ATTACHMENT A

Application Package

Part IV

TRAFTECH
ENGINEERING, INC.

February 19, 2025

Mr. Raphael Schwartz
Senior Vice President
Development and Construction
KUSHNER
188 Bal Bay Drive
Bal Harbour, Florida 33154

Re: Hollywood Oaks by Kushner **- Parking Needs Study**

Dear Rafi:

Per the City's request, Traf Tech Engineering, Inc. has determined the parking needs associated with the proposed 470-unit Hollywood Oaks residential development planned to be located at 4220 & 4231 N 58th Avenue in the City of Hollywood in Broward County, Florida. As shown in the site plan contained in Attachment A, the project consists of the following mix of residential units and amenities:

470 residential units
- 80 studios
- 132 one-bedroom units
- 122 one-bedroom units with den
- 52 two-bedroom units
- 76 two-bedroom units with den
- 8 three-bedroom units

470 units total (614 bedrooms)

812 parking spaces
- 785 parking spaces in the parking garage
- 27 surface parking spaces

Additionally, the project includes a clubhouse, an existing historic building and a community building (4,071 square-foot synagogue).

Parking Needs Based on City of Hollywood Code

According to the City of Hollywood Land Development Regulations, the following parking requirements apply to the Hollywood Oaks project:

Parking Requirements

- 470 residential units x 1.5 spaces per unit = 705 parking spaces
- Residential guests (1/5 units) = 94 parking spaces
- Synagogue (1/60 sf of floor area + 1/4seats) = 69 parking spaces

= 868 parking spaces

Parking Provided

- 812 parking spaces

It is important to note that the synagogue is for Orthodox Jews and therefore, very little to no automobile traffic is expected. Additionally, many members of the synagogue will live in the residential building located within the same complex. Hence, only residents + guests will require parking spaces, or 799 parking spaces. **Therefore, parking is expected to be adequate for this development based on City Code by recognizing the low vehicular use of the Synagogue.**

Parking Needs Based on Traffic Engineering and Planning Industry Standards

The parking needs for this development using parking rates published by the Institute of Transportation Engineers (ITE) in their *Parking Generation Manual (6th Edition)* and by the Urban Land Institute in their *Shared Parking (Third Edition)* were developed.

Based on ITE's *Parking Generation Manual (6th Edition)*, mid-rise multi-family developments (ITE's LUC 221) has the following conservative requirement[1] to determine the amount of parking spaces required for this type of residential development:

Parking Needs = 1.00 (X), where X = number of bedrooms

Using the above formula, the 614 bedrooms require 614 parking spaces. Adding the 94 parking stalls for guests + 69 parking spaces for the Synagogue (ultra conservative), the total parking needs are = 777 parking spaces. Since 812 parking stalls are proposed, **parking is projected to be adequate for the Hollywood Oaks development based on ITE.**

[1] Refer to Attachment B (used highest parking needs of 1.0 per bedroom)

Based on ULI's *Shared Parking (Third Edition)*, residential developments with a mix of bedroom sizes have the following requirements to determine the number of parking spaces:

Parking Needs	0.85 x 80 studios	= 68 parking spaces
	0.9 x 254 one-bedroom units	= 229 parking spaces
	1.65 x 128 two-bedroom units	= 212 parking spaces
	2.5 x 8 three-bedroom units	= 20 parking spaces
		= 529 parking spaces

Using the above formula, the 470 residential units require 529 parking spaces. Adding the 94 parking stalls for guests + 69 parking spaces for the Synagogue (ultra conservative), the total parking needs are = 692 parking spaces (529 + 94 + 69). Since 812 parking stalls are proposed, **parking is projected to be adequate for the Hollywood Oaks development based on ULI.**

Shared Parking Analysis

Shared parking principles were applied to Hollywood Oaks residential development. Shared parking is defined as parking spaces that are shared between different land uses, especially when the land uses have parking peaks that occur at different times of the day. Using the percent parking distribution (shared parking principles), by time of day, as published in the Urban Land Institute's (ULI) *Shared Parking* document, the maximum number of shared parking spaces required to serve the residential use (residents and guests) were determined.

