-0008	JUSTIN ELLERY WILLIAMS P.E. NUMBER: 69260 Reg. Engineer	HILLSIDE GROVE HOWEY IN THE HILLS PREPARED FOR LENNAR HOMES - ORLANDO	PUMP STATION SITE PLAN
	Designed: JEW			
	Drawn: JEW			
	Checked: RCW			
	Date: AUGUST 2022			
	Scale: 1" = 5'			

No.	Date	Revision	By
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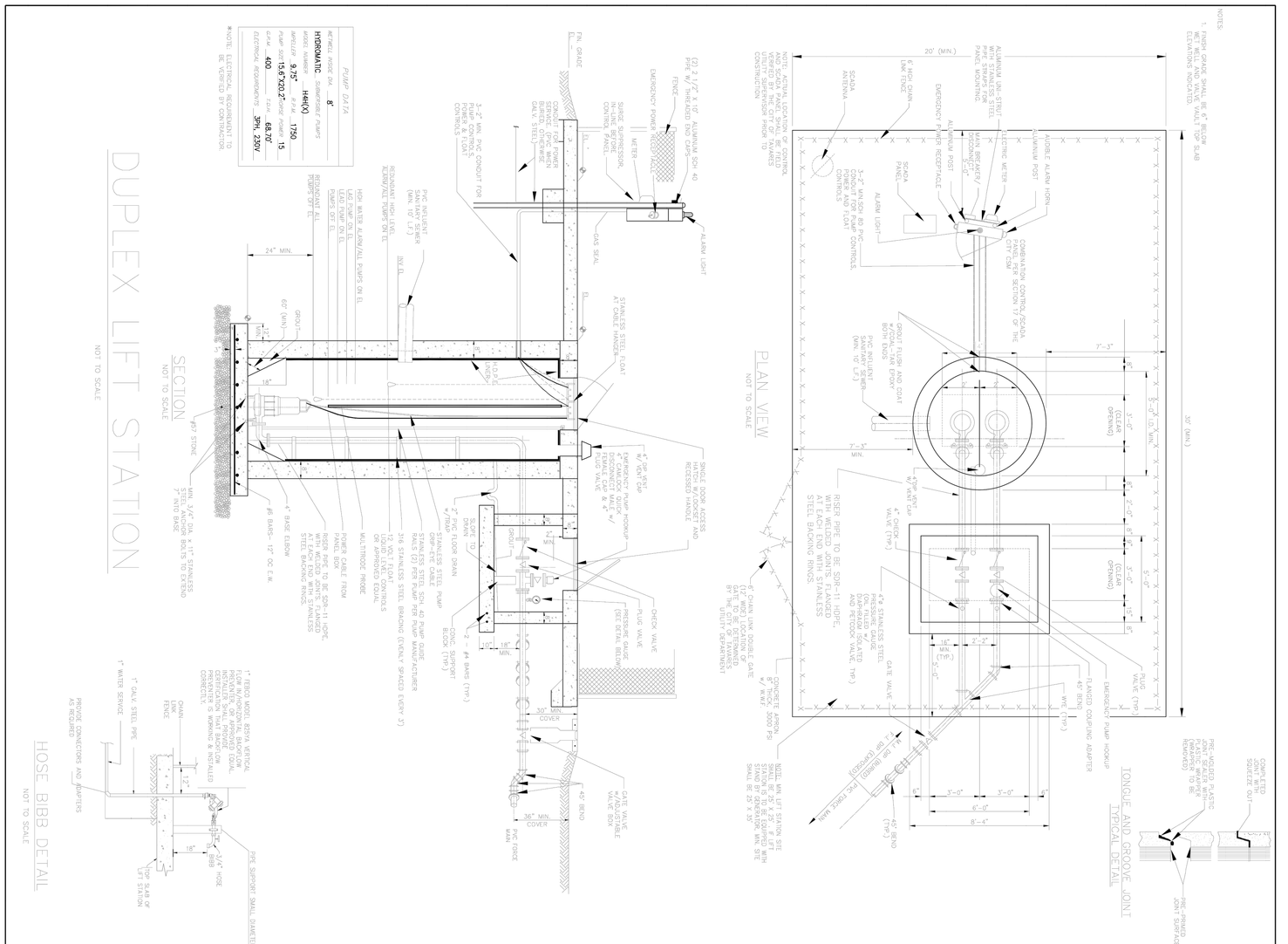

Howey-in-the-Hills

Standard Details

DATE: FEB 2022

DETAIL WW-11

1"

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

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

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

PUMP STATION DETAIL

No.	Date	Revision	By
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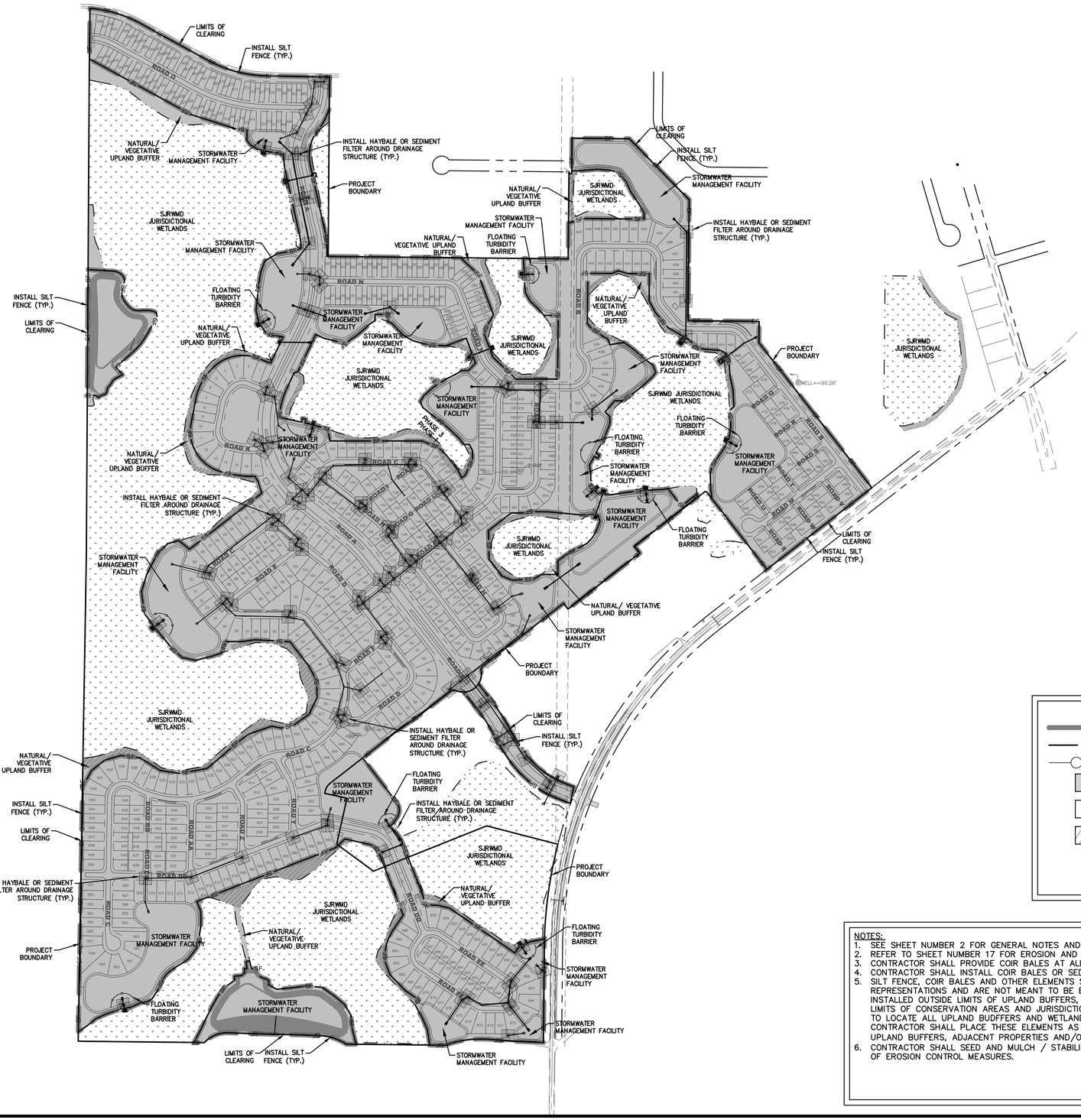

LEGEND

- 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.

300'

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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: 89260
Reg. Engineer

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Sheet	17

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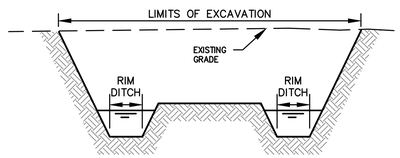
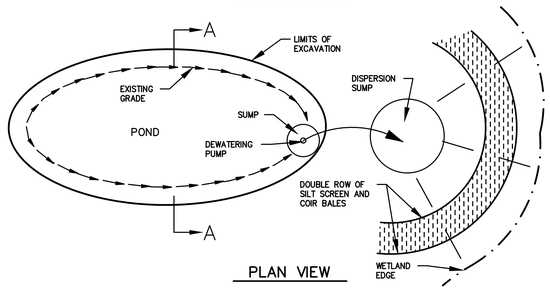
SEDIMENT AND EROSION CONTROL NOTES

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)



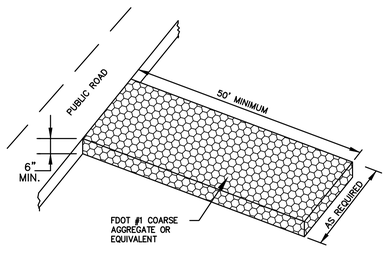
SECTION A–A



PLAN VIEW

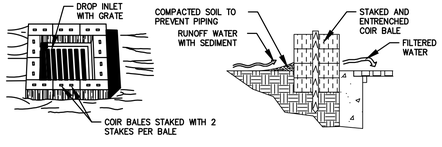
TEMPORARY DEWATERING DETAIL

N.T.S.



STABILIZED CONSTRUCTION ENTRANCE

N.T.S.

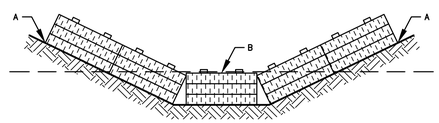


SPECIFIC APPLICATION

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

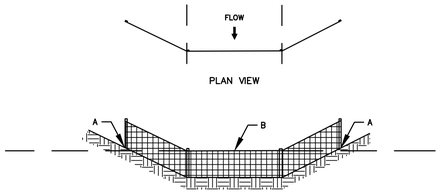
N.T.S.



POINTS A SHOULD BE HIGHER THAN POINT B

PROPER PLACEMENT OF COIR BALE IN A DRAINAGE WAY

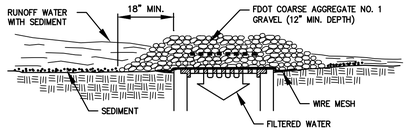
N.T.S.



POINTS A SHOULD BE HIGHER THAN POINT B

PROPER PLACEMENT OF A FILTER BARRIER IN DRAINAGE WAY

N.T.S.

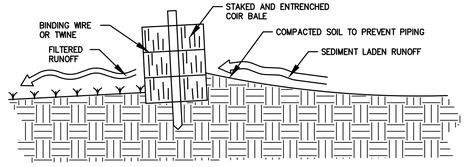


SPECIFIC APPLICATION

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.



CROSS-SECTION OF A PROPERLY INSTALLED COIR BALE

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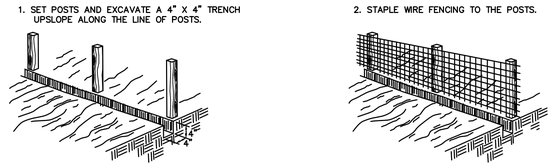

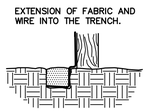

CONSTRUCTION OF SILT FENCE

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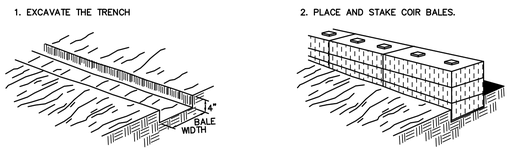
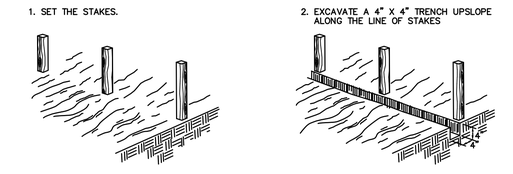


CONSTRUCTION OF A COIR BALE BARRIER

N.T.S.



