

SITE DEVELOPMENT PLAN FOR STARBUCKS AT WESTSIDE

**SECTION 6, TOWNSHIP 25 S, RANGE 27 E OSCEOLA COUNTY, FLORIDA
NOVEMBER 2023**

PID# 06-25-27-5439-0001-0040

PREPARED FOR:
K+F WESTSIDE INVESTORS, LLC
KELLY FROELICH
5555 SOUTH KIRKMAN ROAD, SUITE 201
ORLANDO, FLORIDA 32819
kfroelich@intram.com



LOCATION MAP



NOTE
ELEVATIONS SHOWN HEREON
ARE BASED ON THE NORTH
AMERICAN VERTICAL DATUM
OF 1988

PREPARED BY:



8 BROADWAY, SUITE 104 KISSIMMEE, FLORIDA 34741-5481
PHONE: (407) 847-9433 FAX: (407) 847-2499
ENGINEERING, SURVEYING AND PLANNING



Hanson, Walter & Associates, Inc.

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CONTRACTOR SHALL CONTACT THE FOLLOWING AGENCIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION :

- | | |
|--|---|
| 1. OSCEOLA COUNTY ENGINEERING DEPT.
1 Courthouse Square, Suite 3100
Kissimmee, Florida 34741
Ph: (407) 742-0662 | 4. TOHO WATER AUTHORITY
951 Martin Luther King Blvd.
Kissimmee, Florida 34741
Ph: (407) 944-5000 |
| 2. KISSIMMEE UTILITY AUTHORITY
P.O. Box 423219
Kissimmee, Florida 34742-2148
Ph: (407) 933-7777 | 5. TECO/PEOPLES GAS CO.
600 West Robinson Street
Orlando, Florida 32802
Carlos Quintana - Joe Sanchez
Ph: (407)425-4661
Russell Harris
Ph: (407) 420-6608 |
| 3. SPRINT-FLORIDA INC.
1101 E. Donegan Avenue
Kissimmee, Florida 34744
Ph: (407) 390-6308 | 6. SPECTRUM
3613 Grissom Lane
Kissimmee, Florida 34741
Ph: (407) 847-8001 |

SITE INFORMATION:

- OWNER:**
K&B WESTSIDE INVESTORS, LLC
ATTN: KELLY FROELICH
5555 SOUTH KIRKMAN ROAD, SUITE 201
ORLANDO, FLORIDA 32819
KFROELICH@INTRAM.COM
- OBJECTIVE:**
CONSTRUCTION OF A 1,410 SQFT STARBUCKS AT WESTSIDE.
- ZONING:**
THE EXISTING ZONING FOR THIS SITE IS: PLANNED DEVELOPMENT (PD)
THE FUTURE LAND USE IS: COMMERCIAL TOURIST.
- SITE CALCULATIONS: (BASED UPON LIMITS OF CONSTRUCTION)**

TOTAL SITE AREA:	36,590	SF.	OR	0.84	AC.	(100.00%)
PROPOSED PAVEMENT / PARKING	1,517	SF.	OR	0.04	AC.	(04.76%)
PROPOSED CONC. SIDEWALK / PATIO AREA	5,712	SF.	OR	0.13	AC.	(15.48%)
BUILDINGS:	1,359	SF.	OR	0.03	AC.	(03.57%)
OPEN SPACES:	27,999	SF.	OR	0.64	AC.	(76.19%)
TOTAL PERVIOUS:	28,179	SF.	OR	0.64	AC.	(76.19%)
TOTAL IMPERVIOUS:	8,411	SF.	OR	0.20	AC.	(23.81%)

PER SFMWD ERP 49-01360-P. THE ALLOWABLE IMPERVIOUS AREA IS 80% FOR LOT 2 OR 6.22 ACRES. TOTAL IMPERVIOUS AREA FOR THIS SITE IS 0.63 AC WITH 0.61 ACRES ALLOWABLE REMAINING.

- PARKING CALCULATIONS: (PER COUNTY REQUIREMENTS)**
PARKING REQUIRED: 1 SPACE / 100 S.F. 1410 S.Q. / 100 = 14 SPACES INCLUDING H.C.
PARKING PROVIDED: $\frac{14 \text{ REGULAR SPACES} + 1 \text{ HANDICAP SPACES}}{15 \text{ TOTAL SPACES}}$

- BUILDING SET BACKS:**
FRONT N/A
REAR N/A
SIDE N/A
- TRAFFIC STATEMENT:**
BASED UPON THE 11th EDITION OF THE ITE TRIP GENERATION MANUAL, SHOPPING CENTER AND TRIP GENERATION (PER 1000 S.F. GFA):
WEEK DAY (A.M. PEAK HOUR) = 2 TRIPS (63% ENTER 37% EXIT).
WEEK DAY (P.M. PEAK HOUR) = 5 TRIPS (48% ENTER 52% EXIT).
WEEK DAY TRIPS: = 50 TRIPS (50% ENTER 50% EXIT).

- THE FOLLOWING PROPOSED FACILITIES SHOWN ON THE DEVELOPMENT PLANS ARE FOR REFERENCE PURPOSES ONLY AND EACH SHALL REQUIRE A SEPARATE BUILDING PERMIT. THE LIST INCLUDES, BUT IS NOT LIMITED TO: PROPOSED BUILDINGS, SANITARY LIFT STATIONS, LIGHT FIXTURES (POLES) THAT ARE INDEPENDENT FROM ANY BUILDING STRUCTURE, FENCES, GATES, MONUMENT SIGNS, DUMPSTER ENCLOSURES, AND RETAINING WALLS THAT EXCEED THREE (3) FEET IN HEIGHT.
- MAXIMUM BUILDING HEIGHT IS 40 FEET. (ONE STORY).
- ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FIRM MAP NO. 12097C0010G, EFFECTIVE JUNE 18, 2013, THIS PROPERTY APPEARS TO BE LOCATED IN ZONE "X" (SHADED), AN AREA WITHIN THE 0.2% B.F.E. = 77.0 N.A.V.D. 1988 .
- THE PARCEL SHALL BE DEVELOPED IN ONE PHASE.
- PARCEL ID: 06-25-27-3368-0001-0010.
- ENGINEER OF RECORD: ROBERT NEWBERRY (newberry@hansonwalter.com)
- ALL APPLICABLE STATE AND FEDERAL PERMITS MUST BE OBTAINED BEFORE COMMENCEMENT CONSTRUCTION.
- ALL UNDERGROUND UTILITIES INSTALLATION MUST BE PERFORMED BY A FLORIDA LICENSED UTILITY CONTRACTOR.
- MAINTAIN A MINIMUM OF FIVE FEET HORIZONTAL SEPARATION BETWEEN TREE PLANTINGS AND TWA UTILITIES.
- THE SITE WILL BALANCE TO WITHIN APPROXIMATELY 176 CUYDS OF ENGINEERING FILL FOR THE BUILDING PAD.

- ANY PROPOSED ROADWAY LANE CLOSURE MUST BE SUBMITTED IN WRITING ACCOMPANIED BY A SPECIFIC MOT PLAN DETAILING THE SIGNAGE/DETOUR PLAN, DURATION OF THE ROAD CLOSURE, NOTIFICATION OF LOCAL EMERGENCY AND LAW ENFORCEMENT OFFICES, NOTIFICATION OF OSCEOLA COUNTY PUBLIC INFORMATION OFFICE AND ALL AFFECTED LOCAL RESIDENTS MUST BE NOTIFIED OF THE ROAD IN ADVANCE PRIOR TO THE BEGINNING OF ANY CONSTRUCTION ACTIVITY WITHIN THE ROADWAYS. ALL ROADWAY LANE CLOSURE MUST BE DONE IN STAGES WHEREIN ONLY SECTIONS OF ANY COUNTY ROAD WILL BE CLOSED AT A TIME. THIS IS TO KEEP EMERGENCY VEHICLES ROAD ACCESSIBILITY IMPACT TO A MINIMUM.

LENGTH OF UTILITY PIPES	UTILITY METERS
WATER	WATER
2" P.E.: 205 LF	2" METERS: 1
3/4" P.E.: 25 LF	2" RPZ: 1
SEWER	FIRE HYDRANTS: 0
6" PVC: 251 LF	6" DDCV: 0
6 CLEANOUTS	

NO.	DATE	DESCRIPTION	BY
1	03/11/24	CHANGES PER TOHO AND COUNTY COMMENTS	RN

SDP 23-0167
PD 19-00017
HWA JOB # 3930-8-23
SHEET 01 OF 12

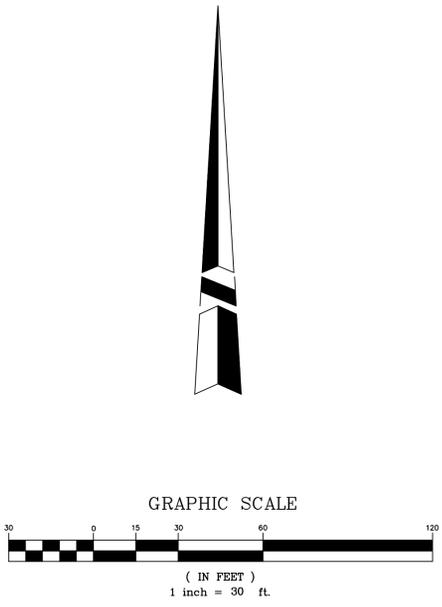
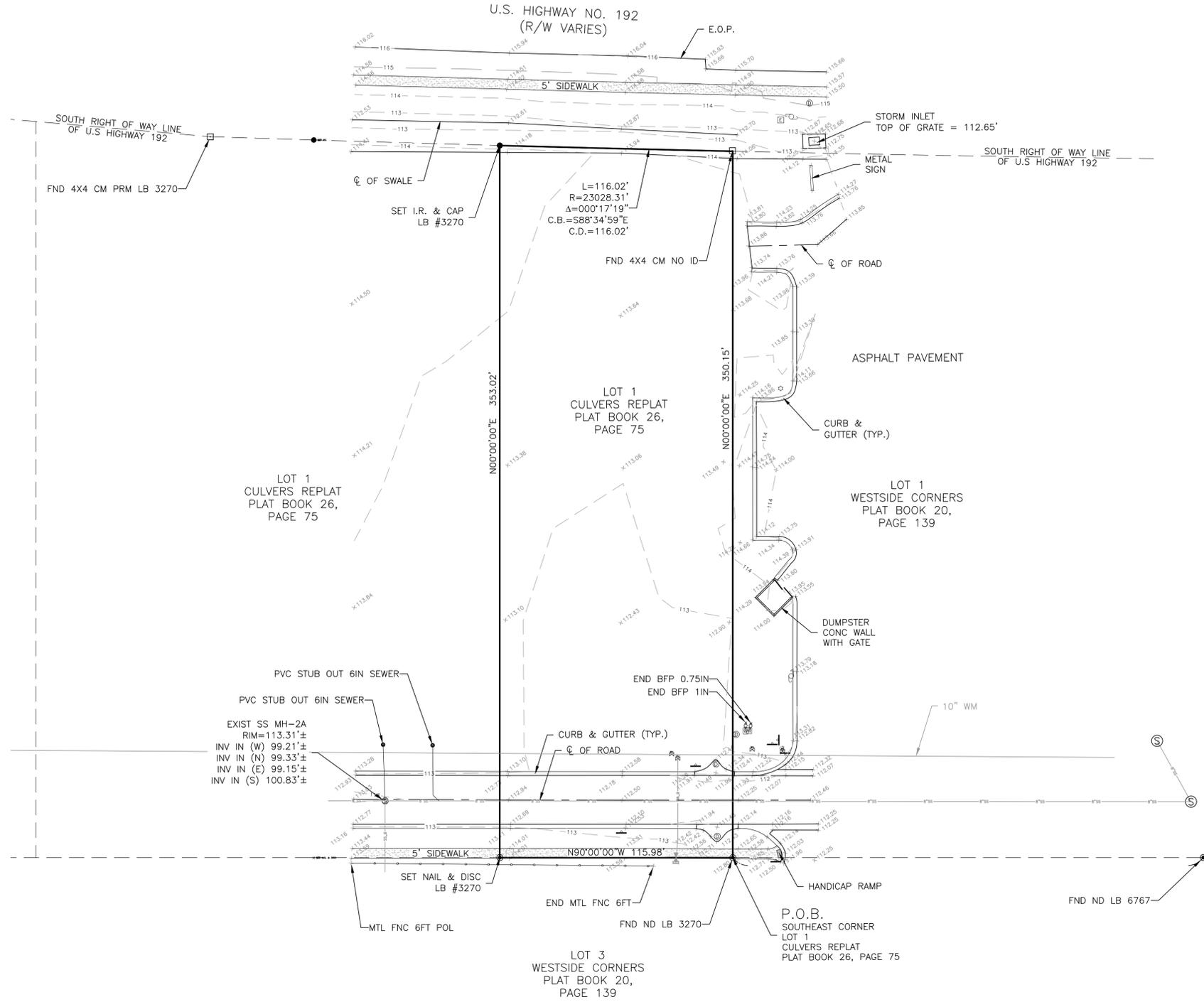
I:\3930-8-23\ENGINEERING\CADD\PLANS\5-3930-8-23-COVER.dwg * Nov 12, 2024 - 8:18am * plotted by: Rhenberry

PLAT OF SURVEY

LEGAL DESCRIPTION:
 BEGIN AT THE SOUTHEAST CORNER OF LOT 1, CULVERS REPLAT, AS RECORDED IN PLAT BOOK 26, PAGE 75, OF THE OFFICIAL RECORDS OF OSCEOLA COUNTY, FLORIDA: THENCE RUN NORTH 90°00'00" WEST ALONG THE SOUTH LINE OF AFORESAID LOT 1, A DISTANCE OF 115.98 FEET; THENCE DEPARTING SAID SOUTH LINE, RUN NORTH 00°00'00" EAST, PARALLEL TO THE EAST LINE OF AFORESAID LOT 1, A DISTANCE OF 353.02 FEET TO A POINT ON THE SOUTH RIGHT OF WAY LINE OF U.S. HIGHWAY 192, SAID POINT ALSO BEING A POINT ON A CURVE, CONCAVE NORTHERLY, HAVING A RADIUS OF 23028.31 FEET, A CHORD BEARING OF SOUTH 88°34'59" EAST, AND A CHORD DISTANCE OF 116.02 FEET; THENCE RUN ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 00°17'19", A DISTANCE OF 116.02 FEET; THENCE DEPARTING SAID SOUTH RIGHT OF WAY LINE, RUN SOUTH 00°00'00" EAST, A DISTANCE OF 350.15 FEET TO THE POINT OF BEGINNING.