Additional parking reductions to account for internal trips, and trips occurring via non-automobile modes of transportation (e.g. multimodal trips such as transit, walking and bicycle trips) were not considered for a conservative analysis.

Table 1 presents the results of the shared parking analysis using City of Hollywood parking requirements and ULI's time of day usage for residents and guests. For the Synagogue, the following assumptions were used based on parking analysis conducted by Traf Tech Engineering, Inc.

- Friday Evening Service (6:00 PM to 10:00 PM at 100% parking usage). All other times assumed 50% parking usage (conservative approach).

- Saturday morning Service (9:00 AM to 1:00 PM at 100 parking usage). All other times assumed 50% parking usage (conservative approach).

As indicated in Table 1, the Hollywood Oaks residential development requires 798 parking spaces on weekdays and 787 parking stalls on weekends. **Hence, a parking surplus of 14 parking spaces will be available using very conservative assumptions based on the shared parking analysis.**

Summary

In summary, the proposed 470-unit residential development and synagogue with 812 parking spaces provide sufficient parking spaces to accommodate the peak parking demand of the Hollywood Oaks development.

Please give me a call if you have any questions.

Sincerely,

TRAF TECH ENGINEERING, INC.

Joaquin E. Vargas, P.E.
Senior Transportation Engineer

TABLE 1
Hollywood Oaks (Weekday)
Shared Parking Analysis (Using CityParking Requirements and ULI Shared Parking by Time of Day)

	Spaces = **705** Residential (Residents)		Spaces = **94** Residential (Guests)		Spaces = **69** Synagogue (Attendee)		Spaces = **0** Synagogue (Other)		**868**
Hour of Day	Utilization	Spaces	Utilization	Spaces	Utilization	Spaces	Utilization	Spaces	**Total**
6:00 AM	95%	670	0%	0	50%	35	0%	0	704
7:00 AM	85%	599	10%	9	50%	35	0%	0	643
8:00 AM	75%	529	20%	19	50%	35	0%	0	582
9:00 AM	65%	458	20%	19	50%	35	0%	0	512
10:00 AM	60%	423	20%	19	50%	35	0%	0	476
11:00 AM	55%	388	20%	19	50%	35	0%	0	441
12:00 PM	50%	353	20%	19	50%	35	0%	0	406
1:00 PM	50%	353	20%	19	50%	35	0%	0	406
2:00 PM	50%	353	20%	19	50%	35	0%	0	406
3:00 PM	55%	388	20%	19	50%	35	0%	0	441
4:00 PM	60%	423	20%	19	50%	35	0%	0	476
5:00 PM	65%	458	40%	38	50%	35	0%	0	530
6:00 PM	70%	494	60%	56	100%	69	0%	0	619
7:00 PM	75%	529	100%	94	100%	69	0%	0	692
8:00 PM	80%	564	100%	94	100%	69	0%	0	727
9:00 PM	85%	599	100%	94	100%	69	0%	0	762
10:00 PM	95%	670	100%	94	50%	35	0%	0	798
11:00 PM	97%	684	80%	75	50%	35	0%	0	794
12:00 AM	100%	705	50%	47	50%	35	0%	0	787

Source: City of Hollywood and Urban Land Institute (ULI) Shared Parking (Third Edition)

Max Parking =	**798**
Available Parking =	812
Surplus Parking =	**14**

Land Use	**Size**	**Pkg Rate**	**Total Parking Spaces**
Residential	**470 units**		**799 Spaces**
- Tenant	470 units	1.50 /unit	705 Spaces
- Guest	470 units	1.00 /5 units	94 Spaces
Synagugue			69 Spaces
Total			**868.00** Spaces

TRAFTECH ENGINEERING, INC.