CONSTRUCTION OF A FILTER BARRIER

N.T.S.

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SEDIMENT AND EROSION CONTROL DETAILS

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

JUSTIN ELLERY WILLIAMS
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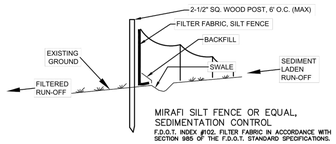


MIRAFI SILT FENCE OR EQUAL,
SEDIMENTATION CONTROL
F.D.O.T. INDEX #102, FILTER FABRIC IN ACCORDANCE WITH SECTION 985 OF THE F.D.O.T. STANDARD SPECIFICATIONS.

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.

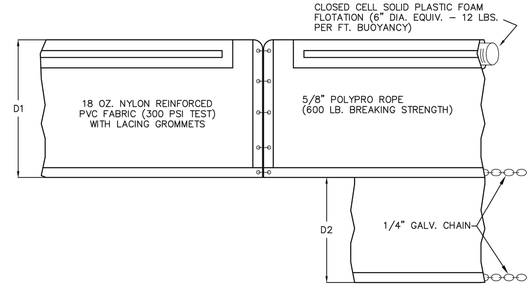
NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BARRIERS SHALL BE ACCOMPLISHED PROMPTLY.

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.)

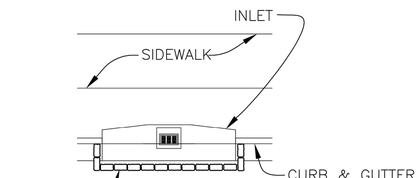


D1 - 5 FT. STANDARD, SINGLE PANEL FOR DEPTHS 5 FT. OR LESS

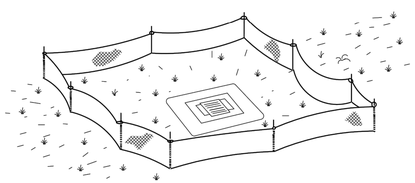
D2 - 5 FT. STANDARD, ADDITIONAL PANEL FOR DEPTHS GREATER THAN 5 FT.

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

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

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

Sheet 18B

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Printed: Nov 18, 2022 - 5:33pm Printed By: Wesley

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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	Fertilizers	Wood
Asphalt	Petroleum Based Products	Masonry Blocks
Tar	Cleaning Solvents	Roofing Materials
Detergents	Paints	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

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No.	Date	Revision	By
1			
2			
3			
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6			

STORMWATER POLLUTION PREVENTION 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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Project No.: 21-04-0008
Designed: JEW
Drawn: JEW
Checked: JEW
O.C.: RCW
Date: AUGUST 2022
Scale:

Sheet 19

Printed: Nov 18, 2022 - 5:33pm Printed By: Wesley

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

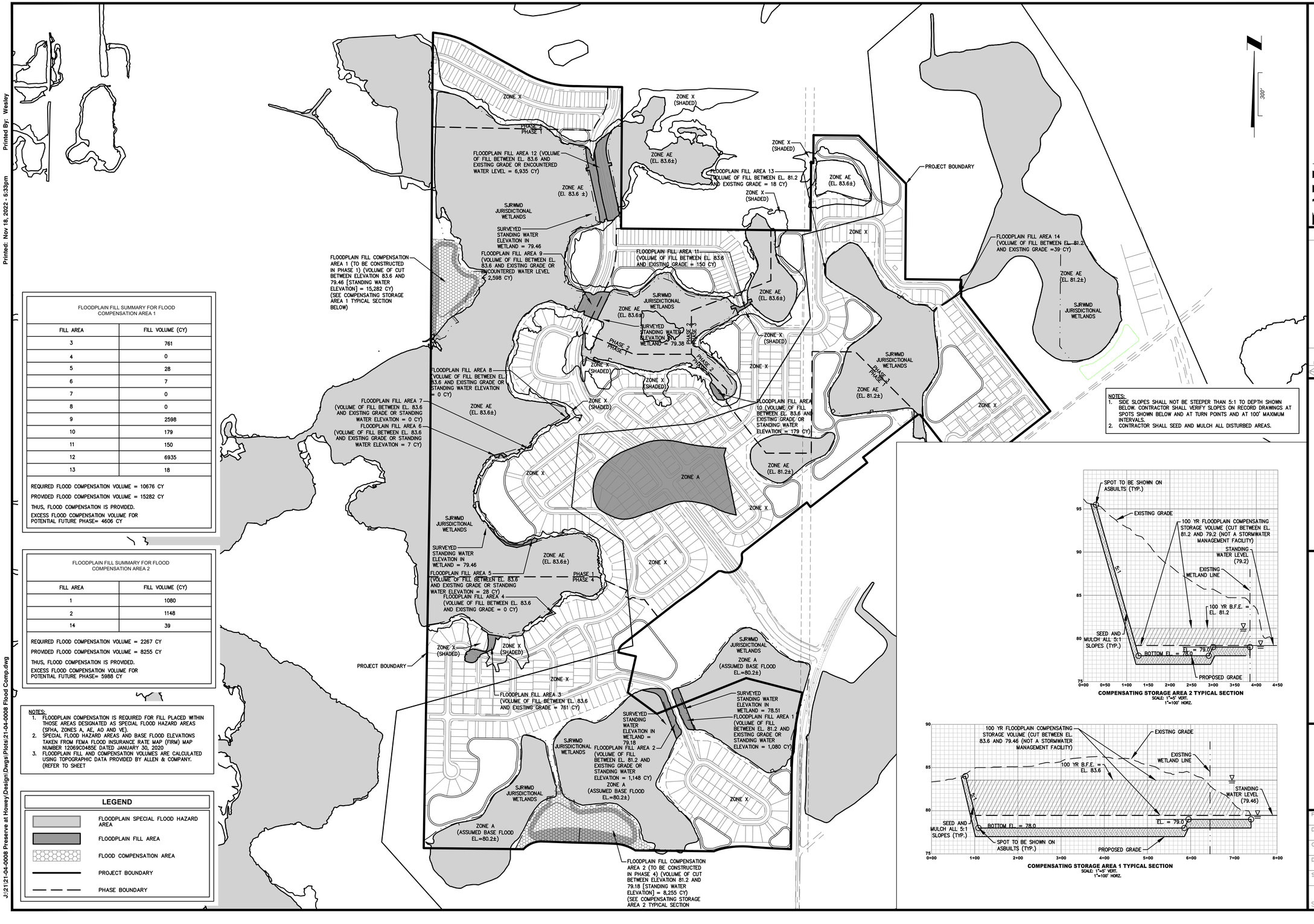
FLOODPLAIN FILL SUMMARY FOR FLOOD COMPENSATION AREA 1	
FILL AREA	FILL VOLUME (CY)
3	761
4	0
5	28
6	7
7	0
8	0
9	2598
10	179
11	150
12	6935
13	18
REQUIRED FLOOD COMPENSATION VOLUME = 10676 CY	
PROVIDED FLOOD COMPENSATION VOLUME = 15282 CY	
THUS, FLOOD COMPENSATION IS PROVIDED.	
EXCESS FLOOD COMPENSATION 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.

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.

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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
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Date: AUGUST 2022	
Scale: 1" = 300'	
Sheet 20	

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SECONDARY WETLAND IMPACT OFFSITE

WETLAND IMPACT	
#1	0.87 AC.
#2	0.01 AC.
TOTAL	0.88 AC.

DIRECT WETLAND IMPACT OFFSITE

WETLAND IMPACT	
#1	0.41 AC.
#2	0.01 AC.
#3	0.20 AC.
TOTAL	0.62 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	1.62 AC.
#6	0.80 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	0.14 AC.
#16	0.37 AC.
#17	0.21 AC.
#18	0.97 AC.
#19	0.10 AC.
#20	3.62 AC.
#21	0.04 AC.
TOTAL	10.37 AC.

DIRECT WETLAND IMPACT ONSITE

WETLAND IMPACT	
#1	0.01 AC.
#2	0.09 AC.
#3	0.01 AC.
#4	0.49 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	0.05 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	0.58 AC.
#25	0.01 AC.
#26	0.20 AC.
#27	0.01 AC.
#28	1.84 AC.
#29	0.01 AC.
#30	0.01 AC.
TOTAL	5.66 AC.

WETLANDS REMAINING

WETLAND REMAINING	
#1	6.54 AC.
#2	14.19 AC.
#3	7.85 AC.
#4	61.80 AC.
#5	3.15 AC.
#6	13.15 AC.
#7	10.06 AC.
#8	3.37 AC.
#9	1.16 AC.
#10	0.83 AC.
TOTAL	122.12 AC.

WETLAND IMPACT #30
48'
15' MIN. 25' AVE. NATURAL / VEGETATIVE UPLAND BUFFER
79'
SECONDARY IMPACT #21
50'
STORMWATER MANAGEMENT FACILITY
WETLAND IMPACT #29
150'
SECONDARY IMPACT #20
SJRWMD JURISDICTIONAL WETLANDS #10
WETLAND IMPACT #28
WETLAND IMPACT #21
SECONDARY IMPACT #14
15' MIN. 25' AVE. NATURAL / VEGETATIVE UPLAND BUFFER
STORMWATER MANAGEMENT FACILITY
21'
SJRWMD JURISDICTIONAL WETLANDS #9
45'
50'
STORMWATER MANAGEMENT FACILITY
SECONDARY IMPACT #13
WETLAND IMPACT #19
15' MIN. 25' AVE. NATURAL / VEGETATIVE UPLAND BUFFER
SECONDARY IMPACT #12
WETLAND IMPACT #18
WETLAND IMPACT #20
150'
25'
STORMWATER MANAGEMENT FACILITY
WETLAND IMPACT #27
150'
COMPENSATORY STORAGE FACILITY
SECONDARY IMPACT #17
STORMWATER MANAGEMENT FACILITY
STORMWATER MANAGEMENT FACILITY
SJRWMD JURISDICTIONAL WETLANDS #8
25'
SECONDARY IMPACT #18
25'
WETLAND IMPACT #23
150'
WETLAND IMPACT #24
73'
WETLAND IMPACT #25
25'
SECONDARY IMPACT #19
66'
25'
SJRWMD JURISDICTIONAL WETLANDS #7
STORMWATER MANAGEMENT FACILITY
SECONDARY IMPACT #16
16'
50'
WETLAND IMPACT #22
32'
25'
WETLAND IMPACT #17
SECONDARY IMPACT #11
STORMWATER MANAGEMENT FACILITY
WETLAND IMPACT #16
SECONDARY IMPACT #9
WETLAND IMPACT #15
SJRWMD JURISDICTIONAL WETLANDS #6
STORMWATER MANAGEMENT FACILITY
SECONDARY IMPACT #10
WETLAND IMPACT #14
25'
25'
WETLAND IMPACT #26
23'
STORMWATER MANAGEMENT FACILITY
70'
SJRWMD JURISDICTIONAL WETLANDS #4
SECONDARY IMPACT #15
WETLAND IMPACT #11
WETLAND IMPACT #10
15'
61'
25'
SECONDARY IMPACT #6
STORMWATER MANAGEMENT FACILITY
WETLAND IMPACT #8
15'
WETLAND IMPACT #9
SJRWMD JURISDICTIONAL WETLANDS #12
SJRWMD JURISDICTIONAL WETLANDS #11
SJRWMD JURISDICTIONAL WETLANDS #5
25'
25'
25'
WETLAND IMPACT #12
SECONDARY IMPACT #8
SECONDARY IMPACT #7
STORMWATER MANAGEMENT FACILITY
WETLAND IMPACT #13
SECONDARY OFFSITE IMPACT #2
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
1.			
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6.			