LOCATION MAP
NOT TO SCALE



NOTE
 ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988

AC = AIR CONDITIONER	CLP = CONCRETE LIGHT POLE	FND = FOUND	L.B. = LICENSED SURVEYING BUSINESS	P.O.B. = POINT OF BEGINNING	SEC = SECTION	WM = WATER METER	—OE— = BUILDING SETBACK LINE
BFP = BACK FLOW PREVENTER	OPP = CONCRETE POWER POLE	FOC = FACE OF CURB	L.C.E. = LIMITED COMMON ELEMENT	P.O.C. = POINT OF COMMENCEMENT	SS = SANITARY SEWER	WPP = WOOD POWER POLE	—OHW— = OVERHEAD ELECTRIC LINE
BK = BOOK	CR = CABLE RISER	FOCM = FIBER OPTIC CABLE MARKER	L.S. = LICENSED SURVEYOR	P.R.C. = POINT OF REVERSE CURVE	SV = SEWER VALVE	WV = WATER VALVE	—OW— = OVERHEAD WIRE
BLDG. = BUILDING	C.S. = CONTROL STRUCTURE	FOCV = FIBER OPTIC CABLE VAULT	MB = MAIL BOX	PP = POWER POLE	SW = SIDEWALK	W = WITH	—W— = WATER LINE
BM. = BENCHMARK	D = DRAINAGE	GA = GUY ANCHOR	MES. = MITERED END SECTION	PR = PHONE RISER	T = TANGENT LENGTH OF CURVE	W/ = WITH	—W— = WATER LINE
BOC = BACK OF CURB	DBH = DIAMETER AT BREAST HEIGHT	GM = GAS MARKER	MTL = METAL	PRM = PERMANENT REFERENCE MONUMENT	TBM = TEMPORARY BENCHMARK	W/ = WITH	—W— = WATER LINE
BOL = BOLLARD	DCO = DRAINAGE CLEAN OUT	GR = GUARD RAIL	MKR = MARKER	PSM = PROFESSIONAL SURVEYOR & MAPPER	TEL = TELEPHONE	W/ = WITH	—W— = WATER LINE
BWF = BARB WIRE FENCE	DIA. = DIAMETER	GW = GUY WIRE	N.T.S. = NOT TO SCALE	P.T. = POINT OF TANGENCY	TOB = TOP OF BANK	W/ = WITH	—W— = WATER LINE
BX = BOX	N.E. = N-ELECTRIC	GV = GAS VALVE	N.R. = NON-RADIAL	PVC = POLY VINYL CHLORIDE	TOG = TOP OF GRATE	W/ = WITH	—W— = WATER LINE
C.H. = CHORD BEARING	EB = ELECTRIC BOX	HC = HANDICAP	N&D = NAIL AND DISC	R = RADIUS	TOS = TOE OF SLOPE	W/ = WITH	—W— = WATER LINE
CB = CATCH BASIN	EL. = ELEVATION	HWA = HANSON, WALTER & ASSOCIATES	OE = OVERHEAD ELECTRIC	RCP = REINFORCED CONCRETE PIPE	TR = TRAFFIC	W/ = WITH	—W— = WATER LINE
C.B.S. = CONCRETE BLOCK STRUCTURE	EMH = ELECTRIC MAN HOLE	HYD = HYDRANT	O/S = OFFSET	RCW = RECLAIM WATER	TRAN = TRANSFORMER	W/ = WITH	—W— = WATER LINE
CD = CHORD DISTANCE	EOP = EDGE OF PAVEMENT	I.C.V. = IRRIGATION CONTROL VALVE	O.R.B. = OFFICIAL RECORD BOOK	RCWV = RECLAIM WATER VALVE	TWP = TOWNSHIP	W/ = WITH	—W— = WATER LINE
C.E. = COMMON ELEMENT	ESMT = EASEMENT	I.D. = IDENTIFICATION	P.B. = PLAT BOOK	RES. = RESIDENCE	UG = UNDERGROUND	W/ = WITH	—W— = WATER LINE
CLF. = CHAIN LINK FENCE	ERCP = ECUPIAL REINFORCED CONC. PIPE	IE = INVERT	P.C. = POINT OF CURVATURE	RGE = RANGE	W = WATER	W/ = WITH	—W— = WATER LINE
C.M. = CONCRETE MONUMENT	ESMT = EASEMENT	IR. = IRON PIPE	P.G. = PAGE	R.L.S. = REGISTERED LAND SURVEYOR	WF = WIRE FENCE	W/ = WITH	—W— = WATER LINE
C.O. = CLEAN OUT	FDC = FIRE DEPARTMENT CONNECTION	I.R. = IRON ROD	P.I. = POINT OF INTERSECTION	R.O. = ROOF OVERHANG	WG = WATER GATE	W/ = WITH	—W— = WATER LINE
COM. = COMMUNICATION	F.F.E. = FINISH FLOOR ELEVATION	I.R.C. = IRON ROD & CAP	P.L.S. = PROFESSIONAL LAND SURVEYOR	R.U. = RE-USE LINE	WK = WALK	W/ = WITH	—W— = WATER LINE
CONC. = CONCRETE	F.M. = FORCED MAIN	L = LENGTH	P.C.C. = POINT OF COMPOUND CURVE	R/W = RIGHT OF WAY	WLF = WETLAND FLAG	W/ = WITH	—W— = WATER LINE

I hereby certify that the survey represented hereon has been prepared in accordance with the Standards of Practice as set forth in Chapter 5J-17, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes.

John M. Hughes, P.S.M. # 6367 Date Signed

DESIGN	FB#	DC	SEC	6
DRAWN	DT	DC	TWP	25 S
CK'D	JH	SCALE	RGE	27 E
CAD#	SEE STAMP	DATE OF SURVEY	DATE	BY
		08-30-22		

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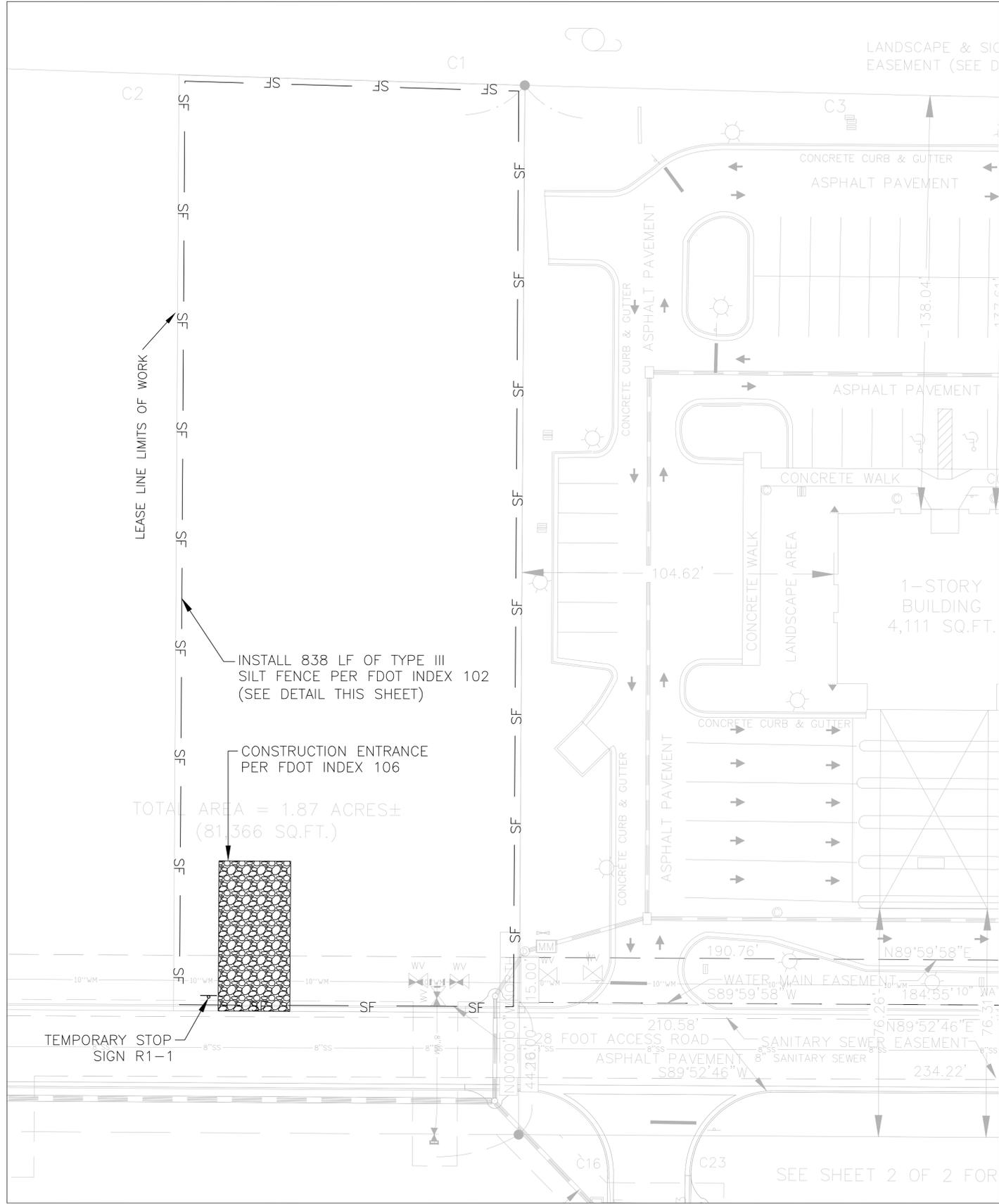
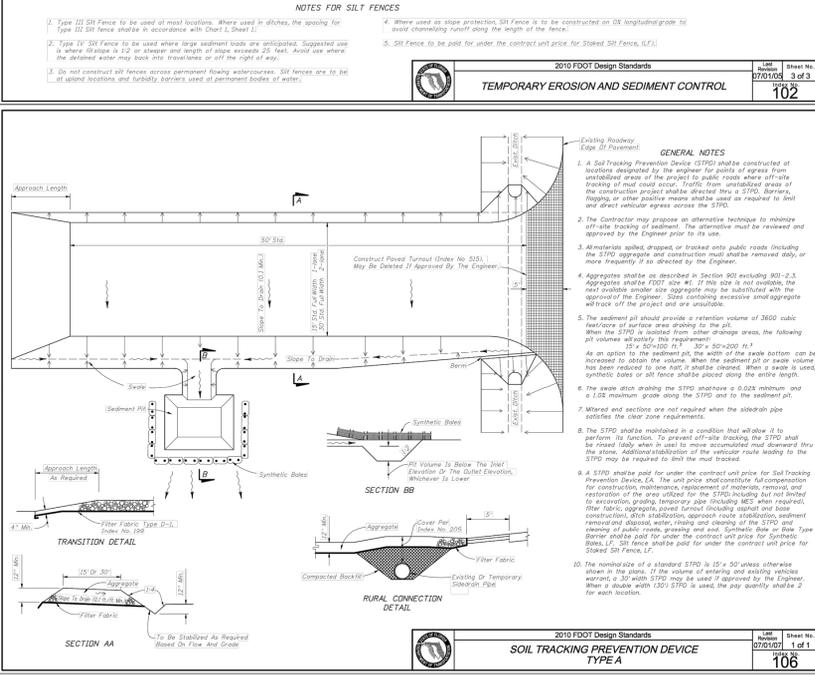
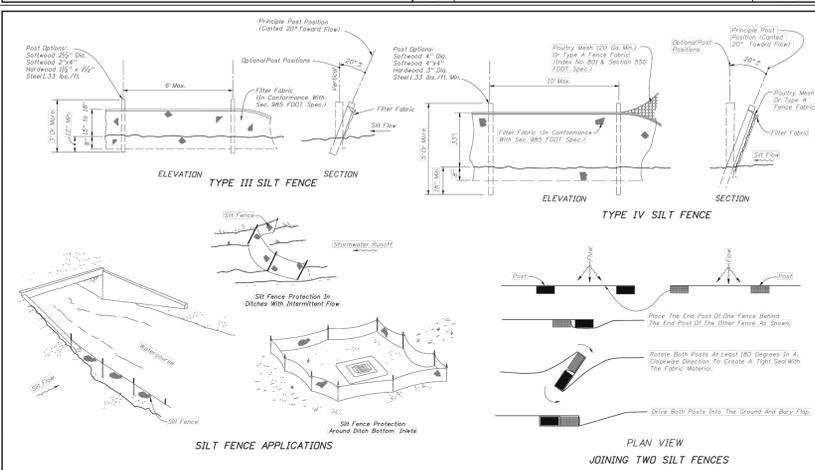
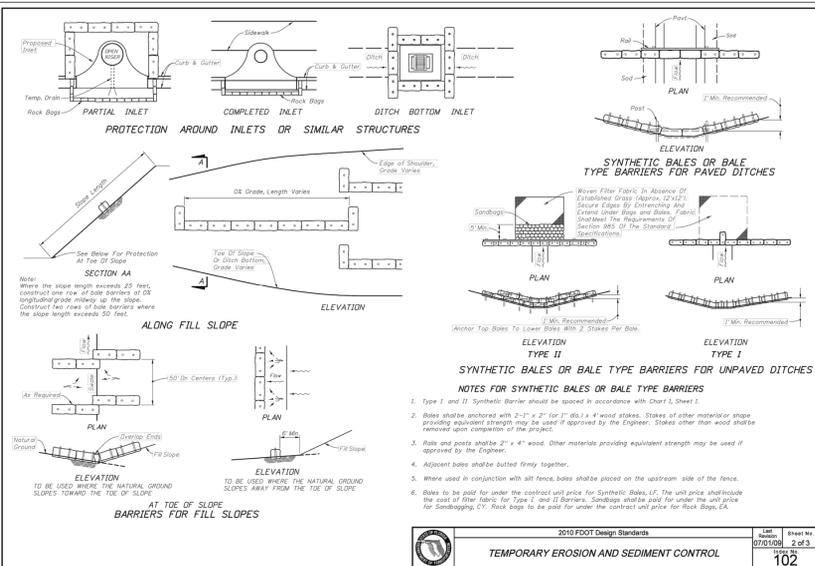
PREPARED FOR:
K&B WESTSIDE INVESTORS, LLC
KELLY FROELICH

BOUNDARY AND TOPOGRAPHIC SURVEY

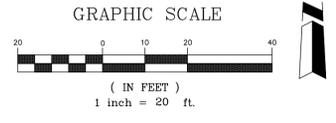
NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER

SHEET NO.
 1 of 1
 JOB# 3930-08-23

1:3930-08-23 SURVEY (CAD) BY JH 08/30/22 11:22 AM PLOTTED BY HWA 08/30/22 11:22 AM



- NOTES:**
- ALL EROSION CONTROL SHALL BE IN PLACE PRIOR TO CONSTRUCTION.
 - CONSTRUCT TURBIDITY BARRIERS PER FDOT INDEX 103.
 - CONSTRUCT SILT FENCE PER FDOT INDEX 102.
 - THE CONTRACTOR SHALL CONTROL DUST EMISSIONS FROM THE SITE.
 - UNDER WINDY CONDITIONS, CEASE DUST-GENERATING OPERATIONS AND STABILIZE DISTURBED AREA TO CREATE A VISIBLE CRUST OR ENSURE THAT DISTURBED AREAS ARE VISIBLY DAMP OR MOIST.
 - THE EXISTING DITCHES SHALL REMAIN OPERATIONAL DURING THE ENTIRETY OF THE CONSTRUCTION PROJECT. THE CONTRACTOR MAY BE REQUIRED TO INSTALL ADDITIONAL BMP'S DEPENDING UPON FIELD CONDITIONS DURING CONSTRUCTION.
 - FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION. IF CONFLICTS OCCUR, CONTACT ENGINEER PRIOR TO CONSTRUCTION.
 - ALL ROADS SHALL BE MAINTAINED/SWEPT DAILY TO REMOVE ANY DIRT TRANSPORTED ONTO THE EXISTING PAVED ROADWAYS.
 - CONTRACTOR TO OBTAIN ALL PERMITS ASSOCIATED WITH ALL DEMOLITION ACTIVITIES.
 - ALL BARRICADES AND EROSION CONTROL DEVICES ARE TO BE MAINTAINED AND REMAIN INTACT UNTIL ALL CONSTRUCTION ACTIVITIES ARE COMPLETED.
 - ALL DEMOLITION ACTIVITIES SHALL BE COMPLETED WITHIN THE MINIMUM REQUIREMENTS OF THE FEDERAL, STATE AND LOCAL AGENCIES.
 - WHEN ANY ROOTS OF EXISTING TREES ARE ENCOUNTERED DURING LAND CLEARING AND/OR GRADING OF THE SITE, THE ROOTS MUST BE CUT OFF EVENLY WITH CLEAN SHARP PRUNING TOOLS. THE CONTRACTOR/DEVELOPER SHALL MINIMIZE THE DAMAGE TO EXISTING TREE ROOT SYSTEMS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING CURB INLETS.
 - FILL SHALL BE PLACED IN LEVEL LIFTS OF 10 TO 12 INCHES. EACH LIFT SHALL BE COMPACTED TO AT LEAST 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY AS RECOMMENDED BY THE GEOTECHNICAL REPORT.
 - ALL ORGANIC SOIL LAYERS FOUND ON THIS SITE SHALL BE REMOVED AND DISPOSED PER THE GEOTECHNICAL REPORT RECOMMENDATION.
 - THE SITE HAS BEEN MASS GRADED.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL AS PART OF THEIR BMP'S AND POLLUTE ABATEMENT PROCESS. CONTRACTOR SHALL USE WATER SPRAY TRUCKS, ENFORCE REDUCED VEHICLE SPEED ON UNPAVED ROADS AND IF NECESSARY PROHIBIT CONSTRUCTION GRADING WHEN WIND GUST EXCEED 25 MPH OR OTHERWISE DIRECTED BY EOR OR COUNTY OFFICIAL.
 - CONTRACTOR SHALL COMPLY WITH LDC 4.12.1G, THIS INCLUDES BUT NOT LIMITED TO SECURITY AND UNAUTHORIZED ACCESS TO SITE.
 - THE CONTRACTOR SHALL SEED & MULCH ALL DISTURBED AREAS UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE PLANS.
 - THE SITE WAS MASS GRADED UNDER SDP15-01/25. HOWEVER, THE SITE WILL NEED APPROXIMATELY 1800 CUBIC YARDS OF IMPORT FILL.
 - DUE TO PROXIMITY TO US 535 & EXISTING COMMERCIAL PROPERTIES, WATER TRUCKS SHALL BE UTILIZED AS NEEDED TO REDUCE WINDBLOWN DUST ACROSS THE SITE.



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19-3930-8-23(ENGINEERING) CAD/PLANS(S)-3930-8-23 EROSION CONTROL & DEMO PLAN.dwg • Nov 13, 2023-9:25am • plotted by RNeuberry

DESIGN	RLN	F.B. NO.	—	SEC.	6		
DRAWN	ML	PAGE	—	TP.	25 S		
CHECKED	RLN	SCALE	AS NOTED	RANGE	27 E		
CAD#	—	DATE	11/2/2022	DATE	10/12/2023	BY	HS
							REVISED PER SFMMD COMMENTS
							REVISIONS

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 ENG. CERT. OF AUTHOR. No. 3265/SUR. CERT. OF AUTHOR. No. 3270
 ENGINEERING, SURVEYING AND PLANNING
Hanson, Walter & Associates, Inc.

STARBUCKS AT WESTSIDE
WESTSIDE BLVD & US HWY 192

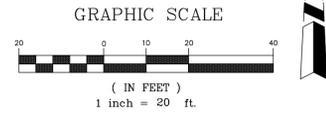
EROSION CONTROL & DEMOLITION
PLAN

SHEET NO.
03 of 12
 JOB NO. 3930-8-23

SDP 23-0167
PD 19-00017

WIRLO BRONSON MEMORIAL HWY

LANDSCAPE & SIGNAGE EASEMENT (SEE DETAIL)

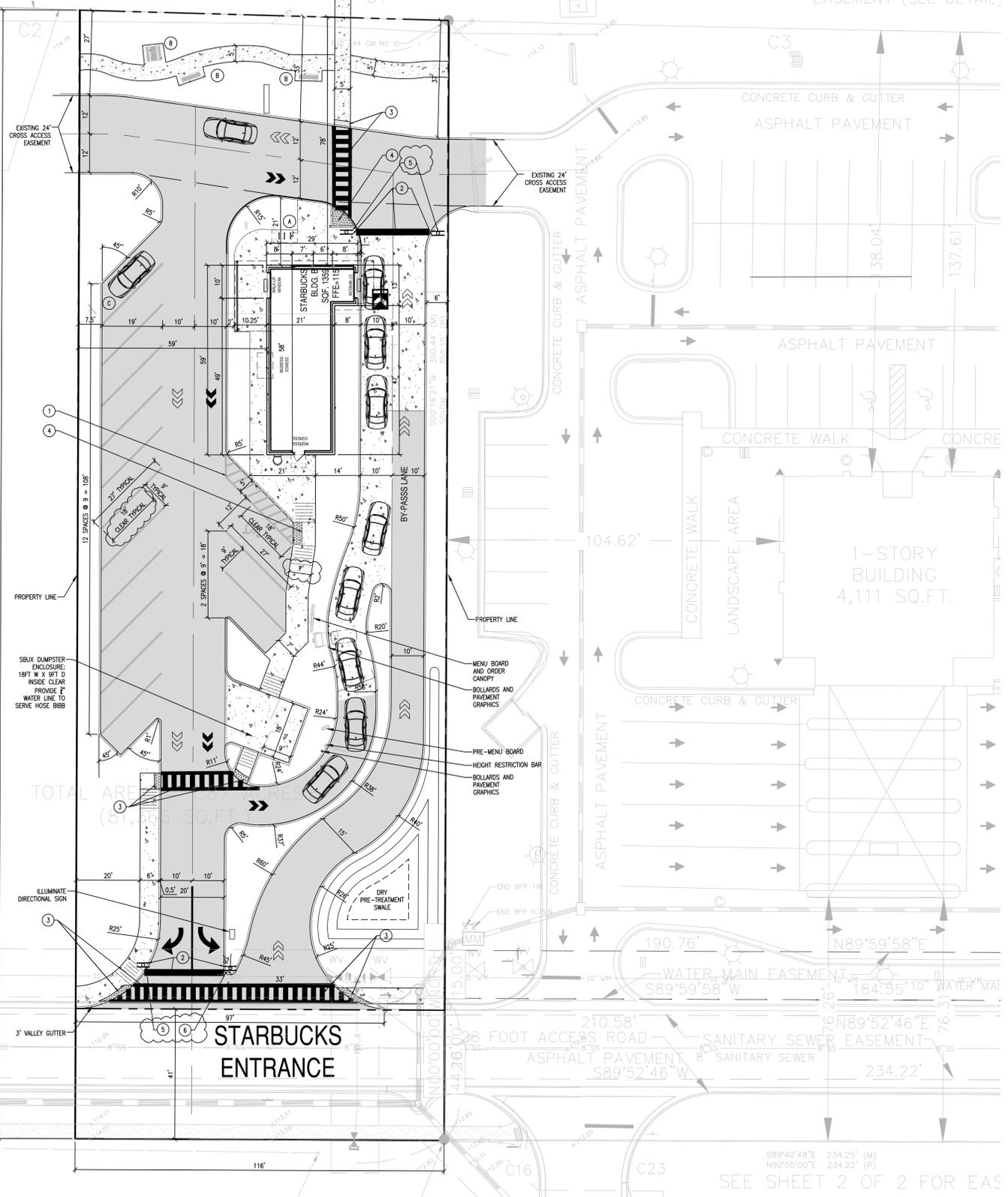


- NOTES:**
- 1.) FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION. IF CONFLICTS OCCUR, CONTACT ENGINEER PRIOR TO CONSTRUCTION.
 - 2.) REFER TO LANDSCAPE/HARDSCAPE PLANS FOR ENHANCEMENT FEATURES AND SIGNS.
 - 3.) ALL CURBS ARE 6" HIGH TRENCH CURB UNLESS OTHERWISE NOTED.
 - 4.) ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
 - 5.) ALL SIDEWALKS ARE 5' WIDE UNLESS OTHERWISE NOTED.
 - 6.) ALL SIGNAGE IS FOR INFORMATIONAL PURPOSES ONLY. ALL SIGNAGE REQUIRES A SEPARATE BUILDING PERMIT SUBMITTAL WITH COUNTY STAMPED APPROVED SDP SITE AND DRAINAGE SHEET. BUFFER WALLS, CANOPIES, ALL SIGNS, MONUMENT SIGNS AND GARBAGE DUMPSTER STRUCTURES REQUIRE A SEPARATE BUILDING PERMIT IN ADDITION TO THE COUNTY STAMPED APPROVED SDP PLANS.
 - 7.) ALL ON-SITE DETECTABLE WARNING SURFACES FOR CURB RAMP ADJACENT TO BUILDING TO MEET THE REQUIREMENTS OF THE CURRENT FLORIDA BUILDING CODE. FOR CURB RAMP THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND DEPTH OF THE RAMP. FOR HAZARDOUS VEHICULAR AREAS AND ALL REMAINING DETECTABLE WARNING DEVICES SHALL BE CONSTRUCTED PER FDOT INDEX #304.
 - 8.) LOCATIONS OF SITE LIGHTING IS APPROXIMATE. FINAL LOCATION TO BE DETERMINED BY DUKE ENERGY.
 - 9.) BUFFER WALLS, CANOPIES, ALL SIGNS, MONUMENT SIGNS AND GARBAGE DUMPSTER STRUCTURES REQUIRE A SEPARATE BUILDING PERMIT IN ADDITION TO THE COUNTY STAMPED APPROVED SDP PLANS.
 - 10.) TRASH DUMPSTER AREA SHALL BE WALLED WITH MATERIALS THAT ARE LIKE KIND TO THE PRINCIPAL BUILDINGS OF THE SITE; IN ACCORDANCE WITH LDC 3.3.
 - 11.) TRASH DUMPSTER SHALL BE ENCLOSED AND HAVE OPAQUE DOORS THE DOORS SHALL REMAIN CLOSE AT ALL TIMES OTHER THAN DURING GARBAGE DISPOSAL OR COLLECTION; IN ACCORDANCE WITH LDC 3.3.
 - 12.) NO CERTIFICATE OF OCCUPANCY (CO) WILL BE ISSUED UNTIL ALL APPLICABLE PERMITS ARE OBTAINED, ALL EASEMENTS RECORDED AND FILED WITH THE COUNTY, AND ALL UTILITIES ARE APPROXIMATE. FINAL LOCATION TO BE DETERMINED BY THE COUNTY ENGINEER.
 - 13.) ALL BUFFER WALL ELEVATIONS MUST COMPLY WITH THE LAND DEVELOPMENT CODE SECTION 10.9.A.P. BUFFER WALLS SHALL BE A MINIMUM OF SIX (6) FEET IN HEIGHT AS MEASURED FROM THE BASE FLOOR ELEVATION OF THE MOST ADJACENT BUILDING, ROAD, OR PROPERTY, WHICHEVER IS GREATER.
 - 14.) REFER TO ARCHITECTURAL PLANS FOR ACTUAL BUILDING DIMENSIONS.
 - 15.) ANY EXISTING POWER POLES, UTILITIES AND ANY OTHER VERTICAL OBJECTS LOCATED WITHIN THE CLEAR ZONE SHALL BE REMOVED PRIOR TO C.O.

- LEGEND (PER LDC 4.7.5)**
- (A) BIKE RACKS
 - (B) SHADED BENCHES AND SIDEWALK WITHIN CIVIC SPACE.
 - (C) DEDICATED CAR POOL / RIDE SHARE SPACE

- LEGEND**
- (1) FOR HANDICAP PARKING DETAILS SEE SHEET 10.
 - (2) STOP SIGN (R1-1) AND 24" WIDE THERMOPLASTIC STOP BAR.
 - (3) REFER TO FDOT INDEX No. 711-001 FOR SPECIAL EMPHASIS THERMOPLASTIC STRIPING CROSSWALK.
 - (4) REFER TO FDOT INDEX No. 522-02 FOR RAMP DETAILS SEE SHEET 11.
 - (5) DO NOT ENTER SIGN (R5-1)
 - (6) KEEP RIGHT (R4-7A)
 - [Pattern] DENOTES PROPOSED CONCRETE SIDEWALK AND CONCRETE PAD.
 - [Pattern] DENOTES PROPOSED PAVEMENT REFER TO TYPICAL SECTIONS FOR PAVEMENT SPECIFICATIONS.
 - ☆ DENOTES LIGHT POLES

R=23028.31' (P)
L=260.24' (P)
Δ=000°38'51" (P)
C.B.=S88.0449E (P)
C.D.=260.24' (P)



SEE SHEET 2 OF 2 FOR EAS

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DESIGN	RLN	F.B. NO.	-
DRAWN	ML	PAGE	-
CHECKED	RLN	SCALE	AS NOTED
CAD#	-	DATE	3/11/2024

SEC.	6
TWP.	25 S
RANGE	27 E

DATE	10/12/2023	BY	HS	REVISIONS	REVISED PER SFWM & TWA COMMENTS
DATE		BY		REVISIONS	

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STARBUCKS AT WESTSIDE
WESTSIDE BLVD & US HWY 192

SITE DIMENSION PLAN

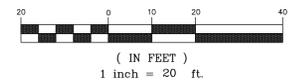
SHEET No
04 of 12
JOB No 3930-8-23

SDP 23-0167
PD 19-00017

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WIRLO BRONSON MEMORIAL HWY

GRAPHIC SCALE



NOTES:

- 1.) ALL CROSSWALKS AND SIDEWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2%.
1.) 1 FOOT FLAT ON BOTH SIDES OF SIDEWALK ALSO MINIMUM 1 FOOT FLAT AREA BEHIND ALL CURBS IN ORDER TO PREVENT EROSION.
2.) MAXIMUM SLOPE FOR HANDICAP PARKING SPACES AND ACCESSIBLE ISLE IS 2%.
3.) MAXIMUM CROSS SLOPES ON ALL CROSSWALKS SHALL BE 2% AND THE MAXIMUM SLOPE FOR RAMPS SHALL BE 1 TO 14.
4.) ALL DISTURBED AREAS SHALL BE SODED AND GRADED TO PROVIDE POSITIVE DRAINAGE. AREAS GRASSED SHALL BE MAINTAINED TO ASSURE ESTABLISHMENT OF GRASS. IF NECESSARY, AFTER 60 DAYS, AREAS WITH DEAD SOO SHALL BE RE-SODED. IF GRASSED AREAS ARE STILL NOT ESTABLISHED WITHIN 90 DAYS, RE-FERTILIZE @ 250 LBS. PER ACRE.
5.) ALL ROADWAYS SHALL BE MAINTAINED/SWEPT DAILY TO REMOVE ANY DIRT TRANSPORTED ONTO EXISTING PAVED ROADS.
6.) ROOF DRAINAGE SHALL COLLECTED BY ROOF DRAIN COLLECTION SYSTEM AND CONNECTED TO ONSITE STORM WATER MANAGEMENT POND, OVER THE SIDEWALK AND ONTO THE PARKING AREA THAT SHALL BE POSITIVELY GRADED TO DRAIN INTO THE ONSITE STORMWATER MANAGEMENT SYSTEM, UNLESS OTHERWISE NOTED.
7.) ALL DRAINAGE PIPE JOINTS SHALL BE FILTER FABRIC WRAPPED PER FDOT #430-001. ALL DRAINAGE PIPE JOINTS NED TO BE FILTER FABRIC WRAPPED REGARDLESS OF THE PIPE MATERIAL.
8.) LOT GRADING SHALL NOT IMPOSE ANY ADDITIONAL RUNOFF ROM ADJACENT PROPERTIES.
9.) OWNER IS RESPONSIBLE FOR THE MAINTENANCE OF THE STORMWATER MANAGEMENT POND, DRAINAGE SWALES, STORM PIPES, AND OVERFLOW STRUCTURES TO ENSURE THE PROPER OPERATION OF THE STORMWATER MANAGEMENT SYSTEM AS PERMITTED BY THE GOVERNING AGENCIES.
10.) STORMWATER PIPE MATERIALS IS REINFORCED CONCRETE PIPE CORRUGATED OR HIGH DENSITY POLYETHYLENE PIPE PER FDOT SPECIFICATIONS. ANY PIPE MATERIAL OTHERWISE CONSTRUCTED SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
11.) FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION. IF CONFLICTS OCCUR, CONTACT ENGINEER PRIOR TO CONSTRUCTION.
12.) REFER TO LANDSCAPE/HARDSCAPE PLANS FOR ENHANCEMENT FEATURES AND SIGNS.
13.) ALL SIGNAGE IS FOR INFORMATIONAL PURPOSES ONLY. ALL SIGNAGE REQUIRES A SEPARATE BUILDING PERMIT SUBMITTAL WITH COUNTY STAMPED APPROVED EIP SITE AND DRAINAGE SHEET.
14.) ALL ONSITE SIDEWALK DETECTABLE WARNING DEVICES SHALL BE CONSTRUCTED PER THE CURRENT FLORIDA BUILDING CODE (IN CONTRAST THOUGH SURFACES SHALL BE 36") AND ALL OFFSITE DETECTABLE WARNING DEVICES SHALL BE CONSTRUCTED PER FDOT INDEX #522-002.
15.) FOR TYPICAL SECTIONS SEE SHEETS 07 FOR DETAILS.
16.) ALL DRAIN BASINS ARE CAST IRON GRATES & CLEANOUT W/SOLID COVER STANDARD (H20) IN GRASSED AND PAVEMENT AREAS UNLESS OTHERWISE NOTED.
17.) MAXIMUM ALLOWABLE RUNNING/LONGITUDINAL SLOPE FOR SIDEWALKS AND CROSSWALKS SHALL BE 1:20 OR 5%.
18.) SEE ARCHITECTURAL PLANS FOR ROOF DRAIN DOWN SPOUT LOCATIONS AND TIE-IN ELEVATIONS.

NOTE
ELEVATIONS SHOWN HEREON
ARE BASED ON THE NORTH
AMERICAN VERTICAL DATUM
OF 1988

LEGEND
EXISTING GRADE
PROPOSED FINISHED GRADE
PROPOSED STORM MANHOLE
PROPOSED STORM INLET
PROPOSED STORM DRAIN
POND CONTROL WATER LEVEL
DIRECTION OF SURFACE FLOW
STRUCTURE NUMBER
UNDERDRAIN & CLEANOUT
JURISDICTIONAL LINE

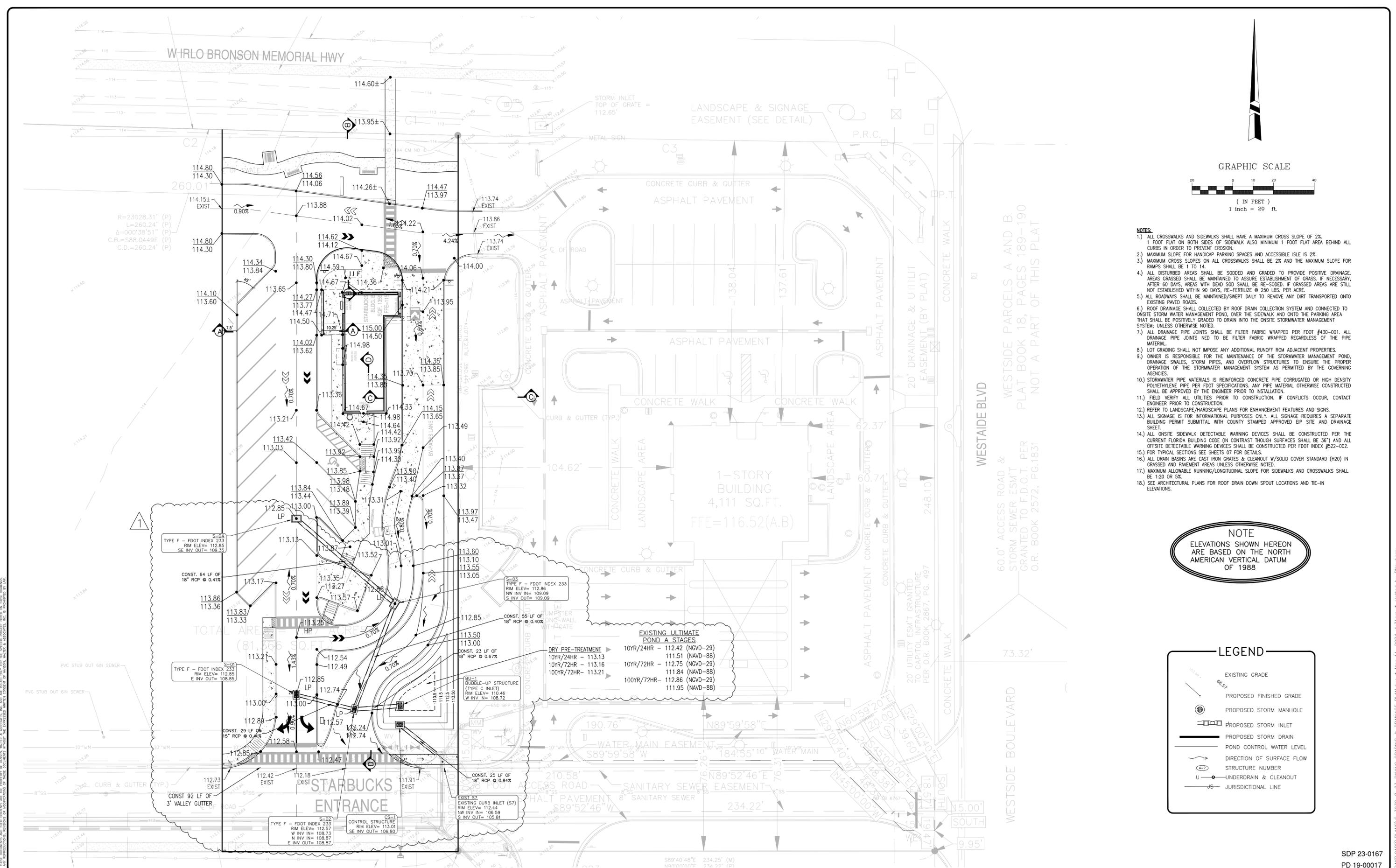


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STARBUCKS AT WESTSIDE WESTSIDE BLVD & US HWY 192

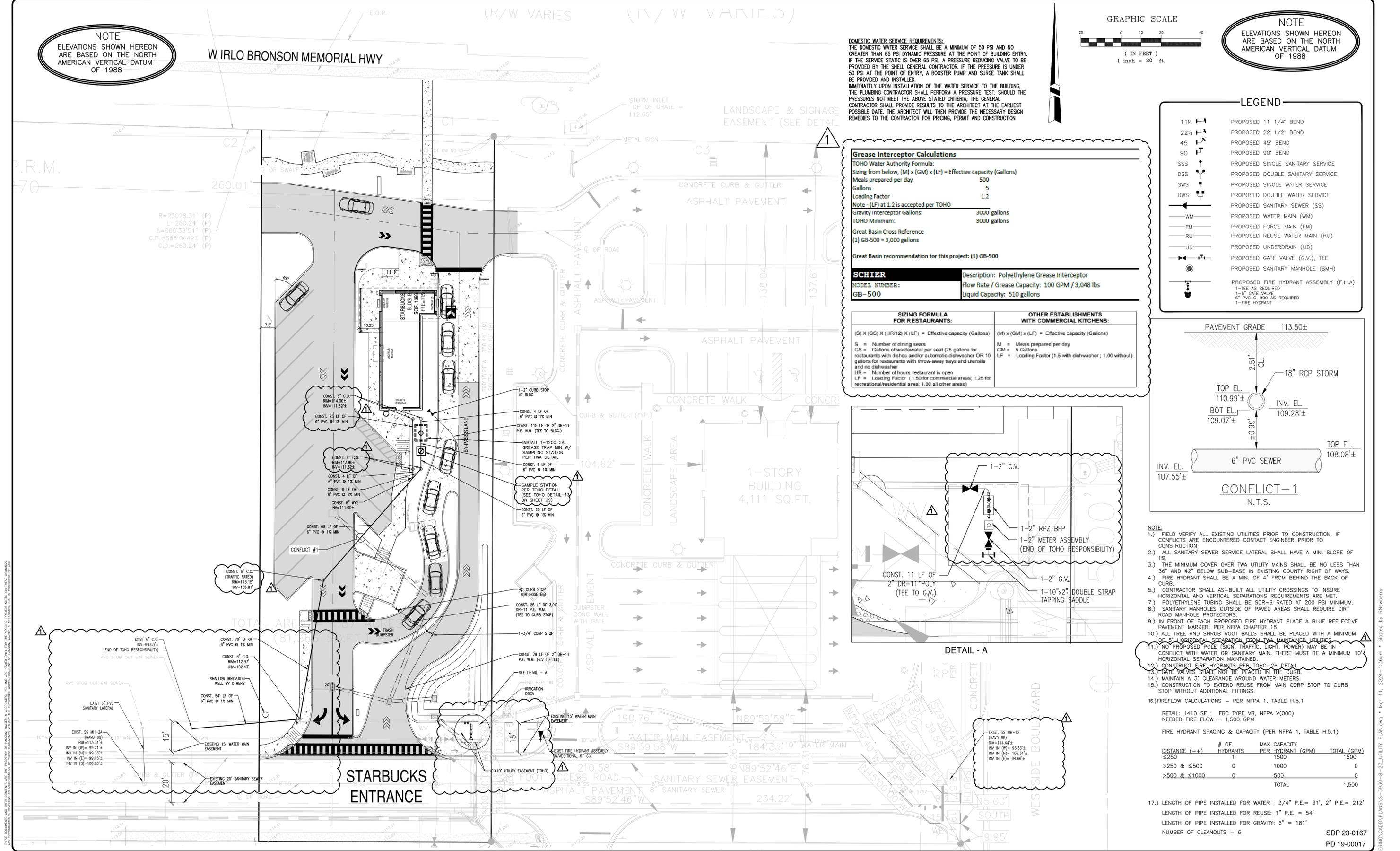
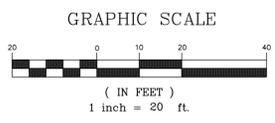
PAVING GRADING & DRAINAGE PLAN

SHEET No 06 of 12, JOB No 3930-8-23

SDP 23-0167 PD 19-00017

NOTE
ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988

NOTE
ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988



Grease Interceptor Calculations
TOHO Water Authority Formula:
Sizing from below, (M) x (GM) x (LF) = Effective capacity (Gallons)
Meals prepared per day: 500
Gallons: 5
Loading Factor: 1.2
Note - (LF) at 1.2 is accepted per TOHO
Gravity Interceptor Gallons: 3000 gallons
TOHO Minimum: 3000 gallons
Great Basin Cross Reference
(1) GB-500 = 3,000 gallons
Great Basin recommendation for this project: (1) GB-500

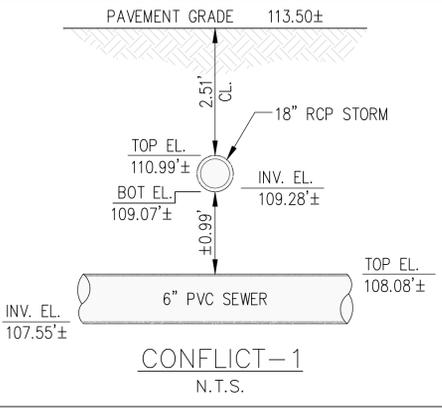
SCHIER Description: Polyethylene Grease Interceptor
MODEL NUMBER: GB-500
Flow Rate / Grease Capacity: 100 GPM / 3,048 lbs
Liquid Capacity: 510 gallons

SIZING FORMULA FOR RESTAURANTS:
(S) X (GS) X (HR/12) X (LF) = Effective capacity (Gallons)
S = Number of dining seats
GS = Gallons of wastewater per seat (25 gallons for restaurants with dishes and/or automatic dishwasher OR 10 gallons for restaurants with throw-away trays and utensils and no dishwasher)
HR = Number of hours restaurant is open
LF = Loading Factor (1.50 for commercial areas; 1.25 for recreational/residential areas; 1.00 all other areas)

OTHER ESTABLISHMENTS WITH COMMERCIAL KITCHENS:
(M) x (GM) x (LF) = Effective capacity (Gallons)
M = Meals prepared per day
GM = 5 Gallons
LF = Loading Factor (1.5 with dishwasher; 1.00 without)

LEGEND

11 1/4"	PROPOSED 11 1/4" BEND
22 1/2"	PROPOSED 22 1/2" BEND
45"	PROPOSED 45" BEND
90"	PROPOSED 90" BEND
SSS	PROPOSED SINGLE SANITARY SERVICE
DSS	PROPOSED DOUBLE SANITARY SERVICE
SWS	PROPOSED SINGLE WATER SERVICE
DWS	PROPOSED DOUBLE WATER SERVICE
SS	PROPOSED SANITARY SEWER (SS)
WM	PROPOSED WATER MAIN (WM)
FM	PROPOSED FORCE MAIN (FM)
RU	PROPOSED REUSE WATER MAIN (RU)
UD	PROPOSED UNDERDRAIN (UD)
G.V.	PROPOSED GATE VALVE (G.V.), TEE
SMH	PROPOSED SANITARY MANHOLE (SMH)
F.H.A.	PROPOSED FIRE HYDRANT ASSEMBLY (F.H.A.)
1-TEE AS REQUIRED	
1-6" GATE VALVE	
6" PVC C-900 AS REQUIRED	
1-FIRE HYDRANT	