TABLE 2
Hollywood Oaks (Saturday)
Shared Parking Analysis (Using CityParking Requirements and ULI Shared Parking by Time of Day)

	Spaces = **705** Residential (Residents)		Spaces = **94** Residential (Guests)		Spaces = **69** Synagogue (Attendee)		Spaces = **0** Synagogue (Other)		**868**
Hour of Day	Utilization	Spaces	Utilization	Spaces	Utilization	Spaces	Utilization	Spaces	**Total**
6:00 AM	90%	635	0%	0	50%	35	0%	0	669
7:00 AM	85%	599	20%	19	50%	35	0%	0	653
8:00 AM	80%	564	20%	19	50%	35	0%	0	617
9:00 AM	75%	529	20%	19	100%	69	0%	0	617
10:00 AM	70%	494	20%	19	100%	69	0%	0	581
11:00 AM	69%	486	20%	19	100%	69	0%	0	574
12:00 PM	68%	479	20%	19	100%	69	0%	0	567
1:00 PM	67%	472	20%	19	50%	35	0%	0	526
2:00 PM	66%	465	20%	19	50%	35	0%	0	519
3:00 PM	55%	388	20%	19	50%	35	0%	0	441
4:00 PM	60%	423	20%	19	50%	35	0%	0	476
5:00 PM	55%	388	40%	38	50%	35	0%	0	460
6:00 PM	50%	353	60%	56	50%	35	0%	0	443
7:00 PM	55%	388	100%	94	50%	35	0%	0	516
8:00 PM	65%	458	100%	94	50%	35	0%	0	587
9:00 PM	75%	529	100%	94	50%	35	0%	0	657
10:00 PM	85%	599	100%	94	50%	35	0%	0	728
11:00 PM	90%	635	80%	75	50%	35	0%	0	744
12:00 AM	100%	705	50%	47	50%	35	0%	0	787

Source: City of Hollywood and Urban Land Institute (ULI) Shared Parking (Third Edition)

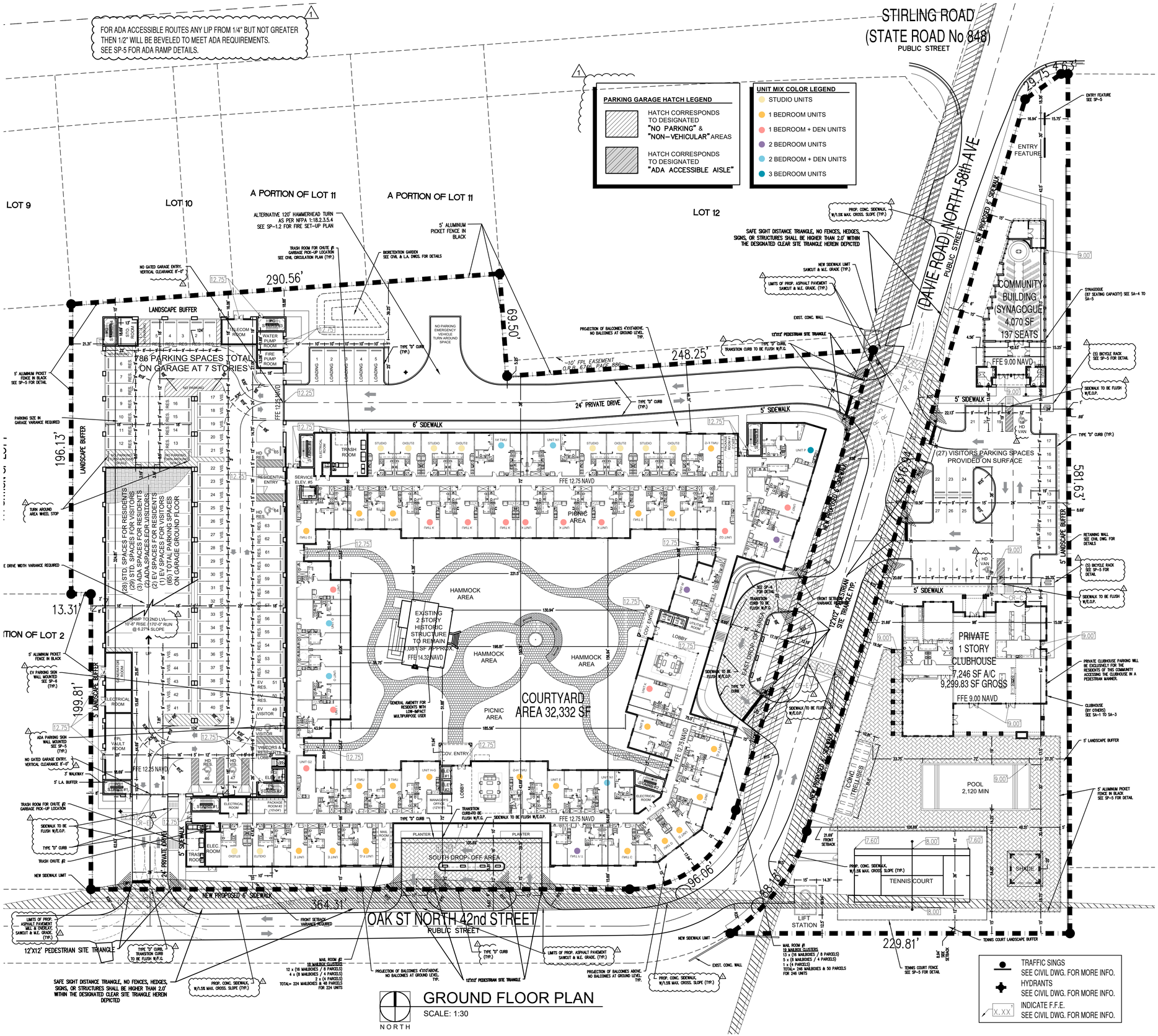
Max Parking =	**787**
Available Parking =	812
Surplus Parking =	**26**