WETLAND IMPACT MAP

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

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

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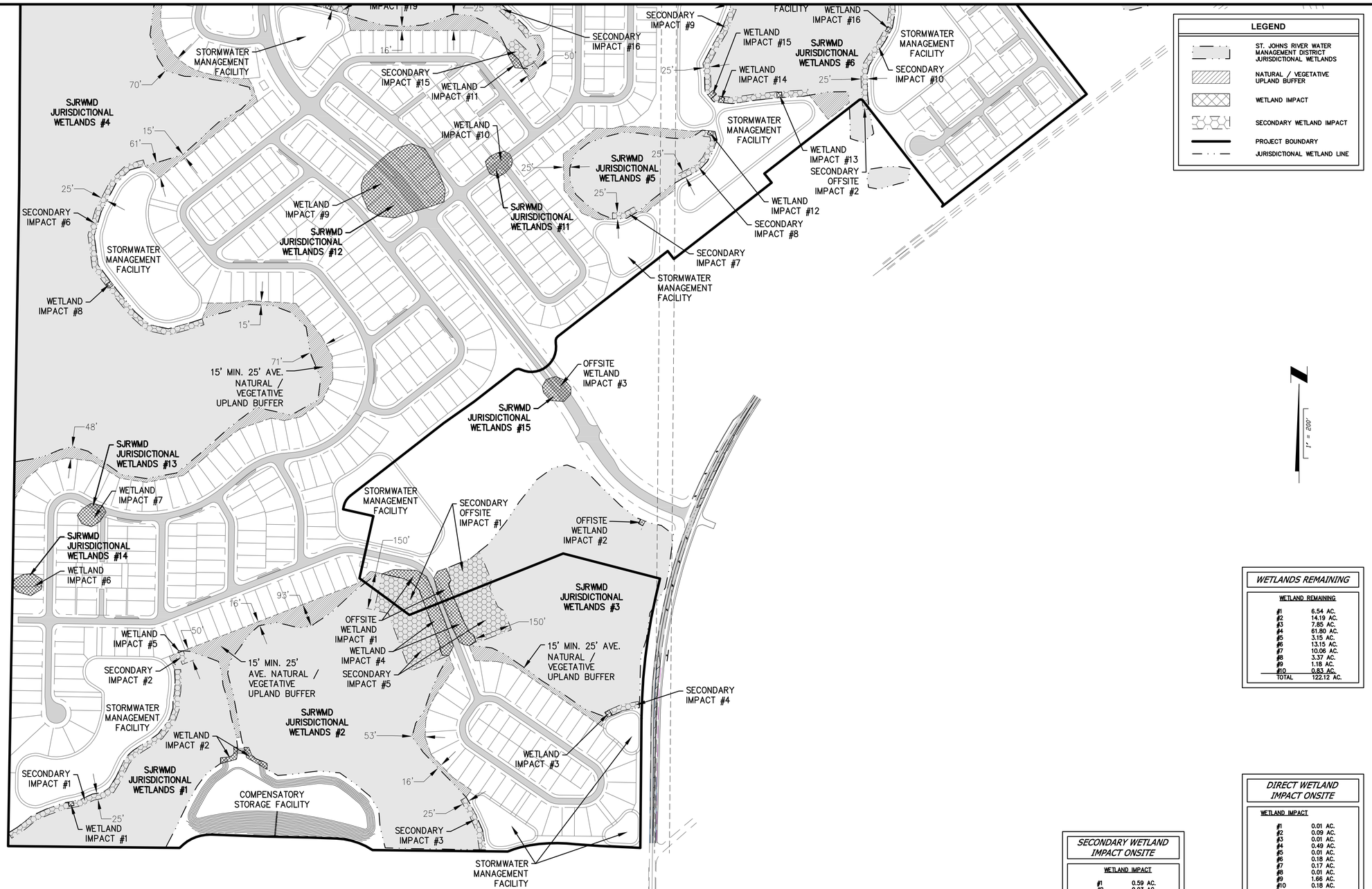
Project No.:	21-04-0008
Designed:	JEW
Drawn:	JEW
Checked:	JEW
O.C.:	RCW
Date:	AUGUST 2022
Scale:	1" = 200'

Sheet 21A



SECONDARY WETLAND IMPACT OFFSITE

WETLAND IMPACT	
#1	0.87 AC.
#2	0.01 AC.
TOTAL	0.88 AC.

DIRECT WETLAND IMPACT OFFSITE

WETLAND IMPACT	
#1	0.41 AC.
#2	0.01 AC.
#3	0.20 AC.
TOTAL	0.62 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	1.62 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	0.14 AC.
#16	0.37 AC.
#17	0.21 AC.
#18	0.97 AC.
#19	0.10 AC.
#20	3.62 AC.
#21	0.04 AC.
TOTAL	10.37 AC.

WETLANDS REMAINING

WETLAND REMAINING	
#1	6.54 AC.
#2	14.19 AC.
#3	7.85 AC.
#4	61.80 AC.
#5	3.15 AC.
#6	13.15 AC.
#7	10.06 AC.
#8	3.37 AC.
#9	1.18 AC.
#10	0.83 AC.
TOTAL	122.12 AC.

DIRECT WETLAND IMPACT ONSITE

WETLAND IMPACT	
#1	0.01 AC.
#2	0.09 AC.
#3	0.01 AC.
#4	0.49 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	0.05 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	0.58 AC.
#25	0.01 AC.
#26	0.20 AC.
#27	0.01 AC.
#28	1.84 AC.
#29	0.01 AC.
#30	0.01 AC.
TOTAL	5.66 AC.

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6.			

WETLAND IMPACT MAP

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

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

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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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MILL AND RESURFACE ASPHALT SURFACE COURSE AT PROJECT ENTRANCE AT THE EXTENTS SHOWN

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

INSTALL SILT FENCE 3' OFF WATERMAIN

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

APPROXIMATE LOCATION OF 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

CONNECTION TO PROPOSED ONSITE FORCE MAIN (REFER TO WATER AND SEWER PLAN)

PROPOSED 10" PVC (DR18) FORCE MAIN (569 LF) 12' OFF EOP

INSTALL SILT FENCE 3' OFF FORCEMAIN

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)

APPROXIMATE LOCATION OF EXISTING GATE VALVE AND 10" FORCEMAIN STUBOUT

PROPOSED WATERMAIN UNDER EXISTING FORCE MAIN (CONTRACTOR TO SUPPORT EXISTING FORCE MAIN AS REQ'D FOR CONSTRUCTION, 18" MIN. SEPARATION)

APPROXIMATE LOCATION OF EXISTING 8" FORCE MAIN

SJRWMD JURISDICTIONAL WETLANDS

40'

NUMBER 2 ROAD - UTILITY IMPROVEMENTS

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

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

Project No.: 21-04-0008	
Designed: JEW	Drawn: JEW
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Date: AUGUST 2022	
Scale: 1" = 40'	
Sheet 22A	

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7			

NUMBER 2 ROAD - UTILITY IMPROVEMENTS

HILLSIDE GROVE

HOWEY IN THE HILLS

PREPARED FOR
LENNAR HOMES - ORLANDO

JUSTIN ELLERY MILLIAMS
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 22B	

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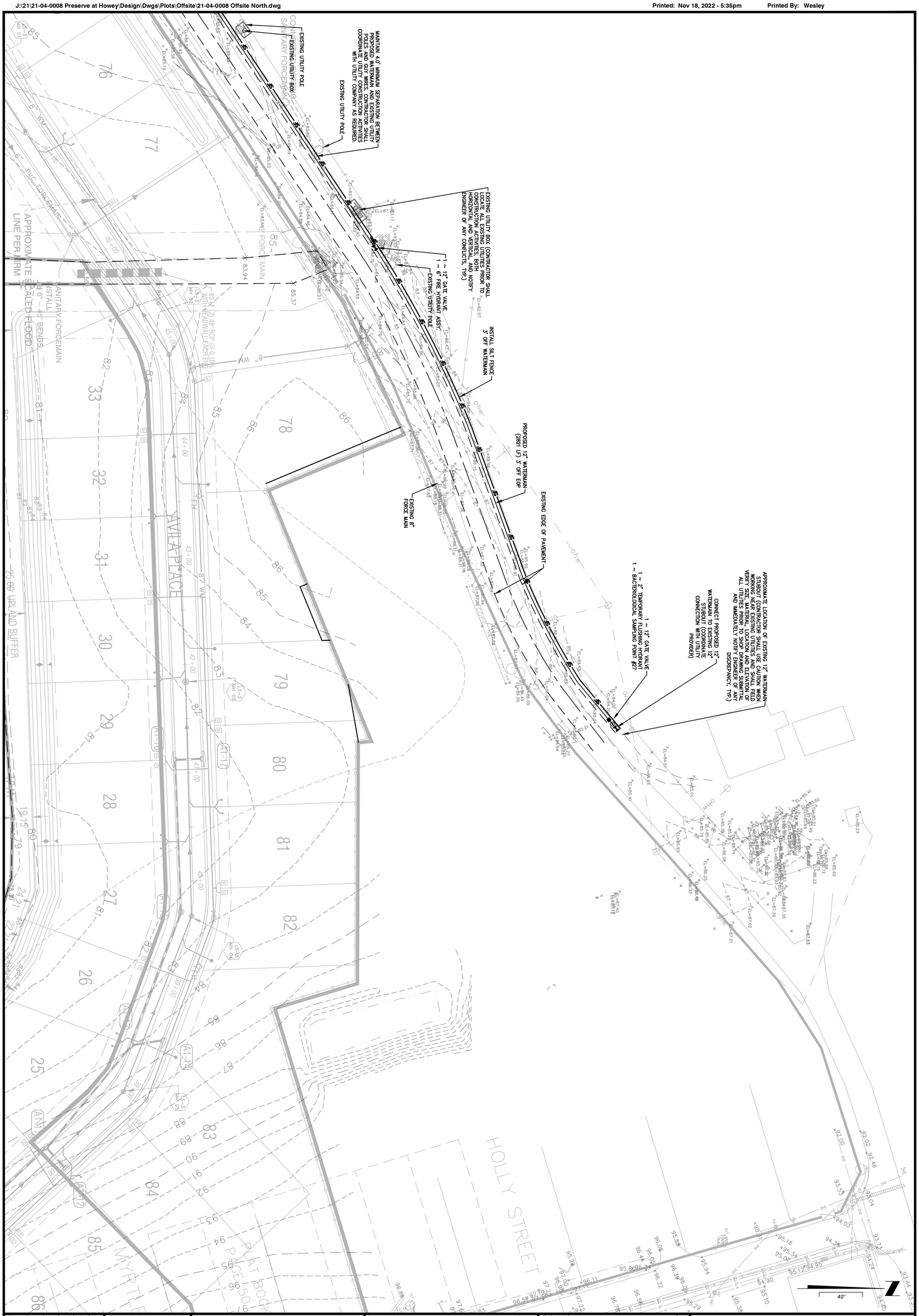

Sheet: 22C	JUSTIN ELLERY WILLIAMS P.E. NUMBER: 69260 Reg. Engineer	HILLSIDE GROVE HOWEY IN THE HILLS PREPARED FOR LENNAR HOMES - ORLANDO	NUMBER 2 ROAD - UTILITY IMPROVEMENTS	Connelly & Wicker Inc. Planning · Engineering · Landscape Architecture 10060 Skinner Lake Drive, Suite 500 Jacksonville, Florida 32246 (904) 265-3030 FAX: (904) 265-3031 www.cwieng.com Florida Registry 3650 L.A. Number: LC26000311

Project No: 21-04-0008 | Designed: JEW | Drawn: JEW | Checked: RCW | Date: AUGUST 2022 | Scale: 1" = 40'