- NOTE:**
- FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF CONFLICTS ARE ENCOUNTERED CONTACT ENGINEER PRIOR TO CONSTRUCTION.
 - ALL SANITARY SEWER SERVICE LATERAL SHALL HAVE A MIN. SLOPE OF 1%.
 - THE MINIMUM COVER OVER TWA UTILITY MAINS SHALL BE NO LESS THAN 36" AND 42" BELOW SUB-BASE IN EXISTING COUNTY RIGHT OF WAYS.
 - FIRE HYDRANT SHALL BE A MIN. OF 4' FROM BEHIND THE BACK OF CURB.
 - CONTRACTOR SHALL AS-BUILT ALL UTILITY CROSSINGS TO INSURE HORIZONTAL AND VERTICAL SEPARATIONS REQUIREMENTS ARE MET.
 - POLYETHYLENE TUBING SHALL BE SDR-9 RATED AT 200 PSI MINIMUM. SANITARY MANHOLES OUTSIDE OF PAVED AREAS SHALL REQUIRE DIRT ROAD MANHOLE PROTECTORS.
 - IN FRONT OF EACH PROPOSED FIRE HYDRANT PLACE A BLUE REFLECTIVE PAVEMENT MARKER, PER NFPA CHAPTER 18
 - ALL TREE AND SHRUB ROOT BALLS SHALL BE PLACED WITH A MINIMUM OF 5' HORIZONTAL SEPARATION FROM TWA MAINTAINED UTILITIES
 - NO PROPOSED POLE (SIGN, TRAFFIC, LIGHT, POWER) MAY BE IN CONFLICT WITH WATER OR SANITARY MAIN. THERE MUST BE A MINIMUM 10' HORIZONTAL SEPARATION MAINTAINED.
 - CONSTRUCT FIRE HYDRANTS PER TOHO-26 DETAIL.
 - GATE VALVES SHALL NOT BE PLACED IN THE CURB.
 - MAINTAIN A 3' CLEARANCE AROUND WATER METERS.
 - CONSTRUCTION TO EXTEND REUSE FROM MAIN CORP STOP TO CURB STOP WITHOUT ADDITIONAL FITTINGS.
 - FIREFLOW CALCULATIONS - PER NFPA 1, TABLE H.5.1

RETAIL: 1410 SF ; FBC TYPE VB, NFPA (V000)
NEEDED FIRE FLOW = 1,500 GPM

FIRE HYDRANT SPACING & CAPACITY (PER NFPA 1, TABLE H.5.1)

DISTANCE (+/-)	# OF HYDRANTS	MAX CAPACITY PER HYDRANT (GPM)	TOTAL (GPM)
≤250	1	1500	1500
>250 & ≤500	0	1000	0
>500 & ≤1000	0	500	0
		TOTAL	1,500

- LENGTH OF PIPE INSTALLED FOR WATER : 3/4" P.E. = 31', 2" P.E. = 212'
- LENGTH OF PIPE INSTALLED FOR REUSE: 1" P.E. = 54'
- LENGTH OF PIPE INSTALLED FOR GRAVITY: 6" = 181'
- NUMBER OF CLEANOUTS = 6

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SEC.	6
TWP.	25 S
RANGE	27 E
DATE	10/12/2023
BY	HS
REVISIONS	REVISED PER SFVMD & TWA COMMENTS

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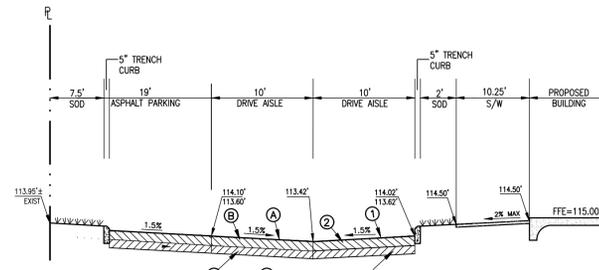
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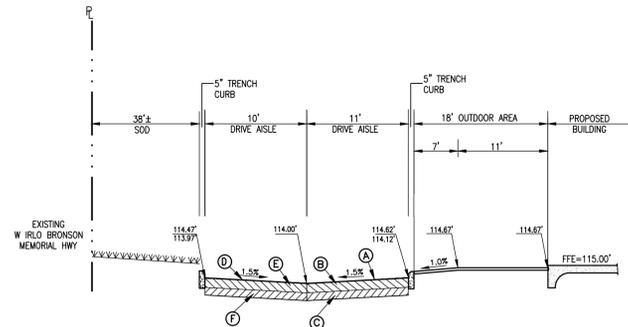
UTILITY PLAN

SHEET NO
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JOB NO 3930-8-23

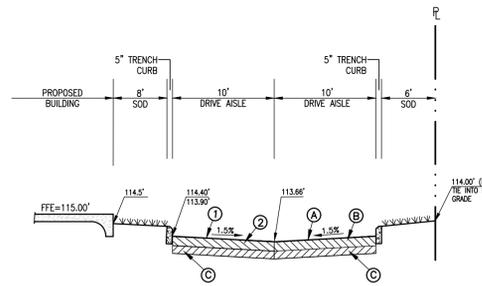
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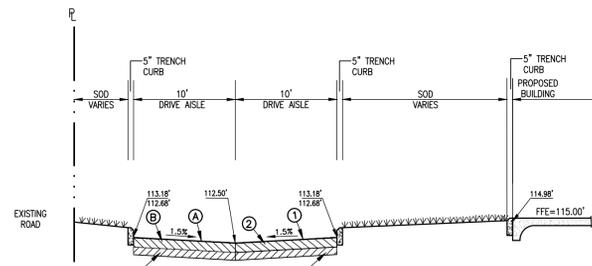
SECTION A-A
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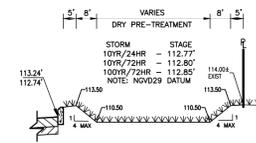
SECTION B-B
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SECTION C-C
N.T.S.



SECTION D-D
N.T.S.



POND SECTION

- HEAVY PAVEMENT SPECIFICATIONS:**
(FOR ALL DRIVE ISLES.)
- A.) MIN. 2" TYPE S-III ASPHALT (SP 9.5) OVER RC-70 OR EQUAL PRIME COAT (2 LIFTS)
 - B.) 8" LIMEROCK (98% MAX. DENSITY, LBR=100) OR 10" FDOT GRADE AGGREGATE BASE (AKA CRUSHED CONCRETE) (98% MAX. DENSITY, LBR=150) COMPACTED TO 100% OF MAX. DENSITY AS DETERMINED BY FM1-1180 AND SHALL BE IN ACCORDANCE WITH FDOT SECTION #204 AND SUPPLIED BY A FDOT & COUNTY APPROVED SOURCE.
 - C.) MIN. 12" STABILIZED SUB-BASE COMPACTED TO MIN. 98% DENSITY OF MOD. PROCTOR AS DETERMINED BY AASHTO-D-1557 OR LBR > 40
- LIGHT PAVEMENT SPECIFICATIONS:**
(FOR ALL PEDESTRIAN TRAFFIC AND CAR PARKING AREAS)
- D.) MIN. 1 1/2" TYPE S-III ASPHALT (SP-9.5) OVER RC-70 OR EQUAL PRIME COAT
 - E.) 6" LIMEROCK (98% MAX. DENSITY, LBR=100) OR 7.5" FDOT GRADE AGGREGATE BASE (AKA CRUSHED CONCRETE) (98% MAX. DENSITY, LBR=150) COMPACTED TO 100% OF MAX. DENSITY AS DETERMINED BY FM1-1180 AND SHALL BE IN ACCORDANCE WITH FDOT SECTION #204 AND SUPPLIED BY A COUNTY APPROVED SOURCE.
 - F.) MIN. 12" STABILIZED SUB-BASE COMPACTED TO MIN. 98% DENSITY OF MOD. PROCTOR AS DETERMINED BY AASHTO-D-1557 OR LBR > 40
- DUMPSTER PAD:**
- 1. 6" PORTLAND CONCRETE MINIMUM 28 DAY COMPRESSING STRENGTH OF 4,000 PSI.
 - 2. 12" WELL DRAINING GRANULAR SUBGRADE, COMPACTED TO 98% OF THE MATERIAL'S AAHTO T-180 MAXIMUM DRY DENSITY.

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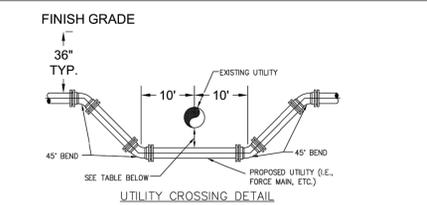
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TYPICAL SECTIONS

SHEET NO
08 of 12
JOB NO 3930-8-23

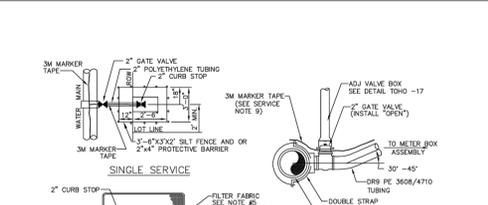
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NOTES:
 1. RESTRAINTS SHALL BE PER THE THURST RESTRAINT DETAIL TOHO-19 AND THE RESTRAINED JOINT TABLE TOHO-20.
 2. FOR DEFLECTIONS LONGER THAN 20 FT. LENGTH AND MORE THAN 4 FT. DEPTH, USE HOPE PIPE.

PROPOSED UTILITY	MIN. HORIZONTAL & VERTICAL SEPARATION REQUIREMENTS		MIN. HORIZONTAL & VERTICAL SEPARATION REQUIREMENTS	
	HORIZ.	VERT.	HORIZ.	VERT.
POTABLE WATER	12"	6"	3"	12"
RECLAIMED WATER	3"	12"	6"	3"
SANITARY SEWER	6" ALLOWED 10" PREFERRED	12"	3"	12"

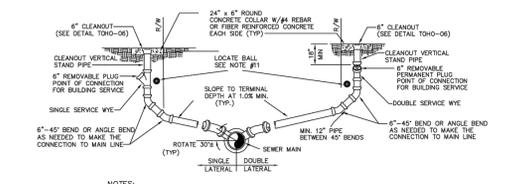
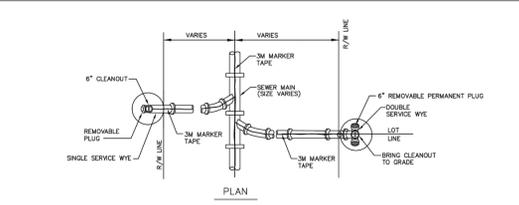
- THIS TABLE REPRESENTS THE MINIMUM SEPARATION REQUIREMENTS AS DESCRIBED IN F.D.P.R. RULES OF THE FLORIDA ADMINISTRATION CODE (F.A.C.) AND TOHO'S SEPARATION REQUIREMENTS TO FACILITATE FUTURE MAINTENANCE. THESE REQUIREMENTS SHALL APPLY TO PROPOSED UTILITY LINES AND EXISTING OR PROPOSED UTILITY LINES.
- RECLAIMED WATER IS DEFINED AS UNRESTRICTED PUBLIC REUSE WATER AS DEFINED BY F.A.C. 17-40. OTHER TYPES OF RECLAIMED WATER ARE CONSIDERED RAW SERVICE AND SEPARATIONS LISTED FOR SANITARY SEWER SHALL APPLY.
- ALL SEPARATION DISTANCES ARE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE UNLESS OTHERWISE SPECIFIED.
- ACCEPTABLE VARIANCES:
 - AT TOHO'S DISCRETION, THE HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY SANITARY SEWER MAINS MAY BE REDUCED TO 6" WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST 6" ABOVE THE TOP OF THE SEWER MAIN.
 - AT TOHO'S DISCRETION, THE HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND STORM SEWER MAINS OR GRAVITY SEWER MAINS MAY BE REDUCED TO 6" IF THE WATER MAIN IS LOCATED ABOVE THE STORM SEWER OR GRAVITY SEWER MAINS.
- WHERE POTABLE WATER AND SANITARY SEWER MAINS OR RECLAIM WATER MAINS CROSS, THE WATER MAIN SHALL BE CENTERED ON THE CROSSING. ALL WATER MAIN JOINTS SHALL BE AT LEAST 6" AWAY FROM ALL SEWER OR RECLAIM JOINTS AND AT LEAST 3" AWAY FROM ALL STORM SEWER JOINTS.
- ALL WATER MAINS SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SEWER OR STORM MANHOLE, STRUCTURE, OR PIPE.
- IF 36" MINIMUM DEPTH OF COVER IS NOT MAINTAINED, SPECIAL PROTECTION OR PIPE MATERIAL UPGRADE MAY BE REQUIRED AT THE DIRECTION OF TOHO.



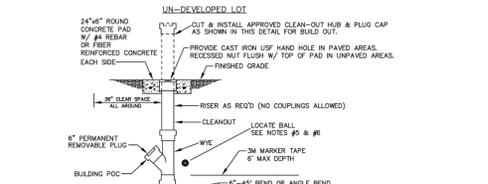
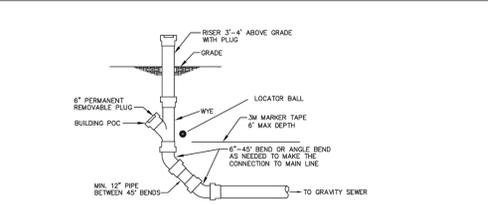
- SERVICE NOTES:**
- GATE VALVES SHALL BE RESILIENT WEDGE, CAST IRON, EPOXY COATED, THREADED WITH 2" OPERATING NUT.
 - CURB STOPS SHALL BE LOCKING TYPE, STRAIGHT BALL VALVE, NO LEAD BRASS. 1.5" AND 2" SHALL BE 2 BALL FLANGE METER CONNECTION. 1" AND 1.5" SHALL BE SWIVEL METER NOT CONNECTION.
 - METER COUPLINGS SHALL NOT BE USED.
 - NO CURB STOPS OF BRASS SHALL BE INSTALLED UNDER AN INTERFERING SURFACE.
 - SERVICE TAPS SHALL BE A MINIMUM OF 18" FROM JOINTS, FITTINGS, OR OTHER TAPS ON THE MAIN.
 - SERVICE TAP SHALL NOT TERMINATE UNDER AN INTERFERING SURFACE OR UNDER ANY STRUCTURE.
 - SERVICE TAP SHALL BE POLYETHYLENE DRO. 200PSI. BLUE FOR POTABLE WATER, PURPLE FOR REUSE WATER.
 - SERVICE TAP SHALL BE POLYETHYLENE DRO. 200PSI. BLUE FOR POTABLE WATER, PURPLE FOR REUSE WATER.
 - PLACE APPROX 3M MARKER TAPE TO THE CURB STOP TO THE MARKER TAPE AT THE MAIN.
 - SERVICE LINES SHALL BE MARKED IN THE CURB OR SIDEWALK IMMEDIATELY ADJACENT TO PARKING SPACES WITH A 3" TALL "M" FOR WATER OR A 3" TALL "S" FOR SEWER.
 - THIS DETAIL IS INTENDED FOR SINGLE OR DOUBLE SERVICE CONNECTIONS ONLY. FOR GROUPS OF 3-8 METERS REFER TO TOHO-030, TOHO-031, AND TOHO-032.