Land Use	**Size**	**Pkg Rate**	**Total Parking Spaces**
Residential	**470 units**		**799 Spaces**
- Tenant	470 units	1.50 /unit	705 Spaces
- Guest	470 units	1.00 /5 units	94 Spaces
Synagugue			69 Spaces
Total			**868.00** Spaces

TRAFTECH ENGINEERING, INC.

ATTACHMENT A

Site Plan for
Hollywood Oaks - By Kushner



GROUND FLOOR PLAN

SCALE: 1:30

FOR FIRE SET-UP PLAN SEE FP-1
FOR LIFE SAFETY PLAN SEE LS-1 TO LS-5
FOR PERVIOUS/ IMPERVIOUS DIAGRAM SEE SP-1.2
FOR SITE PLAN NOTES SEE SP-2
FOR UNIT BREAKDOWN TABLE SEE SP-3
FOR SITE PLAN DETAILS SEE SP-5 & SP-6

SITE DATA		
ZONING: PDD - PLANNED DEVELOPMENT DISTRICT		
	SF	ACRES
GROSS AREA	249,853.00	5.74
NET AREA	249,853.00	5.74
DENSITY PROVIDED	# OF UNITS	DUA (GROSS)
8 STORIES BLDG	470	81.94
MINIMUM UNIT SIZE	650 SF REQUIRED	540 SF PROVIDED
UNIT BREAKDOWN		TOTAL
STUDIO		80
1 BEDROOM		132
1 BEDROOM + DEN		122
2 BEDROOM		52
2 BEDROOM + DEN		76
3- BEDROOM		8
TOTAL UNITS PROVIDED		470
PARKING BREAKDOWN	1 ALLOWED/ REQUIRED PURSUANT CURRENT CODE	PROVIDED (AS REQUEST)
RESIDENTIAL PARKING 1.5 PER UNIT (470 UNITS)	705	718
1 GUEST PARKING 1 PER 5 UNITS	94	94
SYNAGOGUE - PLACE OF WORSHIP (1 PER 60 SF OF FLOOR AREA AVAILABLE FOR SEATING AND 1 PER 4 FIXED SEATS)	69	0
TOTAL	868	812
TOTAL MISSING SPACES	56	
1 SPACES PROVIDED ON GARAGE		785
SPACES PROVIDED ON SURFACE		27
HANDICAP SPACES (2%)	17	19
HANDICAP VAN SPACES		2
E.V.S.E. SPACES (2%)	17	17
LOADING ZONES	5	5
BICYCLE RACK (5% OF PARKING SPCS.)	41	52
AREA CALCULATIONS	SF	%
RESIDENTIAL BLDG. FOOTPRINT	56,838.89	
GARAGE BLDG. FOOTPRINT	39,734.86	
CLUBHOUSE FOOTPRINT	9,299.83	
COMMUNITY BLDG. (SYNAGOGUE)	4,070.51	
EXISTING HISTORIC BLDG FOOTPRINT	1,081.00	
TOTAL BUILDING FOOTPRINTS	111,025.09	44.44%