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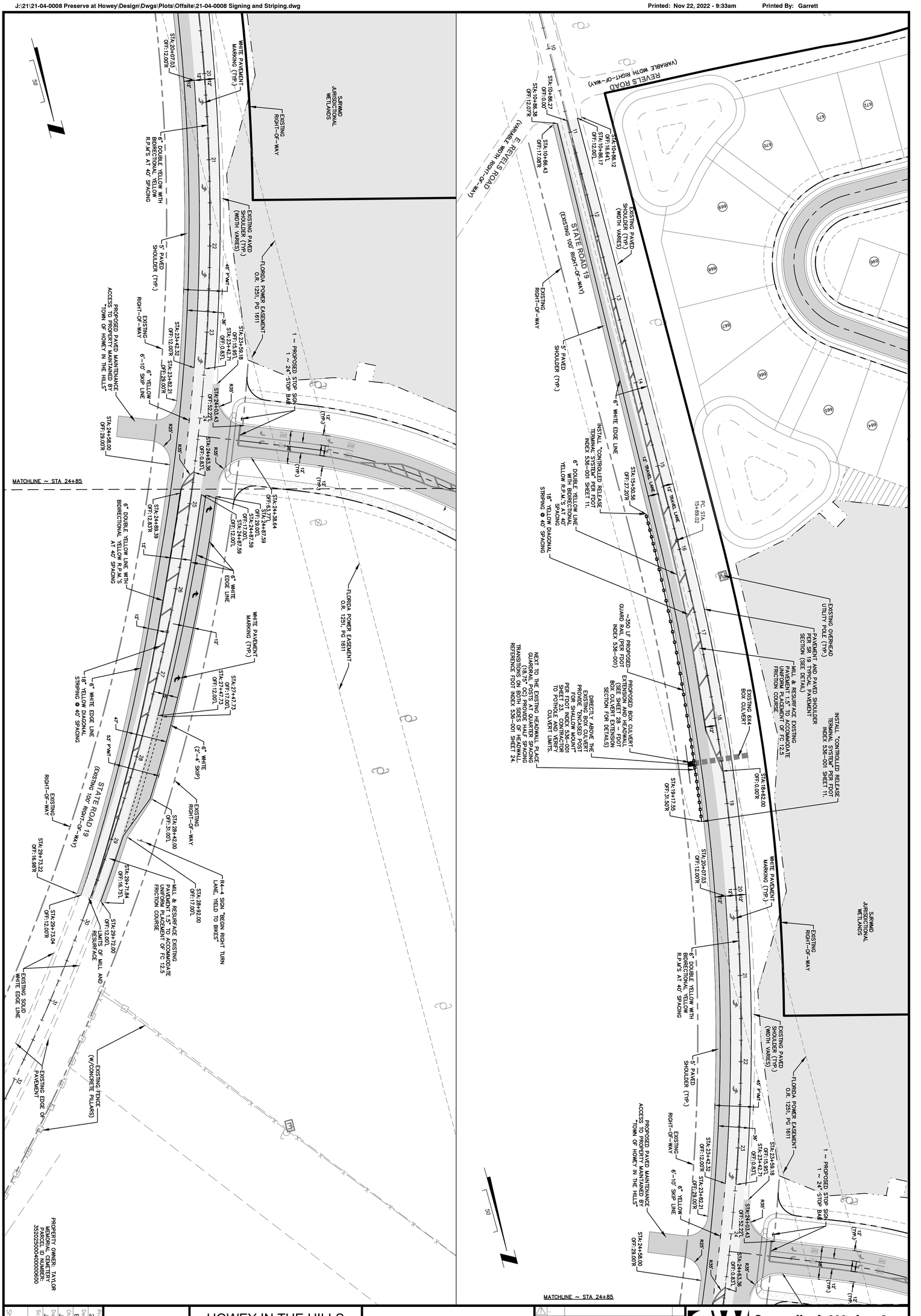

Sheet 23	ERIC DANIEL EVANS, P.E. P.E. NUMBER: 93585 Reg. Engineer	HOWEY IN THE HILLS SR-19 IMPROVEMENTS LAKE COUNTY, FLORIDA PREPARED FOR LENNAR - ORLANDO	SR-19 SIGNING AND STRIPING PLAN

Project No.: 21-04-0008
Designed: E.D.E.
Checked: J.E.W.
Date: JUNE 2022
Scale: 1" = 50'
Drawn: G.R.Q.
D.C.: R.C.W.

No.	Date	Revision	By
1			
2			
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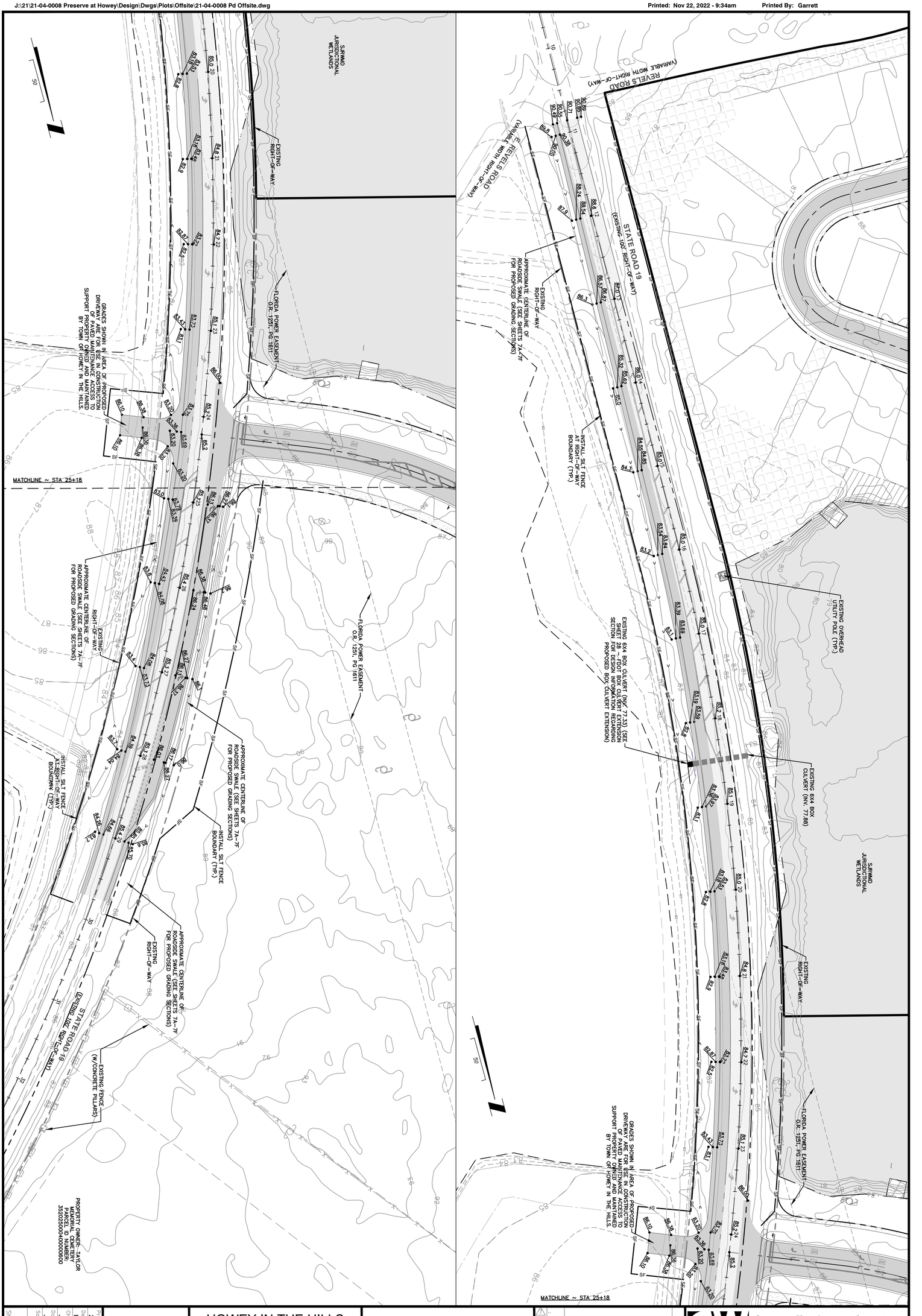

Sheet 24	Project No. 21-04-0008	HOWEY IN THE HILLS SR-19 IMPROVEMENTS LAKE COUNTY, FLORIDA PREPARED FOR LENNAR - ORLANDO	SR-19 PAVING AND DRAINAGE PLAN
Scale: 1" = 50'	Designed: E.D.E. Drawn: G.R.Q.		
Date: JUNE 2022	Checked: J.E.W. QC: R.C.W		

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

No.	Date	Revision	By
1			
2			
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SJRWMD
JURISDICTIONAL
WETLANDS

EXISTING
RIGHT-OF-WAY

FLORIDA POWER EASEMENT
O.R. 1251, PG. 1611

EXISTING UTILITY
POLE (TYP.)

PROPOSED 12" PVC
WATER MAIN (3,390 LF)
(5' OFF R/W)

1 ~ 12" X 6" TEE
1 ~ 6" FIRE HYDRANT ASSY.
1 ~ BACTERIOLOGICAL SAMPLING #28
1 ~ 2" FLUSHING HYDRANT

MATCHLINE STA: 30+38

STATE ROAD 19
(EXISTING 100' RIGHT-OF-WAY)

EXISTING
RIGHT-OF-WAY

1 ~ 12" X 6" REDUCER
1 ~ 6" FIRE HYDRANT ASSY.
1 ~ 6" GATE VALVE
1 ~ BACTERIOLOGICAL SAMPLING #27
1 ~ 2" TEMPORARY FLUSHING HYDRANT
1 ~ 6" PLUG

1 ~ 12" X 12" TEE
1 ~ 12" GATE VALVE

1 ~ 12" GATE VALVE

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

1 ~ 12" GATE VALVE

EXISTING
RIGHT-OF-WAY

EXISTING 4" WATER MAIN
(TO BE ABANDONED)

PROPOSED 12" WATER
MAIN (3,390 LF)
(5' OFF R/W)

EXISTING UTILITY
PEDESTAL

1 ~ 12" GATE VALVE

EXISTING EDGE OF
PAVEMENT

STATE ROAD 19
(EXISTING 100' RIGHT-OF-WAY)

1 ~ 12" X 6" TEE
1 ~ 6" FIRE HYDRANT ASSY.
1 ~ BACTERIOLOGICAL SAMPLING #29
1 ~ 2" FLUSHING HYDRANT

EXISTING 6' X 4'
BOX CULVERT TO
REMAIN

EXISTING
RIGHT-OF-WAY

40

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No.	Date	Revision	By
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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

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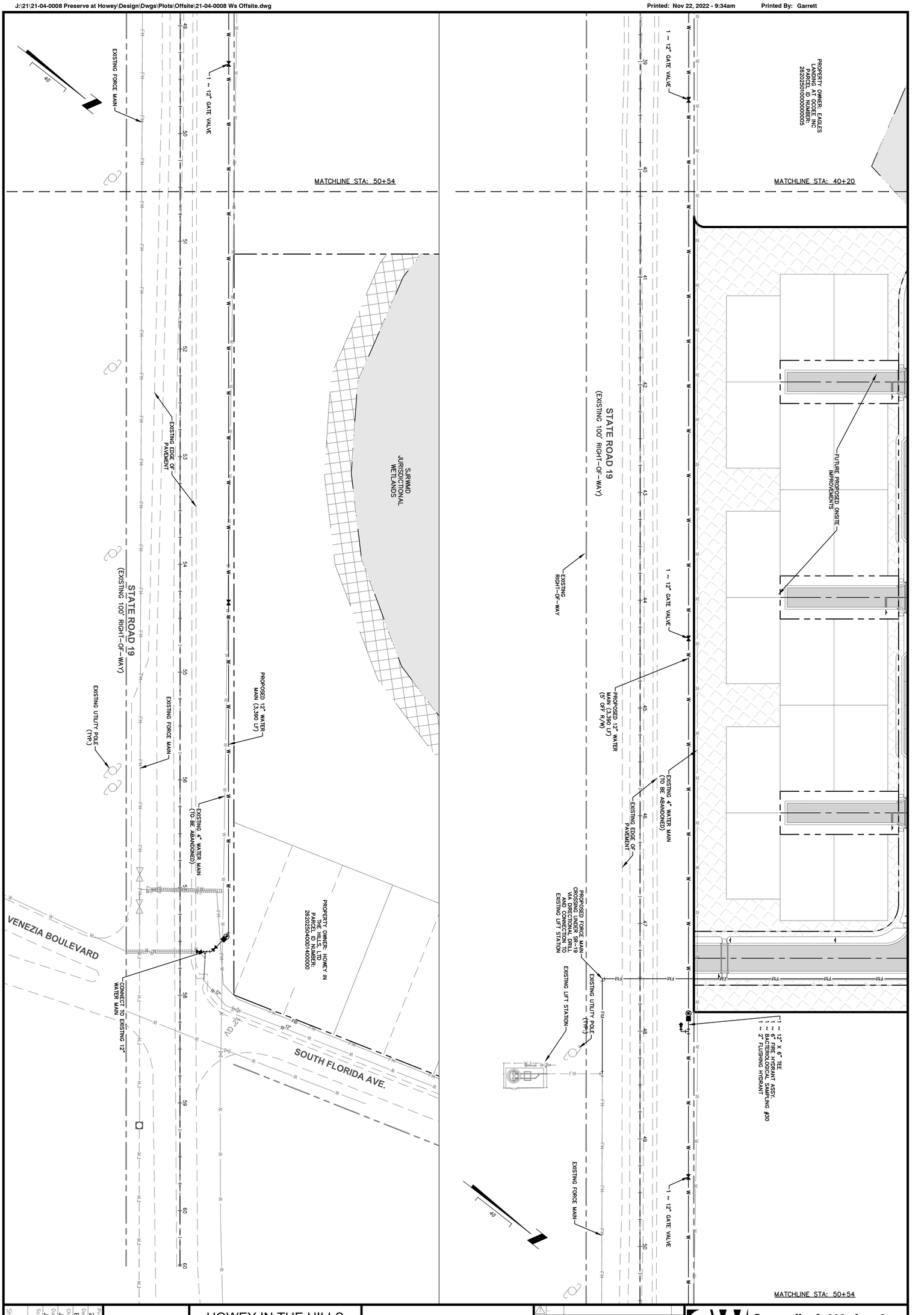
Project No.:	21-04-0008
Designed:	E.D.E.
Drawn:	G.R.Q.
Checked:	J.E.W.
O.C.:	R.C.W
Date:	JUNE, 2022
Scale:	1" = 40'
Sheet	25A