METER AND METER BOX PLACEMENT NOTES:

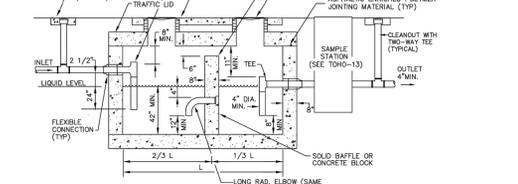
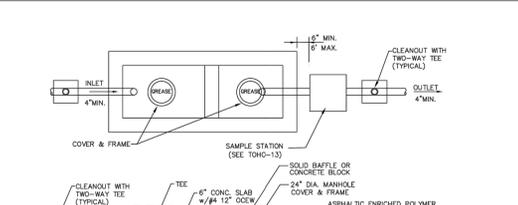
- METERS 2" TO 4" ARE PAID FOR BY THE DEVELOPER AND INSTALLED BY TOHO.
- LONGITUDINAL OR DIAGONAL CUTS REQUIRE OVERLAY/RESURFACING OF THE COMPLETE WIDTH OF THE ROAD.
- APPROVED BACKFLOW DEVICES ARE REQUIRED ON ALL COMMERCIAL SERVICES AND ARE THE RESPONSIBILITY OF THE CONTRACTOR AND/OR DEVELOPER.
- APPROVED BACKFLOW DEVICES SHALL BE INSTALLED A MINIMUM OF 12" ABOVE THE 100 YEAR FLOOD LEVEL.
- APPROVED BACKFLOW DEVICES SHALL BE INSTALLED A MINIMUM OF 12" ABOVE THE HIGHEST OUTLET.
- PLACEMENT OF THE METER BOX EXTENDING 1" IN ALL DIRECTIONS. WRAP THE EXCESS AROUND THE SIDES OF THE BOX AND TAPE TIGHT TO THE TOHO PRECASTS.
- NO PLANTINGS, STRUCTURES, OR OTHER UTILITIES, INCLUDING BUT NOT LIMITED TO TELECOM PRECASTS, ELECTRICAL TRANSFORMERS OR POLES, ETC. SHALL BE INSTALLED WITHIN 36" OF ANY SIDE OF THE METER BOX.
- BUILDER SHALL MAKE FINAL HORIZONTAL AND VERTICAL ADJUSTMENTS TO METER ASSEMBLY AND BOX.
- METER SHALL BE APPROXIMATELY 7" BELOW FINISHED GRADE AND CENTERED IN THE BOX.
- SINGLE SERVICE BOX SHALL BE PERPENDICULAR TO THE CURB OR SIDEWALK.
- DOUBLE SERVICE BOXES SHALL BE PARALLEL TO THE CURB OR SIDEWALK.
- TOP OF METER BOX SHALL BE FLUSH WITH FINISH GRADE.
- METER BOX LID SHALL BE SOLID PLASTIC WITH NO METAL ACCESS DOOR, BLACK FOR WATER, PURPLE FOR SEWER.



- NOTES:**
- ALL RESIDENTIAL AND COMMERCIAL LATERALS SHALL BE 6".
 - THE 6" RISE INDICATES THE END OF TOHO'S MAINTENANCE RESPONSIBILITY.
 - THE SINGLE 6" TOHO CLEANOUT SHALL BE PLACED ON THE LOT LINE AND WITHIN 24" OF THE 6" RISE.
 - NO CLEANOUTS SHALL BE PLACED WITHIN A RIGHT-OF-WAY OR IN A SIDEWALK.
 - LATERALS SHALL NOT EXCEED 100' FROM THE MAIN TO TOHO'S 2" TO 4" TOHO CLEANOUTS.
 - CONNECTIONS TO THE TOHO CLEANOUTS VERTICAL STANDPIPE ARE NOT PERMITTED.
 - FITTINGS USED SHALL NOT EXCEED AN 18" OF 1/2" OF 1/2" REQUIRED BETWEEN ALL FITTINGS.
 - THE SERVICE WIRE ON THE 6" VERTICAL STANDPIPE SHALL BE BETWEEN 18" AND 48" FROM FINISHED GRADE.
 - NO PLANTINGS, STRUCTURES, OR OTHER UTILITIES, INCLUDING BUT NOT LIMITED TO TELECOM PRECASTS, ELECTRICAL TRANSFORMERS OR POLES, OR OTHER CLEANOUTS USED FOR TESTING PURPOSES SHALL BE INSTALLED WITHIN 36" OF ANY SIDE OF THE TOHO CLEANOUT.
 - PLACE TOHO APPROVED 3M MARKER TAPE FROM THE MAIN TO THE SINGLE OR DOUBLE SERVICE WYE.
 - IF MARKER IS BURIED DEEPER THAN 6".
 - IF MARKER IS NOT INSTALLED MORE THAN 6" ABOVE A LATERAL DUE TO DEPTH OF THE PIPES, ADDITIONAL TOHO APPROVED WARNING TAPE SHALL BE REQUIRED.
 - PROVIDE TOHO APPROVED LOCATE BALLS AT ALL SINGLE AND DOUBLE SERVICE WYES.
 - SEE SANITARY SEWER LATERAL DETAIL TOHO-06 FOR ADDITIONAL NOTES AND REQUIREMENTS.



- NOTES:**
- SITE CONTRACTOR SHALL LEAVE THE CLEANOUT RISER 3" - 4" ABOVE FINISHED GRADE AT LOT BUILD OUT. THE RISER SHALL BE CUT AND CAPPED WITH A CLEANOUT HUB AND CAP INSTALLED IN A CONCRETE PAD SET FLUSH WITH FINISH GRADE.
 - CLEANOUT CAPS SHALL HAVE A RECESSED RIB TO PROVIDE SPACE WHERE THE LATERAL CROSSES THE CURB OR SIDEWALK.
 - LATERALS SHALL BE MARKED WITH A 3" HIGH "S" IN THE CURB OR SIDEWALK ADJACENT TO A PARKING SPACE.
 - NO PLANTINGS, STRUCTURES, OR OTHER UTILITIES, INCLUDING BUT NOT LIMITED TO TELECOM PRECASTS, ELECTRICAL TRANSFORMERS OR POLES, OR OTHER CLEANOUTS USED FOR TESTING PURPOSES SHALL BE INSTALLED WITHIN 36" OF ANY SIDE OF THE TOHO CLEANOUT.
 - IF MARKER IS NOT INSTALLED MORE THAN 6" ABOVE A LATERAL DUE TO DEPTH OF THE PIPES, ADDITIONAL TOHO APPROVED WARNING TAPE SHALL BE REQUIRED.
 - PROVIDE TOHO APPROVED LOCATE BALLS AT ALL SINGLE AND DOUBLE SERVICE WYES.
 - SEE SANITARY SEWER LATERAL DETAIL TOHO-05 FOR ADDITIONAL NOTES AND REQUIREMENTS.



- NOTES:**
- STRUCTURE SHALL CONFORM WITH F.D.O.T. DESIGN STANDARDS.
 - PROVIDE FOR A MINIMUM H-20 LOADING.
 - CAST-IN-PLACE STRUCTURES SHALL BE DESIGNED BY A FLORIDA LICENSED ENGINEER.
 - PRECAST STRUCTURES SHALL CONFORM TO ASTM C478.
 - GREASE TRAP SHALL BE 2 COMPARTMENT TYPE WITH 1/3-2/3 SPLIT.
 - LIDS SHALL BE LABELED "GREASE".
 - INSTALLATION SHALL BE IN ACCORDANCE WITH STANDARD PLUMBING CODES.
 - INLET AND OUTLET PIPING REQUIRE A TWO-WAY CLEANOUT TEE.
 - CLEANOUTS SHALL BE PROVIDED BETWEEN ALL STRUCTURES WHERE MULTIPLE INTERCEPTORS ARE INSTALLED IN SERIES.
 - SAMPLE STATION SHALL BE INSTALLED DOWNSTREAM OF THE FINAL INTERCEPTOR WHERE MULTIPLE INTERCEPTORS ARE INSTALLED.
 - A-LOK CONNECTORS SHALL BE GROUDED FROM SPRINGLINE OF PIPE DOWN ONLY.

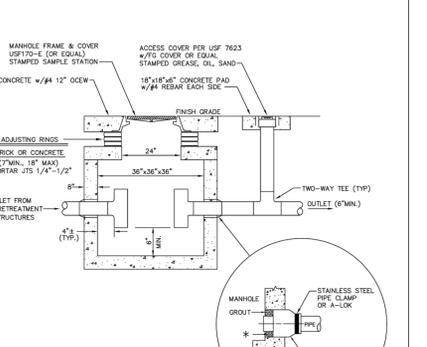
PIPING CLEARANCES TOHO-16

TYPICAL COMMERCIAL WATER SERVICE TOHO-02

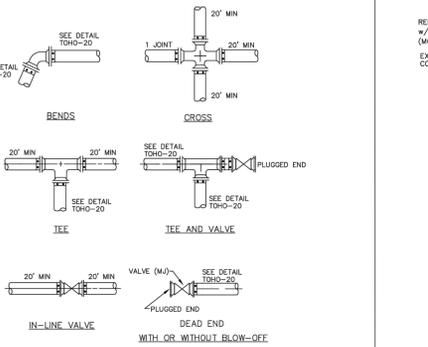
SANITARY SEWER LATERAL TOHO-05

SANITARY CLEANOUT TOHO-06

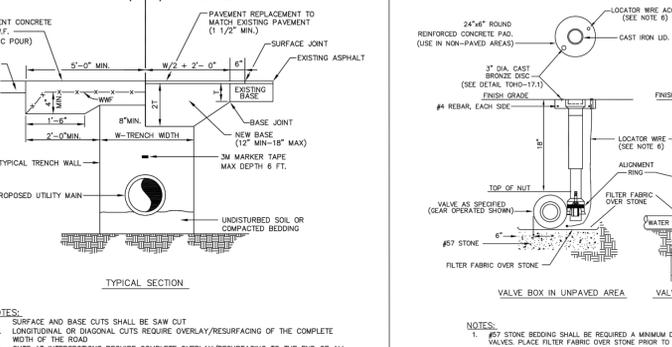
GREASE INTERCEPTOR TOHO-12



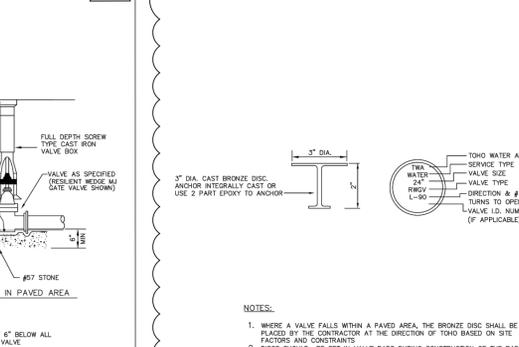
- NOTES:**
- STRUCTURE SHALL CONFORM WITH F.D.O.T. DESIGN STANDARDS.
 - PROVIDE FOR A MINIMUM H-20 LOADING.
 - CAST-IN-PLACE STRUCTURES SHALL BE DESIGNED BY A FLORIDA LICENSED ENGINEER.
 - PRECAST STRUCTURES SHALL CONFORM TO ASTM C478.
 - LIDS SHALL BE LABELED "SAMPLE STATION".
 - INSTALLATION SHALL BE IN ACCORDANCE WITH STANDARD PLUMBING CODES.
 - INLET AND OUTLET PIPING REQUIRE A TWO-WAY CLEANOUT TEE.
 - CLEANOUTS SHALL BE PROVIDED BETWEEN ALL STRUCTURES WHERE MULTIPLE INTERCEPTORS ARE INSTALLED IN SERIES.
 - SAMPLE STATION SHALL BE INSTALLED DOWNSTREAM OF THE FINAL INTERCEPTOR WHERE MULTIPLE INTERCEPTORS ARE INSTALLED.
 - A-LOK CONNECTORS SHALL BE GROUDED FROM SPRINGLINE OF PIPE DOWN ONLY.



- NOTES:**
- MECHANICAL JOINT RESTRAINT SYSTEMS SHALL BE REQUIRED. THRUST BLOCKS WILL BE CAST IN PLACE ON A CONCRETE BASE.
 - DETERMINED BY TOHO.
 - ALL MECHANICAL JOINT FITTINGS (TEES, BENDS, CROSS, ELBOWS, ETC.) AND VALVES SHALL BE RESTRAINED.
 - RESTRAIN THESE VALVES.



- NOTES:**
- SURFACE AND BASE CUTS SHALL BE SAW CUT.
 - LONGITUDINAL OR DIAGONAL CUTS REQUIRE OVERLAY/RESURFACING OF THE COMPLETE WIDTH OF THE ROAD.
 - CUTS AT INTERSECTIONS REQUIRE COMPLETE OVERLAY/RESURFACING TO THE END OF ALL RETURN TURNOUTS AND/OR 10' BEYOND THE CUTS, WHICHEVER IS GREATER.
 - CUTS THROUGH TURNOUTS AND CUL-DE-SACS REQUIRE COMPLETE OVERLAY/RESURFACING AND COMPACTION OF BACKFILL SHALL BE 95% OF ASTM D 1557.
 - USE APPROVED 3M MARKER TAPE OR EQUAL DIRECTLY ABOVE THE CENTERLINE OF THE CUT.
 - IF TAPES SHALL BE 12"-18" ABOVE THE PIPE.
 - TAPES SHALL NOT EXCEED 6" DEPTH.
 - IF TOP OF PIPE IS GREATER THAN 7" DEEP, AN ADDITIONAL LAYER OF WARNING TAPE SHALL BE PROVIDED 12"-18" OVER THE PIPE AND THE MARKER TAPE SHALL BE PLACED AT A DEPTH OF 4'-6" BELOW FINISHED GRADE.
 - SLOPES, BENCHING, OR SHORTING SHALL BE PER OSHA REQUIREMENTS.
 - THIS DETAIL APPLIES TO OPEN CUTS NOT LOCATED WITHIN PUBLIC RIGHTS-OF-WAY OR OTHERWISE NOT DICTATED BY ANOTHER AUTHORITY HAVING JURISDICTION.



- NOTES:**
- WHERE A VALVE FALLS WITHIN A PAVED AREA, THE BRONZE DISC SHALL BE PLACED BY THE CONTRACTOR AT THE DIRECTION OF TOHO BASED ON SITE FACTORS AND CONSTRAINTS.
 - DISCS SHOULD BE SET IN VALVE PADS DURING CONSTRUCTION OF THE PAD.
 - IF EPOXY IS USED TO SET A DISC, THE ANCHOR MUST REMAIN AND A HOLE SHALL BE DRILLED IN THE PAD AND FILLED WITH EPOXY PRIOR TO SETTING THE DISC.
 - IN UNPAVED AREAS USE 2" SOHO PVC FEMALE ADAPTER COUPLING AND 2" BRASS PLUG W/ RECESSED NUT SET IN THE VALVE PAD.
 - PAVED AREAS TERMINATE, THE LOCATE WIRE INSIDE THE TOP PORTION OF THE VALVE BOX.
 - PROVIDE A MINIMUM OF 12" OF EXTRA WIRE ABOVE FINISHED GRADE.
 - PRIVATELY MAINTAINED WATER SYSTEMS SHALL HAVE "PRIVATE" STAMPED ON THE BRONZE DISC.
 - DEDICATED FIRE LINES SHALL HAVE "FIRE" STAMPED ON THE BRONZE DISC AND THE VALVE COVER SHALL BE PAINTED RED.