STREETS & PAVED AREAS	29,607.75	11.85%
PEDESTRIAN SIDEWALKS	15,804.23	6.33%
COURTYARD	32,332.58	12.94%
POOL & POOL DECK	13,120.44	5.25%
TENNIS COURT	6,037.25	2.42%
LIFT STATION	299.02	0.12%
UNENCUMBERED GREEN OPEN SPACE	41,626.64	16.66%
TOTAL	249,853.00	100.00%
LOT COVERAGE	ALLOWED/ REQUIRED	PROVIDED
MAX LOT COVERAGE SF	BY CITY COMMISION	111,025.09
MAX LOT COVERAGE %	BY CITY COMMISION	44.4%
OPEN SPACE (LANDSCAPED OPEN SPACE AT GRADE / COURTYARD / POOL DECK & TENNIS COURT)	ALLOWED/ REQUIRED	PROVIDED
MINIMUM OPEN SPACE SF	BY CITY COMMISION	93,116.91 SF
MINIMUM OPEN SPACE %	BY CITY COMMISION	37.3%
PERVIOUS / IMPERVIOUS AREA	ALLOWED/ REQUIRED	PROVIDED
PERVIOUS AREA SF	BY CITY COMMISION	67,469.15
PERVIOUS AREA %	BY CITY COMMISION	27.00%
IMPERVIOUS AREA SF	BY CITY COMMISION	182,383.85
IMPERVIOUS AREA %	BY CITY COMMISION	73.00%
SETBACKS	ALLOWED/ REQUIRED	PROVIDED
INTERNAL STREETS	25'-0"	15'-0"
EXTERNAL STREETS	25'-0"	15'-0"
MIN. DISTANCE BETWEEN BLDGS	NOT REQUIRED	N/A
MAX BUILDING HEIGHT	ALLOWED	PROVIDED
RESIDENTIAL BLDG (TOP OF ROOF SLAB)	NOT REQUIRED	84'-10"
CLUBHOUSE (TOP OF PARAPET)	NOT REQUIRED	26'-8"
COMMUNITY BLDG SYNAGOGUE (TOP OF PARAPET)	NOT REQUIRED	24'-0"
EXISTING HISTORIC STRUCTURE (TOP OF ROOF SLAB)	EXISTING	EXISTING
NOTE: THE MAXIMUM FOOT - CANDLE LEVEL AT ALL PROPERTY LINES (MAXIMUM 0.5 IF ADJACENT TO RESIDENTIAL)		

SAFE SIGHT DISTANCE TRIANGLE DIAGRAMS

SIGHT PEDESTRIAN TRIANGLE AS PER SEC. 155.12 (d) OF THE CITY OF HOLLYWOOD CODE OF ORDINANCE AND LANDSCAPE MANUAL.

SAFE SIGHT DISTANCE TRIANGLE
COLLECTOR TRIANGLE FOR (60' TO 70' RIGHT-OF-WAY)
USED ON OAK STREET (N 42nd ST.) (50' R.O.W.)
& DAVIE ROAD (N 58th AVENUE) (50' R.O.W.)