Sheet: 25B	ERIC DANIEL EVANS, P.E. P.E. NUMBER: 93585 Reg. Engineer	HOWEY IN THE HILLS SR-19 IMPROVEMENTS LAKE COUNTY, FLORIDA PREPARED FOR LENNAR - ORLANDO	SR-19 WATER AND SEWER PLAN

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'

No.	Date	Revision	By
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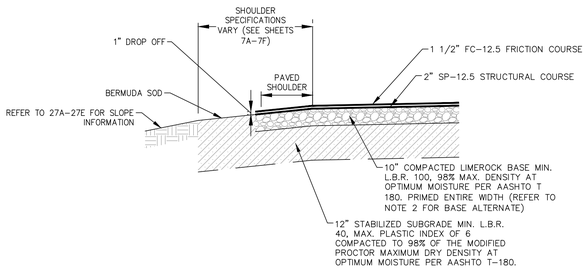
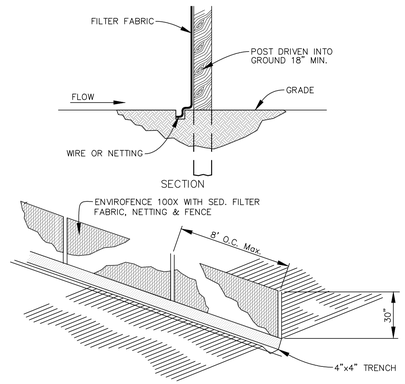
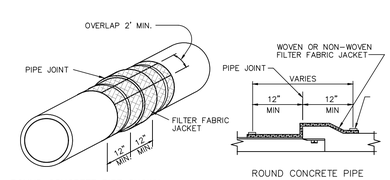


NOTES:
1. ALL DISTURBED AREA SHALL BE SEEDED AND MULCHED.
2. ALL ASPHALTIC CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 331 AND 333, F.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
*ALTERNATE BASE OPTION = BASE GROUP #9.

SR-19 TYPICAL PAVEMENT SECTION
N.T.S.

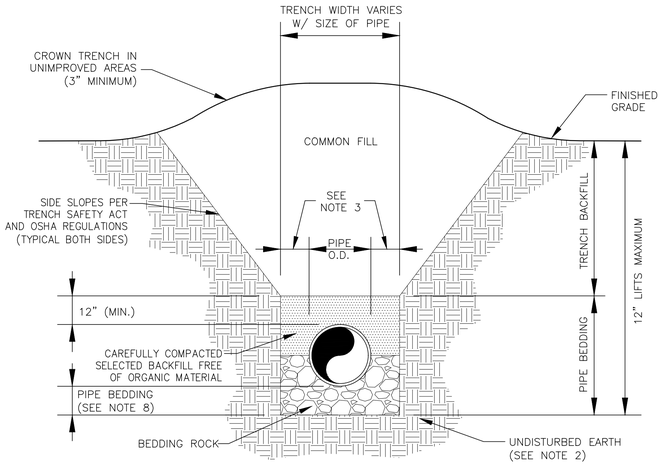


SILT FENCE DETAIL
N.T.S.



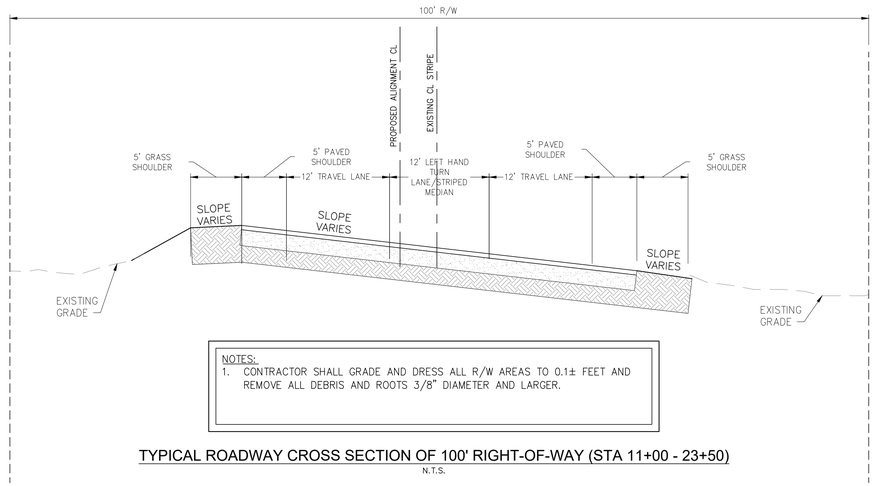
COST OF FILTER FABRIC TO BE INCLUDED IN COST OF PIPE.

FILTER FABRIC JACKET DETAIL
N.T.S.



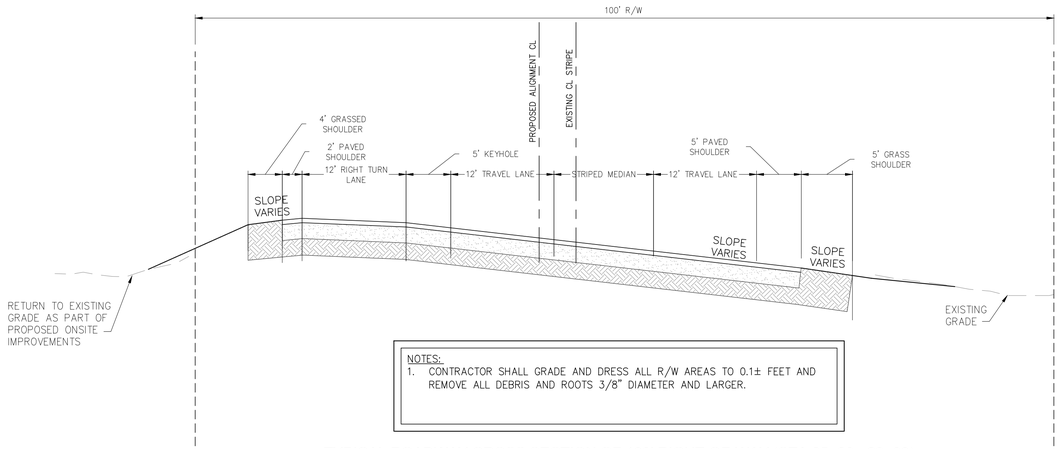
NOTES:
1. TRENCH AND PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% MAX DENSITY (AASHTO T-180).
2. USE TYPE A BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE COUNTY.
3. 15" MAX FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX FOR PIPE DIAMETER 24" AND LARGER.
4. WATER SHALL NOT BE PERMITTED IN 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.



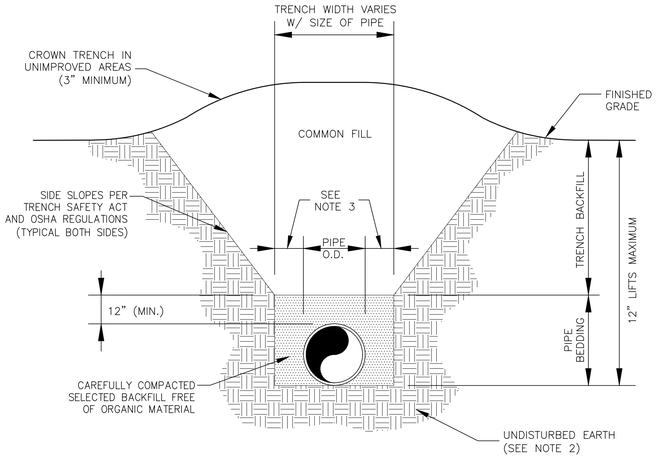
NOTES:
1. CONTRACTOR SHALL GRADE AND DRESS ALL R/W AREAS TO 0.1± FEET AND REMOVE ALL DEBRIS AND ROOTS 3/8" DIAMETER AND LARGER.

TYPICAL ROADWAY CROSS SECTION OF 100' RIGHT-OF-WAY (STA 11+00 - 23+50)
N.T.S.



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.



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.

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No.	Date	Revision	By
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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

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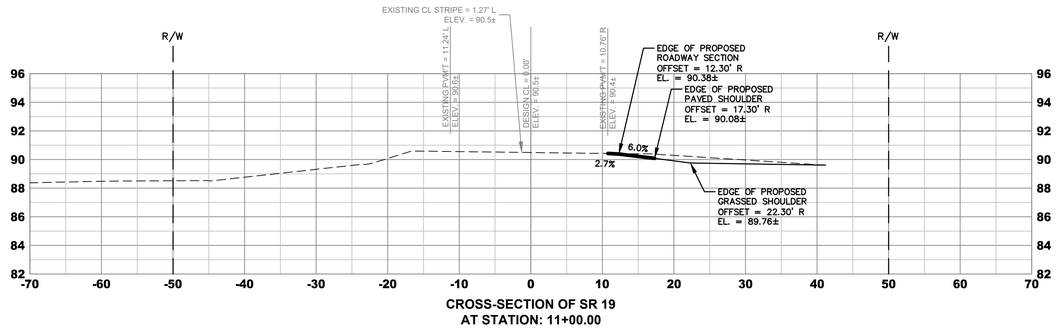

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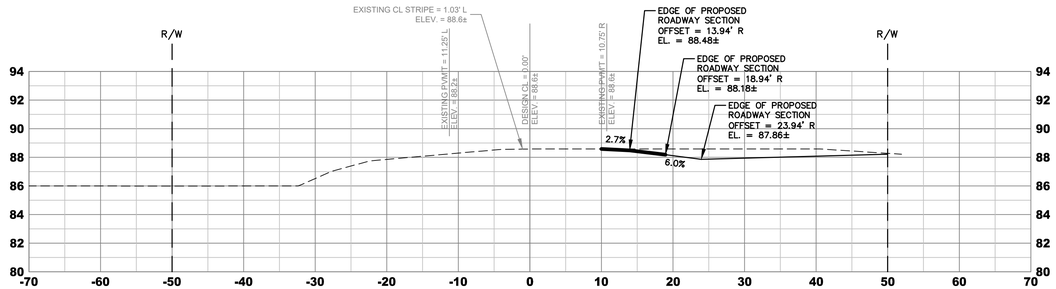
AT STATION: 11+00.00



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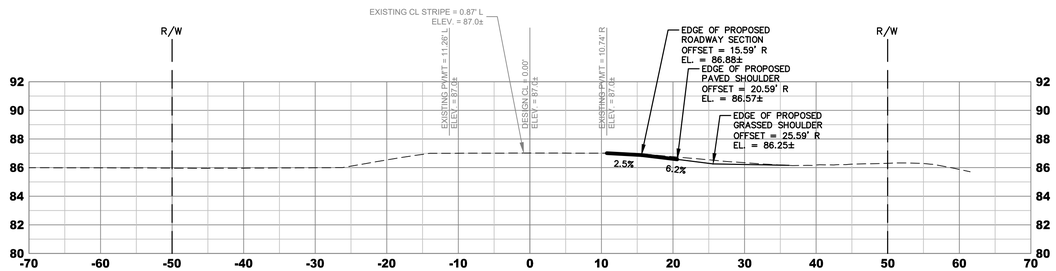

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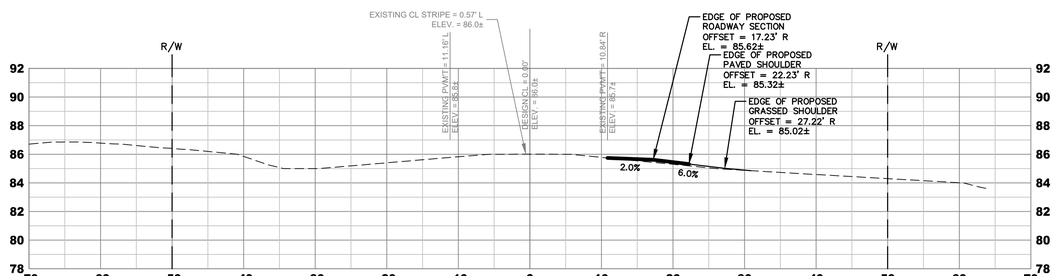