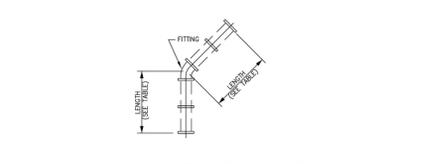
U.S. FOUNDRY & MANUFACTURING CORPORATION

USF 7620 CLEAN OUT RING AND FD COVER

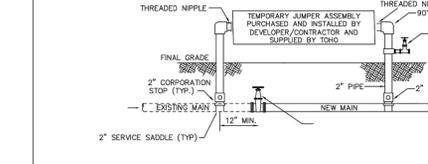
USF 7621 REVERSIBLE HANDHOLE RING AND FE COVER

USF 7622 SLAB TYPE CLEANOUT RING AND FF COVER

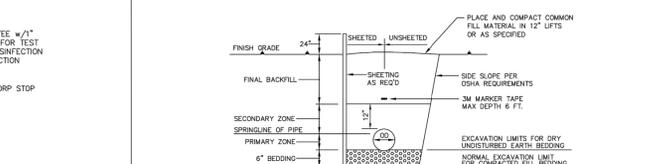
ALWAYS SPECIFY USF NUMBER



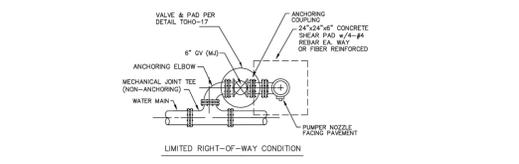
PIPE DIAMETER (INCHES)	BENDS										OTHER FITTINGS												
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6"	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'	20'
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12"	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'
14"	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'
18"	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'	40'
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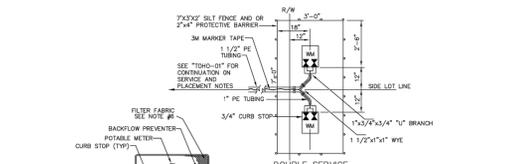
- NOTES:**
- A TEMPORARY JUMPER CONNECTION IS REQUIRED AT ALL CONNECTIONS BETWEEN EXISTING ACTIVE POTABLE AND REUSE WATER MAINS AND PROPOSED WATER AND REUSE MAIN IMPROVEMENTS.
 - THE DETAIL ABOVE IS TO BE USED FOR PIGGING, FLUSHING, AND PULLING SAMPLES FROM NEW WATER MAINS UNITS, SUCH THAT AS EPOXY HAS CURED, THE WATER MAIN FOR USE OR TOHO HAS CLEARED THE POTABLE OR REUSE MAIN FOR USE. IF NO TIE PERMIT IS REQUIRED, THE JUMPER MUST REMAIN ON AND THE VALVE BETWEEN THE OLD AND NEW SYSTEMS MUST REMAIN CLOSED.
 - THE DEVELOPER AND/OR CONTRACTOR WILL PURCHASE THE TEMPORARY JUMPER ASSEMBLY FROM TOHO. ONLY JUMPERS PURCHASED DIRECTLY FROM TOHO ARE ALLOWED.
 - THE INSTALLATION AND MAINTENANCE OF THE TEMPORARY JUMPER IS THE RESPONSIBILITY OF THE DEVELOPER AND/OR THE CONTRACTOR.
 - 2" TAPES AND SERVICES UPSTREAM AND DOWNSTREAM OF THE JUMPER ASSEMBLY SHALL BE PER DETAIL TOHO-01.
 - GALVANIZED JUMPERS AND/OR FITTINGS ARE NOT ALLOWED.
 - ABANDONED JUMPER CONNECTIONS MUST BE ILLUSTRATED ON THE FINAL RECORD DRAWINGS.



- NOTES:**
- BEDDING SHALL BE #57 STONE IF PIPE BEDDING IS WELDING.
 - PRIMARY & SECONDARY ZONES SHALL BE INDIVIDUALLY COMPACTED LAYERS OF CLEAN FILL.
 - COMPACTION OF BACKFILL BENEATH PAVEMENT SHALL BE 95% OF ASTM D 1557. ALL OTHER AREAS SHALL BE 90% OF ASTM D 1557 UNLESS OTHERWISE REQUIRED BY AN AUTHORITY HAVING JURISDICTION.
 - PLACE APPROVED 3M MARKER TAPE OR EQUAL DIRECTLY ABOVE THE CENTERLINE OF THE PIPE.
 - TAPES SHALL BE 12"-18" ABOVE THE PIPE.
 - TAPES SHALL NOT EXCEED 6" DEPTH.
 - IF TOP OF PIPE IS GREATER THAN 7" DEEP, AN ADDITIONAL LAYER OF WARNING TAPE SHALL BE PROVIDED 12"-18" OVER THE PIPE AND THE MARKER TAPE SHALL BE PLACED AT A DEPTH OF 4'-6" BELOW FINISHED GRADE.
 - SLOPES, BENCHING, OR SHORTING SHALL BE PER OSHA REQUIREMENTS.



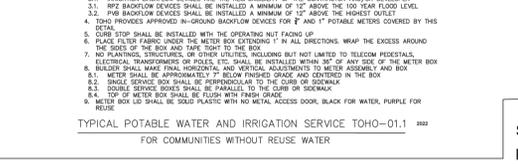
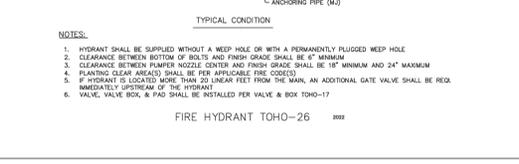
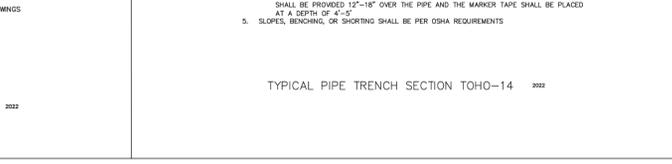
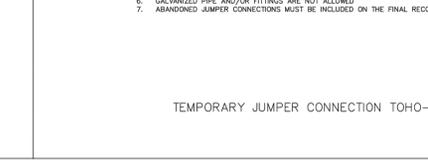
- NOTES:**
- HYDRANT SHALL BE SUPPLIED WITHOUT A WEEP HOLE OR WITH A PERMANENTLY PLUGGED WEEP HOLE.
 - CLEARANCE BETWEEN BOTTOM OF RISER AND FINISH GRADE SHALL BE 6" MINIMUM.
 - CLEARANCE BETWEEN RISER NOZZLE CENTER AND FINISH GRADE SHALL BE 18" MINIMUM AND 24" MAXIMUM.
 - PLANTING CLEAR AREAS SHALL BE PER APPLICABLE TREE CODES.
 - IF HYDRANT IS LOCATED NEAR, THAN 20' LINEAR FEET FROM THE MAIN, AN ADDITIONAL GATE VALVE SHALL BE REQUIRED IMMEDIATELY UPSTREAM OF THE HYDRANT.
 - VALVE, VALVE BOX, & PAD SHALL BE INSTALLED PER VALVE & BOX TOHO-17.



- SERVICE NOTES:**
- REFER TO TYPICAL RESIDENTIAL WATER SERVICE TOHO-08 FOR SERVICE NOTES.
 - REFER TO TYPICAL COMMERCIAL WATER SERVICE TOHO-02 FOR SERVICE NOTES.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEVELOPER AND INSTALLED BY TOHO.
 - LONGITUDINAL OR DIAGONAL CUTS REQUIRE OVERLAY/RESURFACING OF THE COMPLETE WIDTH OF THE ROAD.
 - APPROVED BACKFLOW DEVICES ARE REQUIRED ON ALL COMMERCIAL SERVICES COVERED BY THIS DETAIL.
 - APPROVED BACKFLOW DEVICES SHALL BE INSTALLED A MINIMUM OF 12" ABOVE THE 100 YEAR FLOOD LEVEL.
 - IF TOP OF PIPE IS GREATER THAN 7" DEEP, AN ADDITIONAL LAYER OF WARNING TAPE SHALL BE PROVIDED 12"-18" OVER THE PIPE AND THE MARKER TAPE SHALL BE PLACED AT A DEPTH OF 4'-6" BELOW FINISHED GRADE.
 - TOHO APPROVED APPROVED IN-GROUND BACKFLOW DEVICES FOR 2" & 1" POTABLE SERVICES COVERED BY THIS DETAIL.
 - CURB STOP SHALL BE INSTALLED WITH THE OPERATING NUT FACING UP.
 - PLACES FILTER FABRIC UNDER THE METER BOX EXTENDING 1" IN ALL DIRECTIONS. WRAP THE EXCESS AROUND THE SIDES OF THE BOX AND TAPE TIGHT TO THE TOHO PRECASTS.
 - NO PLANTINGS, STRUCTURES, OR OTHER UTILITIES, INCLUDING BUT NOT LIMITED TO TELECOM PRECASTS, ELECTRICAL TRANSFORMERS OR POLES, OR OTHER CLEANOUTS USED FOR TESTING PURPOSES SHALL BE INSTALLED WITHIN 36" OF ANY SIDE OF THE TOHO CLEANOUT.
 - BUILDER SHALL MAKE FINAL HORIZONTAL AND VERTICAL ADJUSTMENTS TO METER ASSEMBLY AND BOX.
 - METER SHALL BE APPROXIMATELY 7" BELOW FINISHED GRADE AND CENTERED IN THE BOX.
 - SINGLE SERVICE BOX SHALL BE PERPENDICULAR TO THE CURB OR SIDEWALK.
 - DOUBLE SERVICE BOXES SHALL BE PARALLEL TO THE CURB OR SIDEWALK.
 - TOP OF METER BOX SHALL BE FLUSH WITH FINISH GRADE.
 - METER BOX LID SHALL BE SOLID PLASTIC WITH NO METAL ACCESS DOOR, BLACK FOR WATER, PURPLE FOR SEWER.

RESTRAINED JOINT TABLE TOHO-20

PIPE DIAMETER (INCHES)	BENDS										OTHER FITTINGS												
	90°	45°	22 1/2°	11 1/4°	VERTICAL BENDS	90°	45°	22 1/2°	11 1/4°	VERTICAL BENDS	90°	45°	22 1/2°	11 1/4°	VERTICAL BENDS	90°	45°	22 1/2°	11 1/4°	VERTICAL BENDS			
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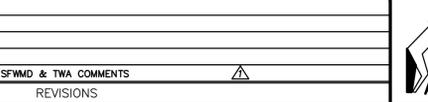