PASCUAL PEREZ KILIDDJIAN STARR
ARCHITECTS + PLANNERS
LICENSE # AA 26001357
EDGARDO PEREZ , AIA
LICENSE No. : AR 0015394
MARIO P. PASCUAL , AIA
LICENSE No. : AR 0008254
PETER KILIDDJIAN, RA
LICENSE No. : AR 0093067
ANDREW STARR, RA
LICENSE No. : AR 0095130
AT THE BEACON CENTER
1330 NW 84th AVENUE
DORAL, FLORIDA 33126
TELEPHONE:(305) 592-1363
FACSIMILE : (305) 592-6865
http://www.ppkarch.com

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REVISIONS:
1 TAC - REV. 1 - 2024.01.20

OWNER:
KUSHNER
188 BAL BAY DRIVE
BAL HARBOUR, FL 33154

HOLLYWOOD OAKS
BY KUSHNER
4220 & 4231 N 58TH AVE.
HOLLYWOOD, FLORIDA

SEAL:

SITE PLAN

GROUND FLOOR

DATE : 2024-01-20
SCALE : AS SHOWN
DRAWN : SJ
CHECK BY: MP / PK
JOB NO. : 24-26

SP-1.1

SHEET NO. :

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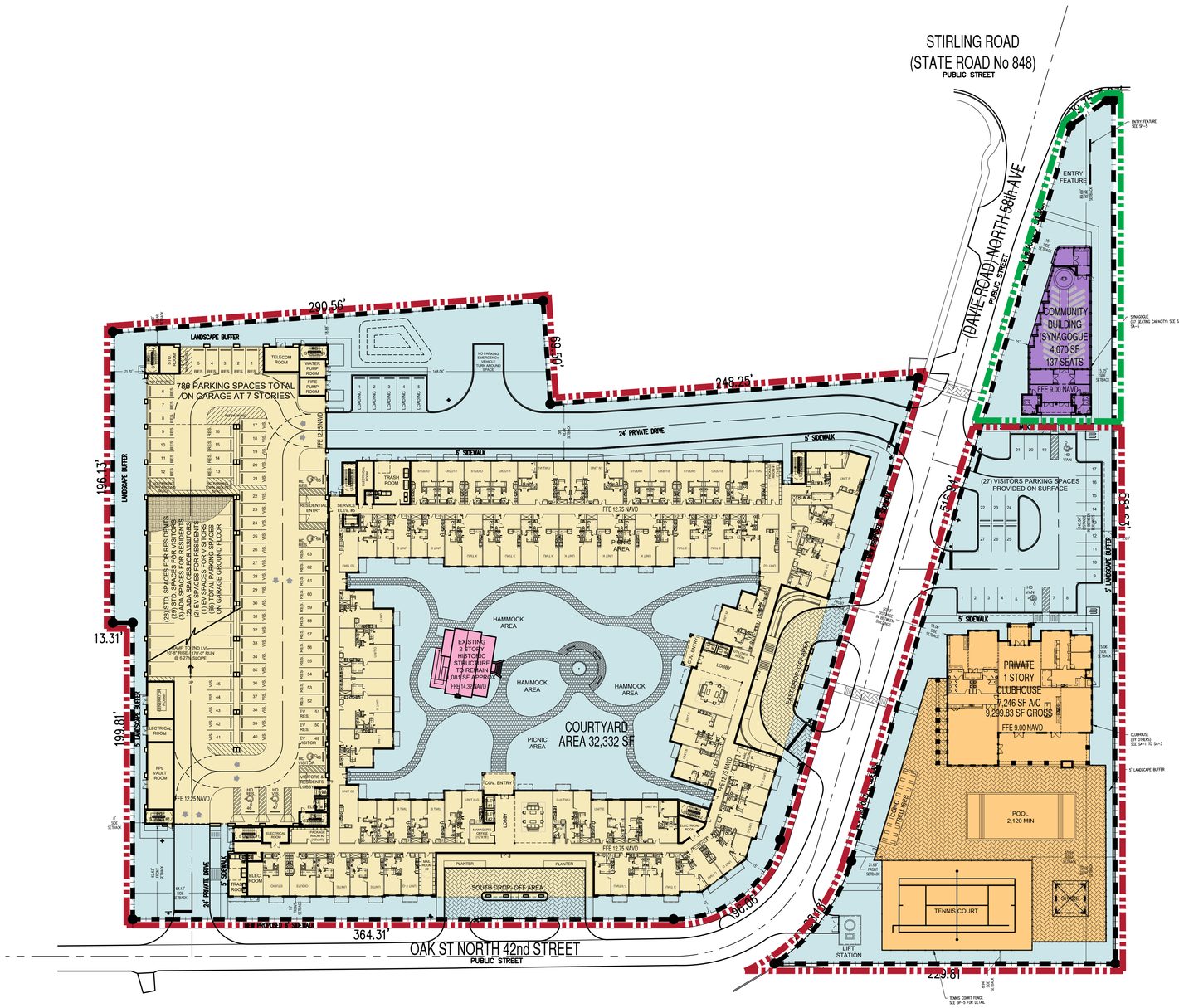