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AT STATION: 14+00.00

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No.	Date	Revision	By
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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
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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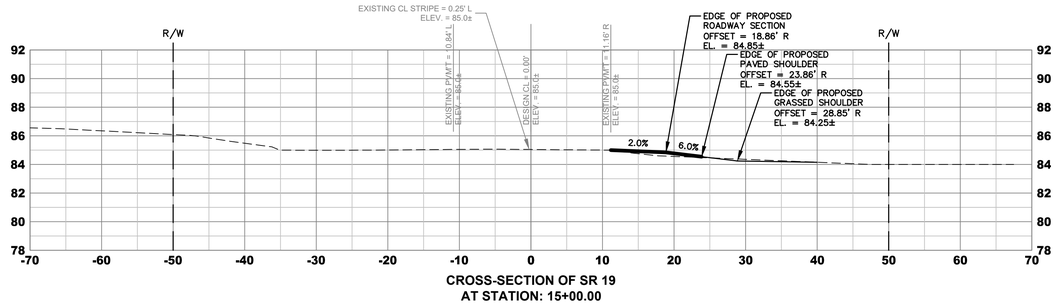

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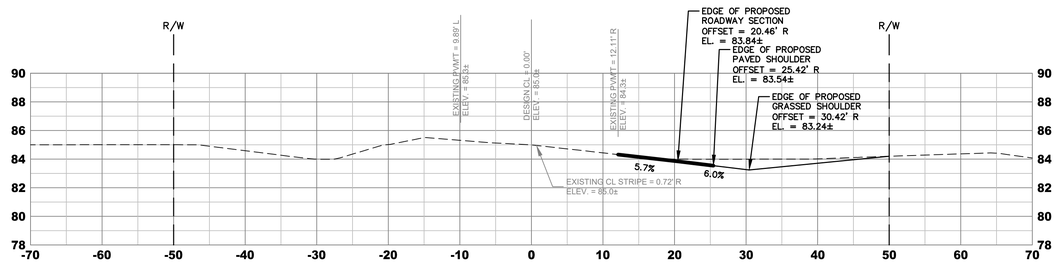
AT STATION: 15+00.00



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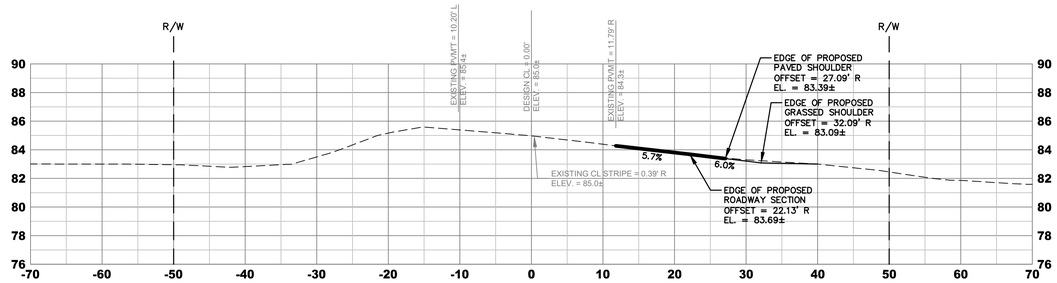

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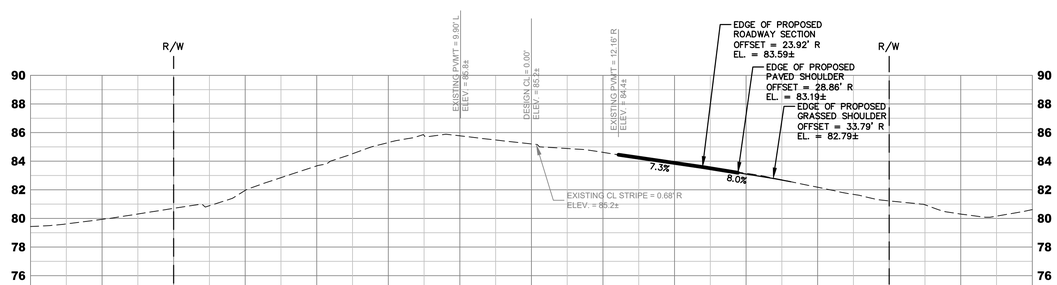

CROSS-SECTION OF SR 19
AT STATION: 18+00.00

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No.	Date	Revision	By
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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
Reg. Engineer

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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

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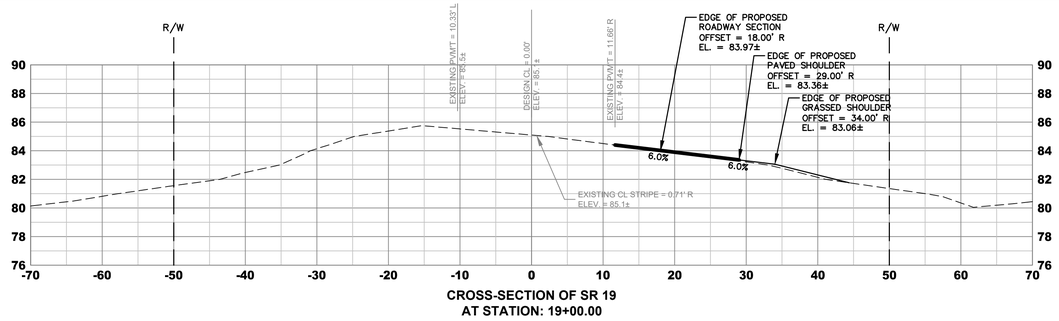

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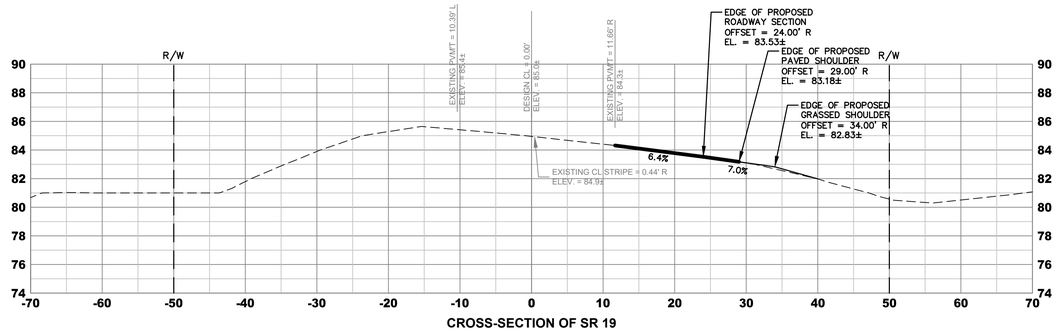

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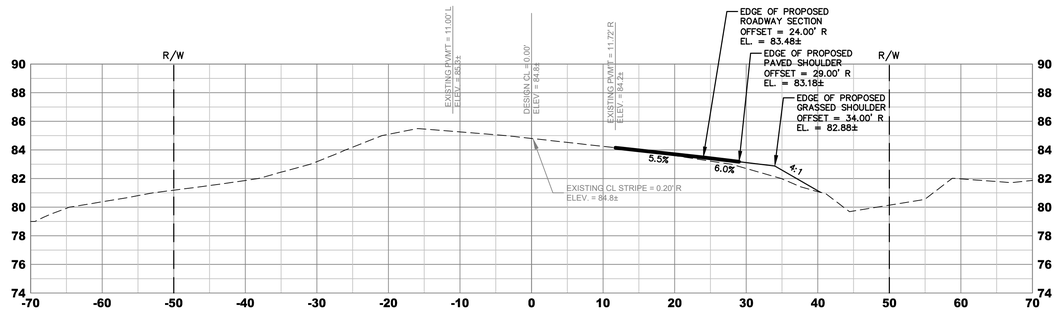

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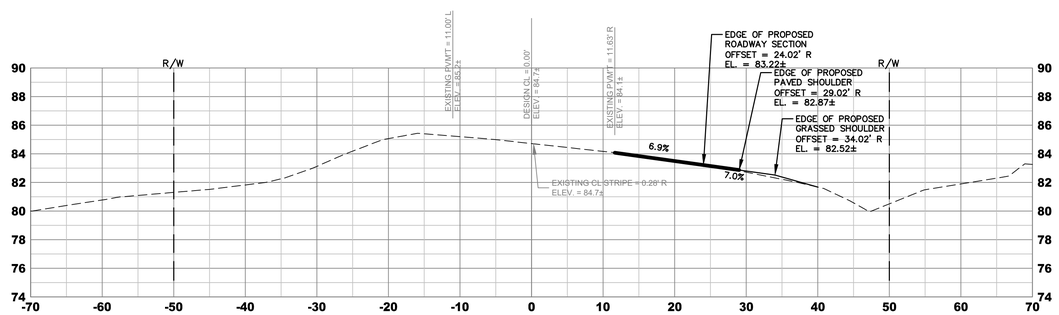

CROSS-SECTION OF SR 19
AT STATION: 22+00.00

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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
1.			
2.			
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4.			
5.			

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

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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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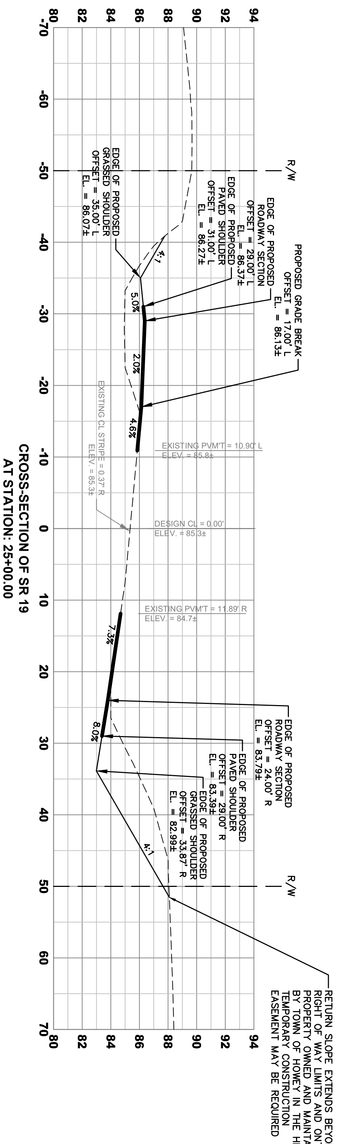

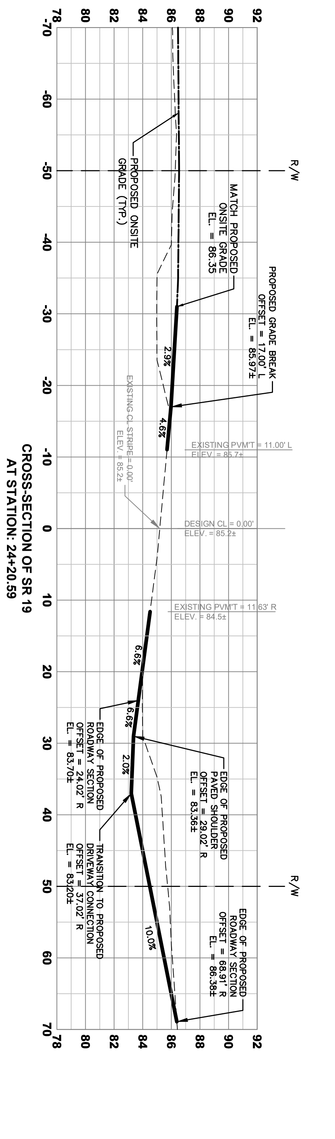

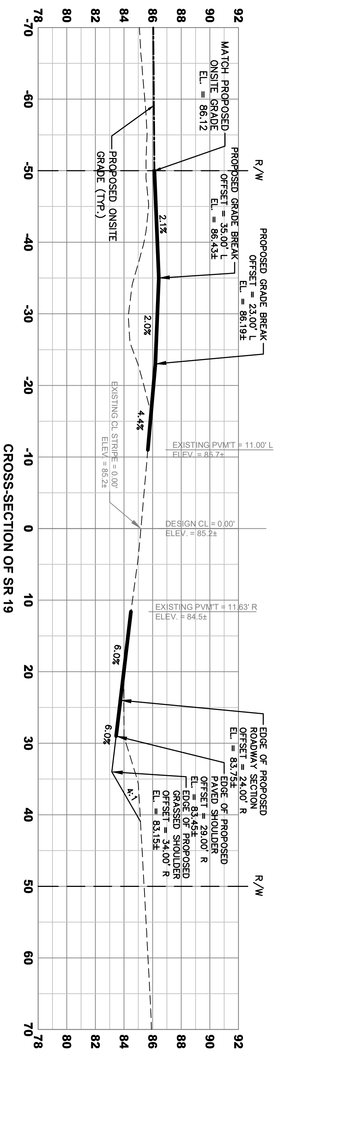

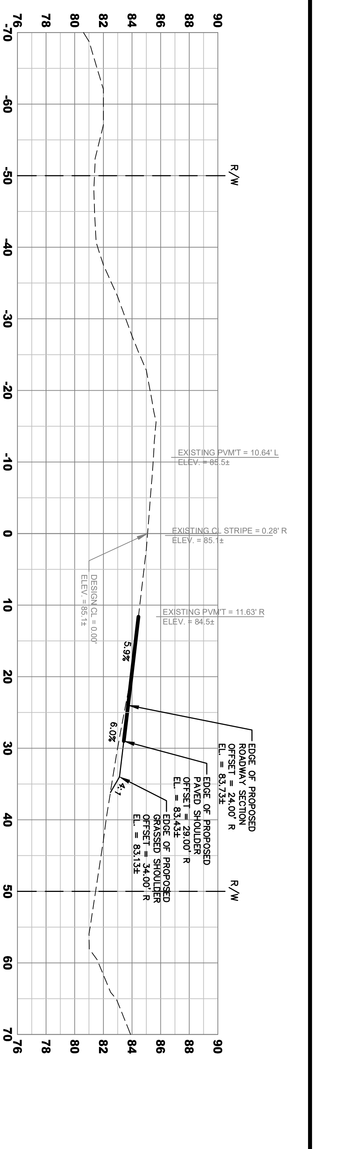

Sheet: 27D	Project No.: 21-04-0008	ERIC DANIEL EVANS, P.E. P.E. NUMBER: 93585 Reg. Engineer	HOWEY IN THE HILLS SR-19 IMPROVEMENTS LAKE COUNTY, FLORIDA PREPARED FOR LENNAR - ORLANDO
	Designed: E.D.E.		
	Drawn: G.R.Q.		
	Checked: J.E.W.		
	O.C.: R.C.W.		
	Date: JUNE 2022		
	Scale:		