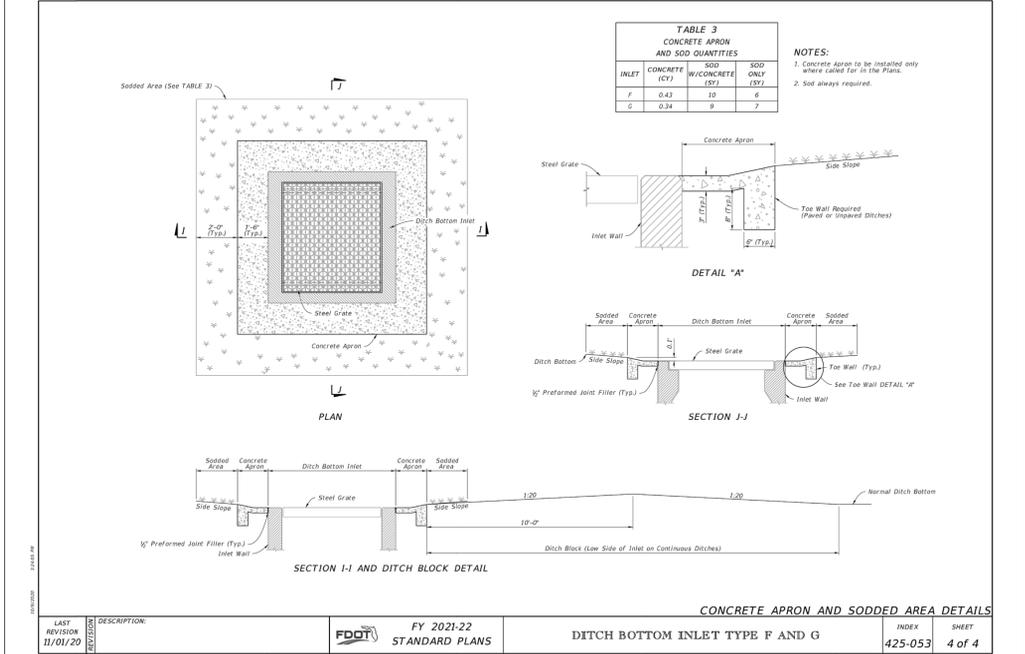
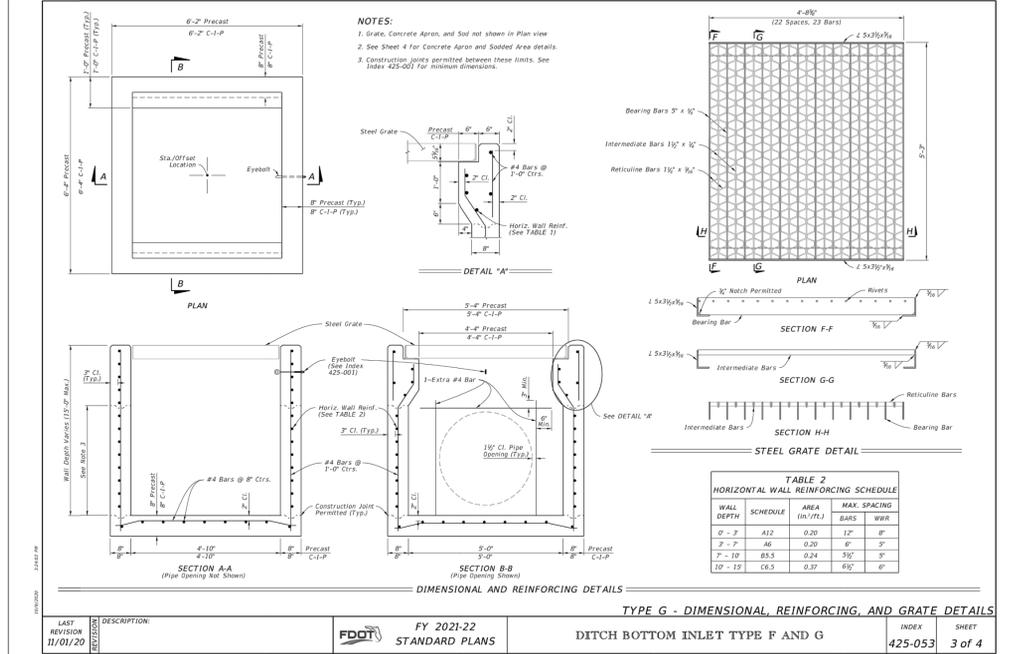
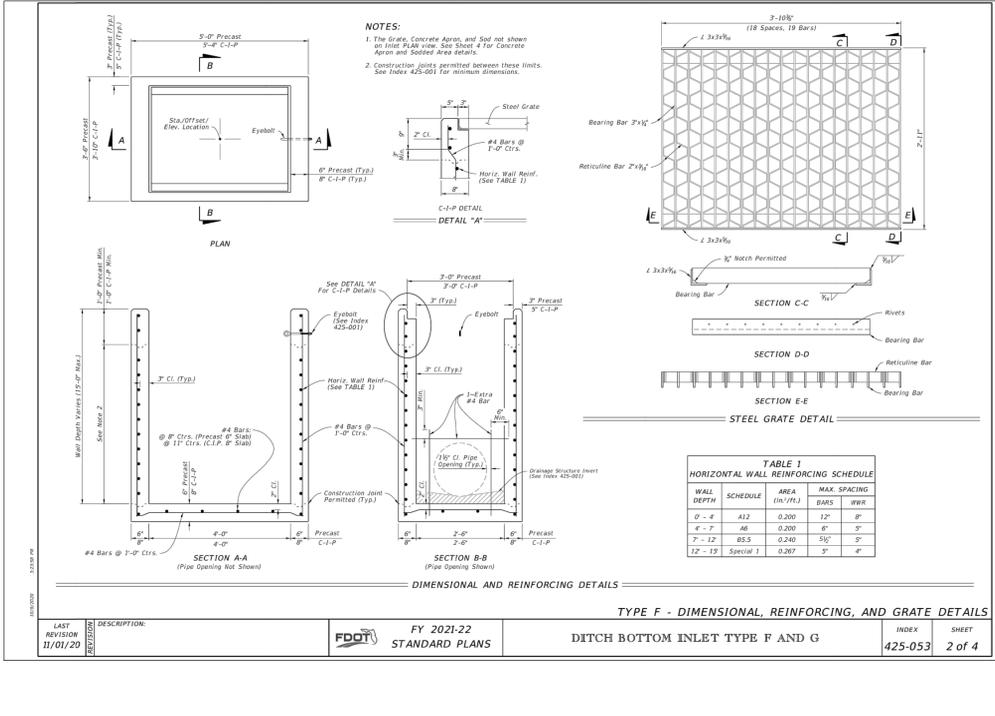
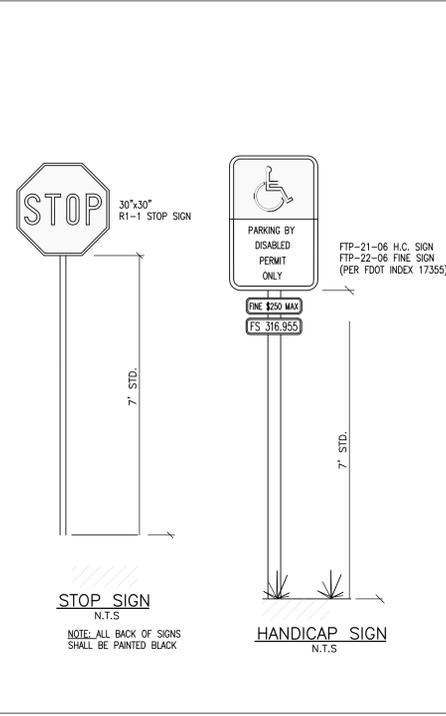
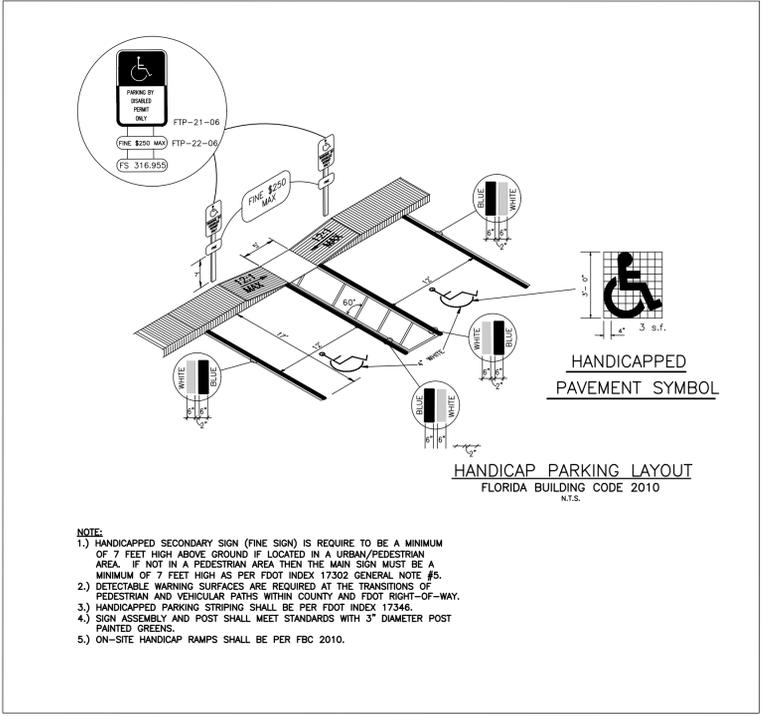
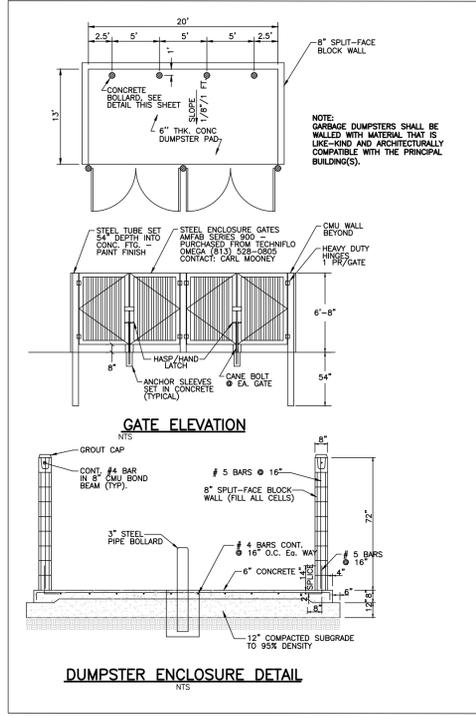
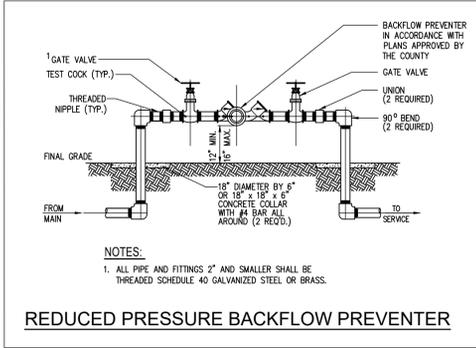
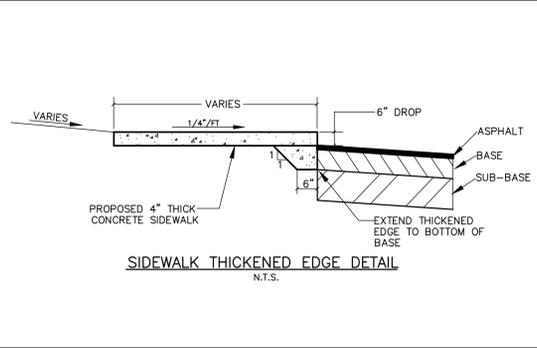
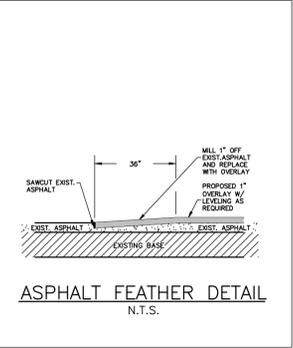
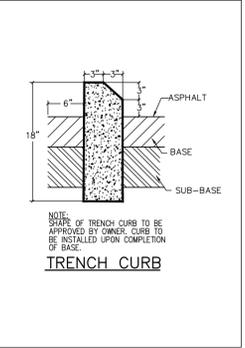
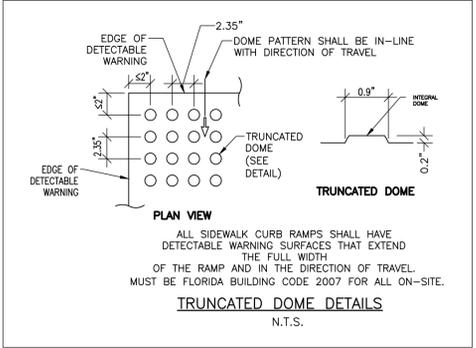
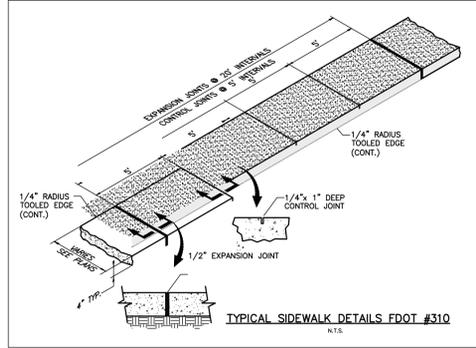
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SEC.: 6
 TWP.: 25 S
 RANGE: 27 E

10/12/2023 HS
 DATE: 10/12/2023
 REVISIONS: REVISED PER SFMWD & TWA COMMENTS





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DRAWN	ML	PAGE	-	TWP.	25 S
CHECKED	RLN	SCALE	AS NOTED	RANGE	27 E
CAD#	-	DATE	2/9/2023	DATE	10/12/2023
		REVISIONS	REVISED PER SFWM COMMENTS		

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HWA
 ENGINEERING, SURVEYING AND PLANNING
Hanson, Walter & Associates, Inc.

STARBUCKS AT WESTSIDE
WESTSIDE BLVD & US HWY 192

MISCELLANEOUS DETAILS
 SHEET NO. 10 of 12
 JOB No. 3930-8-23

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NOTES:

1. Fill or excavate variable slopes during normal grading operations.
2. Minimum distance as required to comply with safety criteria.
3. Use Larger Value of Filter: L=10ft Min Maximum L=100ft Min Maximum L=100ft Min Maximum L=100ft
4. Slope to normal slope if possible. Slope not to be steeper than 1:2. See side elevation (extended) below if 1:2 slope must go beyond toe of normal slope.
5. 1:2 slope if necessary to go beyond normal toe of slope and maintain ditch width by using top soil.

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Item	Description
1	Limits of Variable Front Slopes at Drainage Structures
2	Round and Elliptical Concrete Pipe Joint
3	Filter Fabric Jacket, Concrete Jacket, and Pipe Plug
4	Concrete Collars
5	Single Pipe End Guard
6	Double Pipe End Guard
7	Retaining Wall Concrete Gutter and Drains

LIMITS OF VARIABLE FRONT SLOPES AT DRAINAGE STRUCTURES

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TABLE 1 - SCHEDULE OF REINFORCEMENT CLASSES II, III, IV, V, Wall A, B, C

Nominal Diameter	Spacing	Reinforcement	Maximum Allowable Tolerance
1/2"	12"	40	0.010
3/8"	12"	40	0.010
1/2"	18"	40	0.010
3/4"	18"	40	0.010
1"	18"	40	0.010
1 1/4"	18"	40	0.010
1 1/2"	18"	40	0.010
1 3/4"	18"	40	0.010
2"	18"	40	0.010
2 1/4"	18"	40	0.010
2 1/2"	18"	40	0.010
2 3/4"	18"	40	0.010
3"	18"	40	0.010
3 1/4"	18"	40	0.010
3 1/2"	18"	40	0.010
3 3/4"	18"	40	0.010
4"	18"	40	0.010

NOTES:

1. Allowable Tolerance for the last full wrap of reinforcing when using single elliptical caps.
2. Extend the last full wrap of reinforcing to the shoulder joint and meet ASTM C-76 requirements.
3. All circumferential steel located above the line and within the 17.5' is defined as full reinforcement.

ROUND AND ELLIPTICAL CONCRETE PIPE JOINT

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NOTES:

1. Alternate connection must be approved by the Engineer.
2. Install securing device in accordance with Specification 985.
3. Any wire mesh arrangement which provides 6.25 square inches of steel area per linear foot with less than 16" spacing, provided the wires are spaced a minimum of 2" and/or a maximum of 6" on centers.
4. Do not use a concrete jacket to join dissimilar metal pipes.
5. 12" for pipes 10" through 30", 24" for pipes 30" and larger.
6. 12" for pipes 18" x 24" through 30" x 24", 24" for pipes 24" x 30" and larger.

FILTER FABRIC JACKET, CONCRETE JACKET, AND PIPE PLUG

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NOTES:

1. The collar may be formed by any method approved by the Engineer.
2. Install 1/2" x 1/2" dowels in adhesive bond material.
3. Stub pipe maximum diameter: 3/4" if depth within the slope drier, or 1/2" the height of elliptical main line pipe.
4. Spacing by Pipe Manufacturer.
5. Install riser reinforcement using #3 Bars @ 18" centers vertically and #4 centers horizontally. Bend pipe into riser.
6. Reinforced concrete top required when using manhole or junction box riser is less than 4 feet in diameter or when 3'-0" dia. 8 inch manhole or junction box riser is used, or when rectangular slope is used.
7. See Index 425-001 for optional construction joints.

CONCRETE COLLARS

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TABLE 2 - SINGLE GUARD

Pipe Size (In)	Top Steel Grade	Bottom Steel Grade	Number of Top Bars	Number of Bottom Bars	Vertical Spacing (In)	Number of Horizontal Bars	Horizontal Spacing (In)	Weight (Lbs)
18	2-#2	2-#2	4	4	18"	1	18"	48
24	2-#2	4-#2	5	5	18"	2	18"	58
30	2-#2	4-#2	5	5	18"	2	18"	74
36	2-#2	5-#2	6	6	18"	4	18"	90
42	4-#2	5-#2	7	7	18"	5	18"	111

NOTES:

1. Concrete guards only at locations specifically called for in Plans.
2. Anchor Bolts (Galvanized) Use C-10 Hex Head bolts or fully threaded adhesive anchors, installed in accordance with Specification 416.

SINGLE PIPE END GUARD

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TABLE 3 - DOUBLE GUARD

Pipe Size (In)	Top Steel Grade	Bottom Steel Grade	Number of Top Bars	Number of Bottom Bars	Vertical Spacing (In)	Number of Horizontal Bars	Horizontal Spacing (In)	Weight (Lbs)
18	2-#2	2-#2	8	8	18"	2	18"	127
24	2-#2	4-#2	8	8	18"	4	18"	157
30	2-#2	4-#2	8	8	18"	4	18"	173

NOTES:

1. Concrete guards only at locations specifically called for in Plans.
2. Anchor Bolts (Galvanized) Use C-10 Hex Head bolts or fully threaded adhesive anchors, installed in accordance with Specification 416.

DOUBLE PIPE END GUARD

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NOTES:

1. Gutter slope toward gutter. Match PVC pipe slope under sidewalk with sidewalk slope.

RETAINING WALL CONCRETE GUTTER AND DRAINS

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GENERAL NOTES:

1. **Clear Slopes and Grades:**
 - A. Sidewalk, ramp and landing slopes (i.e. 0.02, 0.05, and 1:12) shown in this Index are a minimum. With approval of the Engineer, provide the minimum feasible slope where the requirements cannot be met.
 - B. Landings must have cross-slopes less than or equal to 0.02 in any direction.
 - C. Maintain a single longitudinal slope along each side of the curb ramp. Ramp slopes are not required to exceed 15 feet in length.
2. **Joints Permitted at the Location of Slope Breaks:** Otherwise locate joints in accordance with Index 522-001. No joints are permitted within the ramp portion of the curb ramps.
3. **Curb, Curb and Gutter, and/or Sidewalk:**
 - A. Refer to Index 522-001 for concrete thickness and sidewalk details.
 - B. Remove any existing curb, curb and gutter, or sidewalk to the nearest joint beyond the curb transition or to the extent that no remaining section is less than 5 feet long.
3. **Curb Ramp Alpha-Identifications:**
 - A. Sidewalk curb ramp alpha-identifications (e.g. CR-4) are provided for reference purposes in the Plans.
 - B. Alpha-identifications CR-1 and CR-2 are intentionally omitted.
4. **Detectable Warnings:**
 - A. Install detectable warnings in accordance with Specification 527.
 - B. Place detectable warnings across the full width of the ramp or landing, to a minimum extent of 2 feet, installed perpendicular to the curb line and no greater than 5 feet from the back of the curb or edge of pavement.
 - C. If detectable warnings are shown in the Plans on slopes greater than 5%, along the truncated domes with the centerline of the ramp; otherwise, the truncated domes are not required to be aligned.

CURB RAMP NOMENCLATURE

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MISCELLANEOUS DETAILS

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