MASTER SITE PLAN

SCALE: 1:40

NORTH

PHASING PLAN LEGEND

- PHASE 1
- PHASE 2

NOTE:
PHASING DOESN'T REPRESENT CONSTRUCTION SEQUENCE.

LAND USE PLAN LEGEND

- OPEN SPACE
- RESIDENTIAL USE
- RESIDENTIAL USE RECREATIONAL AREA
- COMMUNITY FACILITY
- HISTORY STRUCTURE

PERMITTED USES:

AS PER SEC. 4.15 PD PLANNED DEVELOPMENT DISTRICT (D.)

1. ALL RESIDENTIAL USES PERMITTED BY THE CITY OF HOLLYWOOD COMPREHENSIVE PLAN.
2. BUSINESS USES LOCATED IN A PLANNED DEVELOPMENT WHICH IS INTENDED TO BE PREDOMINANTLY RESIDENTIAL OR INTENDED TO MEET THE NEIGHBORHOOD SHOPPING AND SERVICE NEEDS OF THE PLANNED DEVELOPMENT AND NOT THE GENERAL NEEDS OF THE SURROUNDING AREA.
3. BUSINESS USES IN A PLANNED DEVELOPMENT WHICH IS INTENDED TO BE PREDOMINANTLY COMMERCIAL, OFFICE OR RESORT TO INCLUDE ALL COMMERCIAL USES CONSISTENT WITH MEDIUM HIGH/HIGH RESIDENTIAL, GENERAL BUSINESS AND OFFICE CATEGORIES OF THE CITY OF HOLLYWOOD COMPREHENSIVE PLAN.
4. RESORT USES IN A PLANNED DEVELOPMENT MAY INCLUDE ENTERTAINMENT AND RECREATIONAL USES PERMITTED IN THE CENTRAL BEACH AND RECREATIONAL DISTRICTS AS WELL AS THOSE USES PERMITTED BY THE CITY OF HOLLYWOOD COMPREHENSIVE PLAN.
5. USES AND STRUCTURES WHICH ARE CUSTOMARILY ACCESSORY AND CLEARLY INCIDENTAL TO PRINCIPAL USES AND STRUCTURES MAY BE PERMITTED.

PROHIBITED USES:

1. ANY USE NOT DESCRIBED IN SEC. 4.15 PD PLANNED DEVELOPMENT DISTRICT OF THE CITY OF HOLLYWOOD PLAN DEVELOPMENT CODE.

DESIGN REGULATIONS:

AS PER SEC. 4.15 PD PLANNED DEVELOPMENT DISTRICT (E.)