SR-19 CROSS SECTIONS

No.	Date	Revision	By
1			
2			
3			
4			
5			
6			

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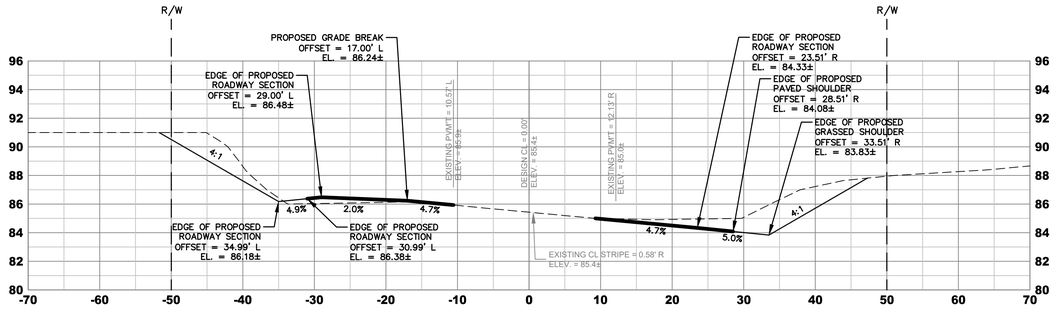
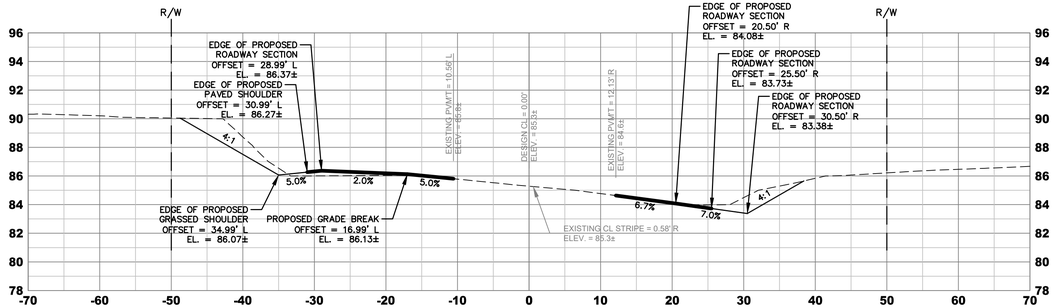


CROSS-SECTION OF SR 19
AT STATION: 26+00.00



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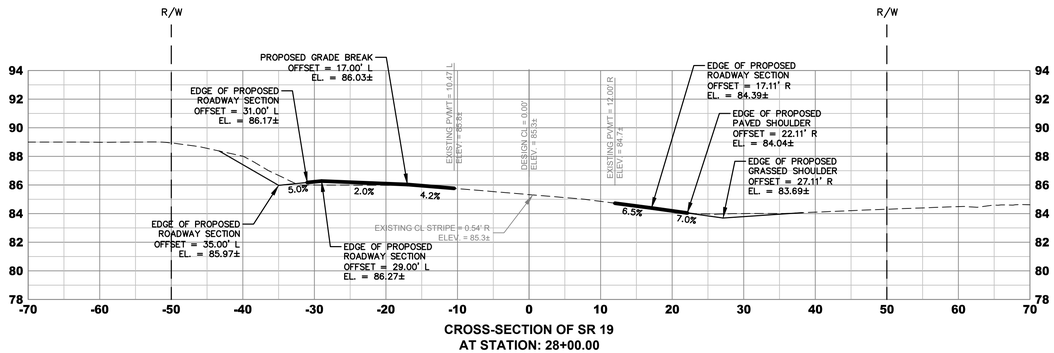

CROSS-SECTION OF SR 19
AT STATION: 28+00.00

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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
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 27E	

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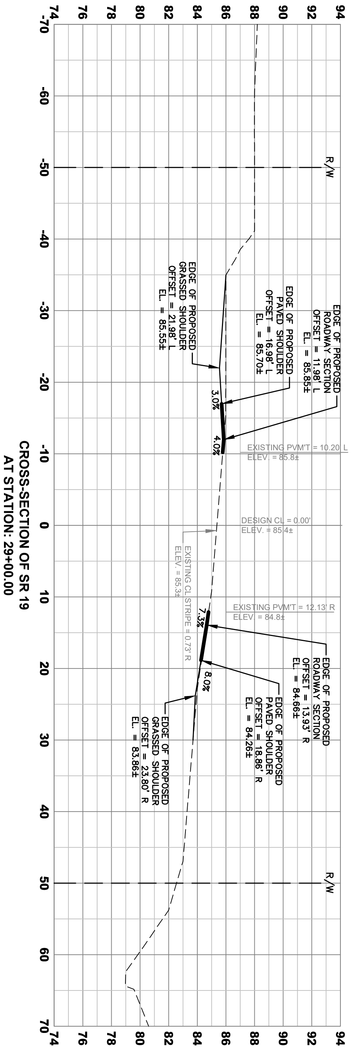

Sheet 27F

Project No.: 21-04-0008
Designed: E.D.E.
Drawn: G.R.Q.
Checked: E.D.E.
Q.C.: R.C.W.
Date: JUNE 2022
Scale:

ERIC DANIEL EVANS, P.E.
P.E. NUMBER: 93585
Reg. Engineer

HOWEY IN THE HILLS
SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA
PREPARED FOR
LENNAR - ORLANDO

SR-19 CROSS SECTIONS

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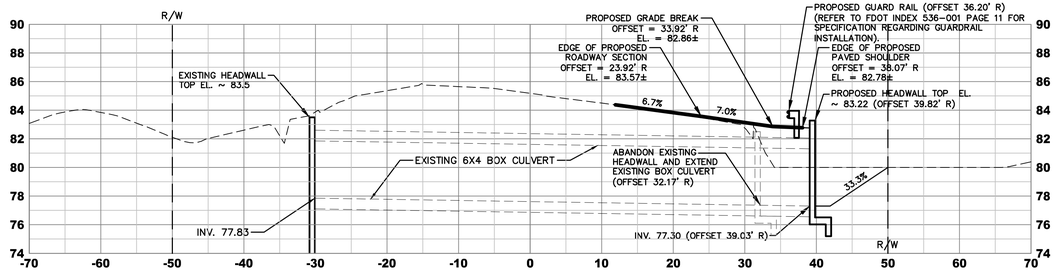

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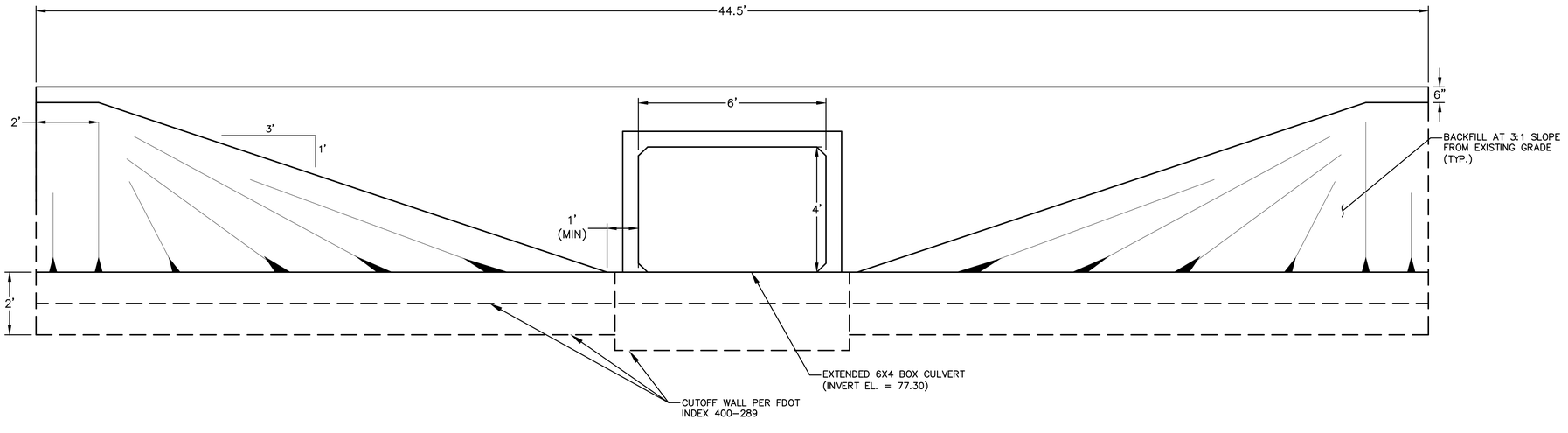
AT STATION: 18+47.98



FRONT VIEW OF PROPOSED BOX CULVERT EXTENSION
SCALE: 1"=2'

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FDOT BOX CULVERT EXTENSION 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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Sheet 28	

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OWNER'S REQUIREMENTS

SITE DESCRIPTION

PROJECT NAME AND LOCATION:
HOWEY IN THE HILLS SR-19 IMPROVEMENTS
LAKE COUNTY, FLORIDA

OWNER/DEVELOPER NAME AND ADDRESS:

LENNAR – ORLANDO
6750 FORUM DRIVE, SUITE 310
ORLANDO, FLORIDA 3281

DESCRIPTION:

THIS PROJECT WILL CONSIST OF:

WIDENING OF STATE ROAD 19, TO INCLUDE A RIGHT AND LEFT HAND TURN LANE, TO SUPPORT THE PROPOSED RESIDENTIAL PROJECT LOCATED ON THE WESTERLY RIGHT OF WAY LINE OF STATE ROAD 19.

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 COEFFICIENT:

1. PRE-CONSTRUCTION = .3±
2. DURING CONSTRUCTION = .8±
3. POST-CONSTRUCTION = .8±

SOILS:
* SEE ATTACHED FOR SOILS DATA

SITE MAPS:
* SEE ATTACHED DWG. No. # 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 DWG.# FOR LOCATION OF TEMPORARY STABILIZATION PRACTICES, AND TURBIDITY BARRIERS

SITE AREA:
1. TOTAL AREA OF SITE = 375.2 (ONSITE) AC±
2. TOTAL AREA TO BE DISTURBED = 293.3 (ONSITE) AC±

CONTROLS

THIS PLAN UTILIZES BEST MANAGEMENT PRACTICES TO CONTROL EROSION AND TURBIDITY CAUSED BY STORM WATER RUN OFF. DWG. No. 5 AND 7 HAVE BEEN PREPARED TO INSTRUCT THE CONTRACTOR ON PLACEMENT OF THESE CONTROLS. IT IS THE CONTRACTORS RESPONSIBILITY TO INSTALL AND MAINTAIN THE CONTROLS AS PER PLAN AS WELL AS ENSURING THE PLAN IS PROVIDING THE PROPER PROTECTION AS REQUIRED BY FEDERAL, STATE AND LOCAL LAWS. REFER TO "CONTRACTORS REQUIREMENTS" 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 DRAWING NO. 5

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	Fertilizers	Wood
Asphalt	Petroleum Based Products	Masonry Blocks
Tar	Cleaning Solvents	Roofing Materials
Detergents	Paints	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

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STORMWATER POLLUTION PREVENTION 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

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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 8

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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.

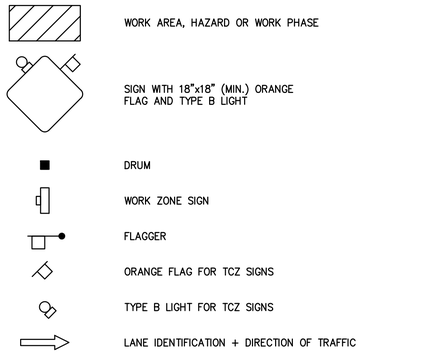
29. ALL LANES MUST BE OPENED FOR TRAFFIC DURING AN EVACUATION NOTICE OF A HURRICANE OR OTHER CATASTROPHIC EVENT AND SHALL REMAIN OPEN FOR THE DURATION OR THE EVACUATION OR EVENT.

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



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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.
Checked: J.E.W. | O.C.: R.C.W
Date: JUNE, 2022
Scale:
Sheet 29

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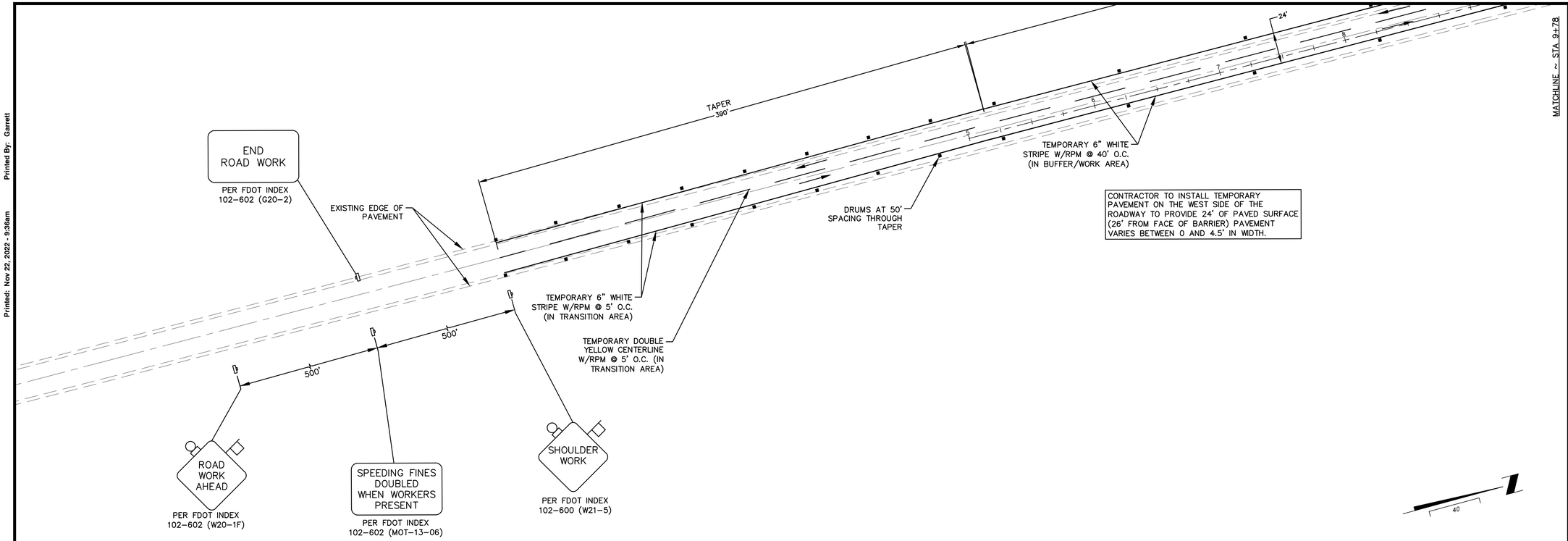

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MAINTENANCE OF TRAFFIC PLAN (SR-19 EAST WIDENING)

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	
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Scale: 1" = 40'	
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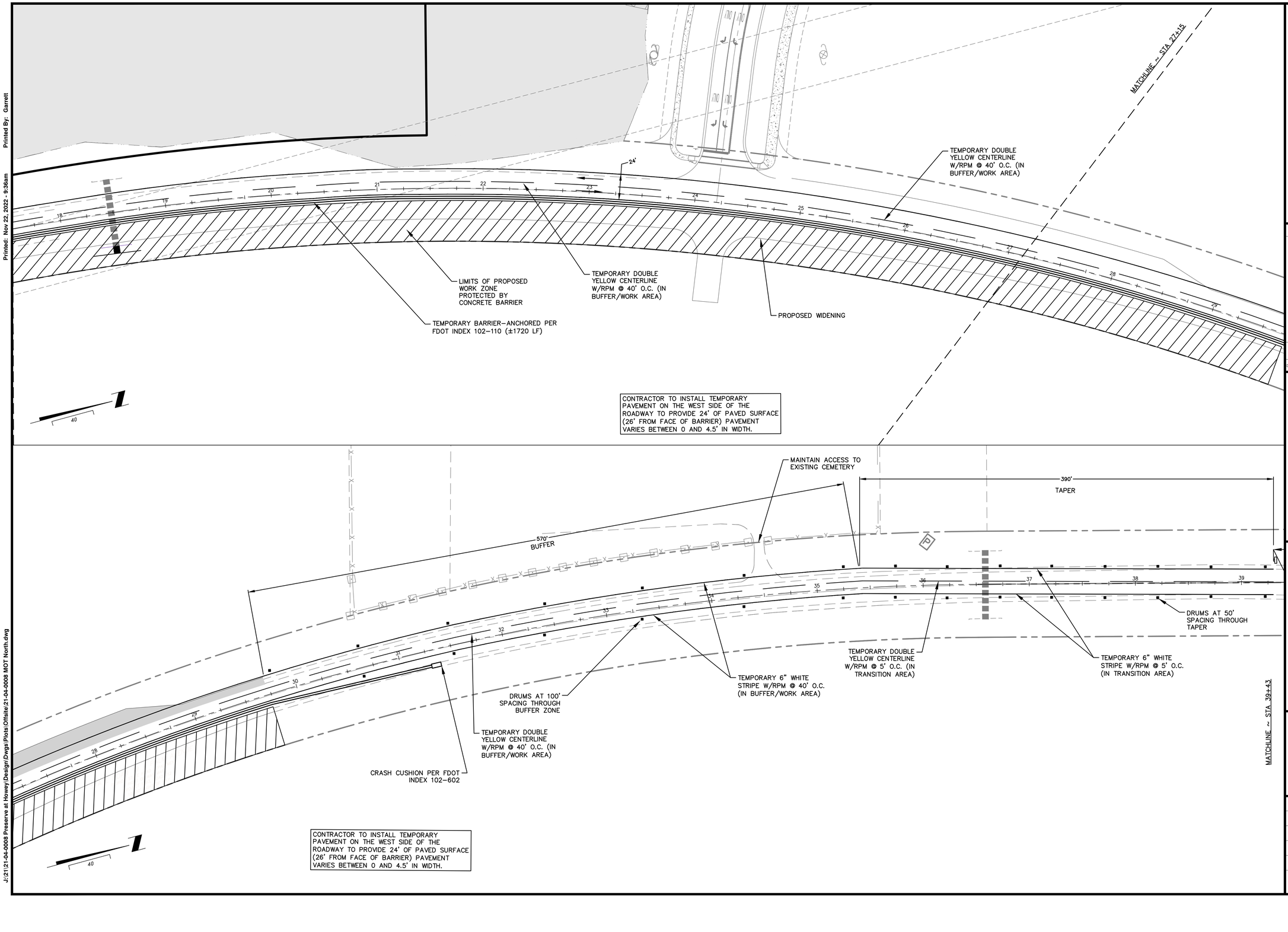

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MAINTENANCE OF TRAFFIC PLAN (SR-19 EAST WIDENING)

HOWEY IN THE HILLS SR-19 IMPROVEMENTS LAKE COUNTY, FLORIDA

PREPARED FOR
LENNAR - ORLANDO

ERIC DANIEL EVANS, P.E.
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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.
Checked: J.E.W.	O.C.: R.C.W
Date: JUNE, 2022	
Scale: 1" = 40'	
Sheet 30C	

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Printed: Nov 22, 2022 - 9:36am
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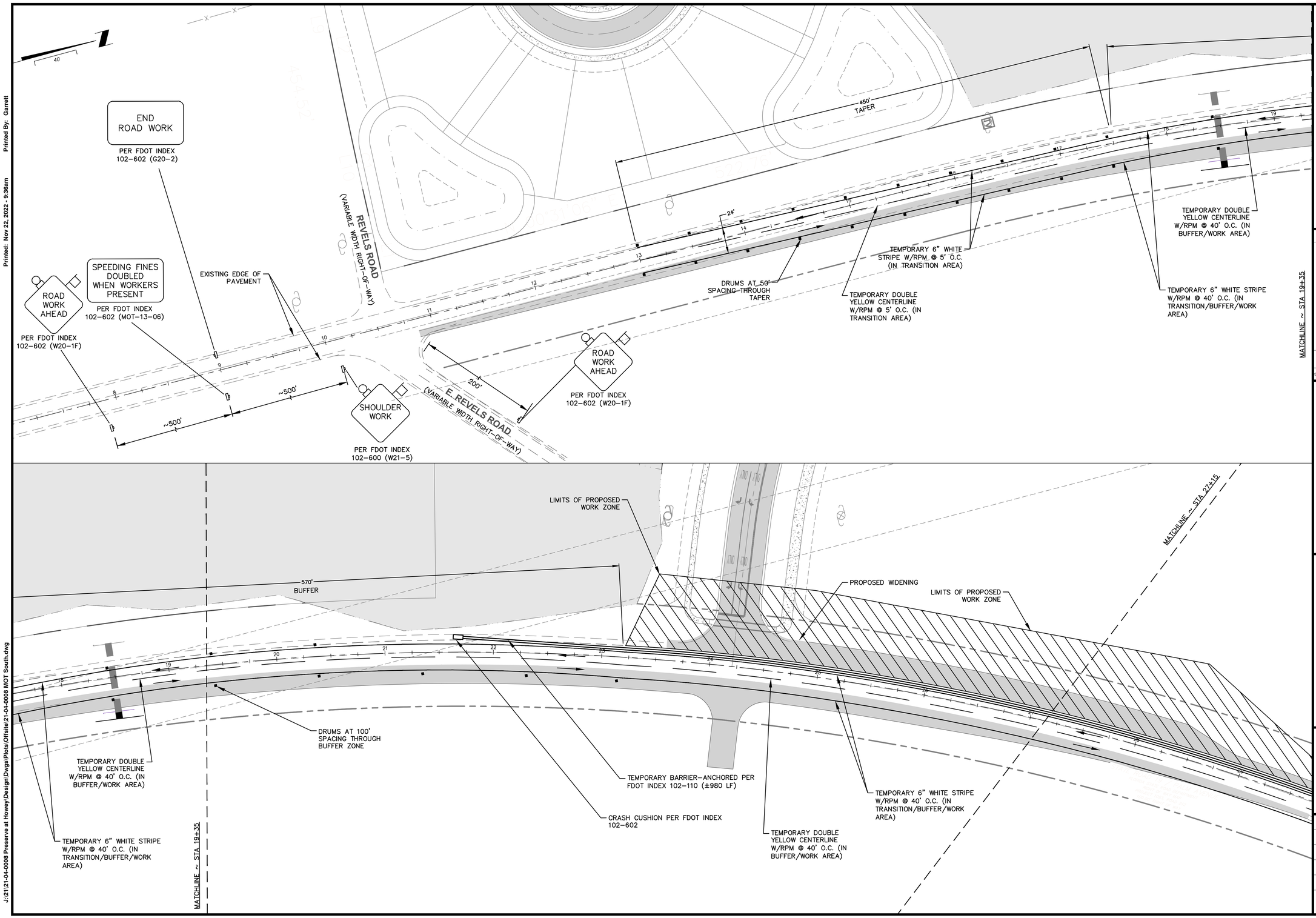

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Florida Registry 3650 L.A. Number: LC26000311

No.	Date	Revision	By
1			
2			
3			
4			
5			

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.
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