1. MINIMUM SIZE OF PLANNED DEVELOPMENT:
   REQUIRED = 10.0 ACRES OF LAND UNDER UNIFIED CONTROL; EXCEPT WITHIN THE DOWNTOWN DISTRICT OF THE COMMUNITY REDEVELOPMENT AGENCY WHERE PLANNED DEVELOPMENTS SHALL CONTAIN A MINIMUM OF TWO ACRES OF LAND UNDER UNIFIED CONTROL. THIS MINIMUM MAY BE WAIVED BY THE CITY COMMISSION UPON THE RECOMMENDATION OF THE PLANNING AND DEVELOPMENT BOARD.
   PROVIDED = 5.74 ACRES
2. MAXIMUM DENSITY:
   THE TOTAL NUMBER OF DWELLING UNITS PERMITTED IN A PLANNED DEVELOPMENT SHALL NOT EXCEED THE TOTAL NUMBER OF UNITS PERMITTED BY THE CITY OF HOLLYWOOD COMPREHENSIVE PLAN.
   PROVIDED = 470 UNITS (81.94 DUA)
3. MINIMUM LOT SIZE
4. NO MIN. LOT SIZE SHALL BE REQUIRED WITHIN A PLANNED DEVELOPMENT.
5. DISTANCE BETWEEN STRUCTURES:
   NO MINIMUM DISTANCE REQUIRED, EXCEPT AS REQUIRED BY THE FLORIDA BUILDING CODE.
   PROVIDED = NOT APPLICABLE
6. SETBACKS
   INTERNAL STREETS = 25' REQUIRED
   = 15' PROVIDED (VARIANCE REQUESTED)
   EXTERNAL STREETS = 25' REQUIRED
   = 15' PROVIDED (VARIANCE REQUESTED)
   OTHER SETBACKS PROVIDED:
   MIN. SETBACK FROM PARKING GARAGE TO PL. = 8'
   MIN. SETBACK FROM SURFACE PARKING TO PL. = 8.69'
   MIN. SETBACK FROM TENNIS COURT TO PL. = 8.94'
7. MAXIMUM HEIGHT OF STRUCTURES:
   NO MAXIMUM HEIGHT OF STRUCTURES REQUIRED
   PROVIDED = 8 STORIES RESIDENTIAL BUILDING
   AT 84'-10" TO TOP OF ROOF SLAB
   = CLUBHOUSE (1 STORY) AT 24'-6"
   = SYNAGOGUE (1 STORY) AT 24'-0"
8. TOTAL SITE COVERAGE:
   BY CITY COMMISSION UPON RECOMMENDATION OF THE PLANNING AND DEVELOPMENT BOARD.
   PROVIDED = 111,025.09 SF (44.4%)
9. LANDSCAPING
   SHALL MEET THE REQUIREMENTS OF ARTICLE 9 OF THE CITY OF HOLLYWOOD ZONING AND LAND DEVELOPMENT REGULATIONS UNLESS EXPRESSLY MODIFIED BY THE CITY COMMISSION.
   SEE LANDSCAPE PLANS.
10. UNDERGROUND UTILITIES
    ALL UTILITIES INCLUDING TELEPHONE, TELEVISION CABLE AND ELECTRICAL SYSTEMS SHALL BE INSTALLED UNDERGROUND.
11. PERMITTED ABOVE GROUND UTILITIES SHALL BE SCREEN WITH ADEQUATE LANDSCAPING WITH SHRUBS AND PLANTS.
12. INTERNAL CIRCULATION:
    A PLANNED DEVELOPMENT SHALL PROVIDE AN INTERNAL CIRCULATION SYSTEM FOR USE BY BOTH MOTORIZED AND NON-MOTORIZED TRANSPORTATION MODES THAT IS ORDERLY.
    SEE SHEETS MSP-2 & MSP-3 FOR VEHICULAR AND PEDESTRIAN CIRCULATION PLANS.

PARKING AND LOADING REQUIREMENTS:

OFF-STREET PARKING AND LOADING REQUIREMENTS. OFF-STREET PARKING AND LOADING REQUIREMENTS SHALL MEET ALL THE REQUIREMENTS OF ARTICLE 7 OF THE CITY OF HOLLYWOOD ZONING AND LAND DEVELOPMENT REGULATIONS UNLESS EXPRESSLY MODIFIED BY THE CITY COMMISSION.

PARKING BREAKDOWN	ALLOWED/ REQUIRED PARKING CONTROL CODE	PROVIDED (PD REQUEST)
RESIDENTIAL PARKING 1.5 PER UNIT (470 UNITS)	705	718
GUEST PARKING 1 PER 5 UNITS	94	94
SYNAGOGUE - PLACE OF WORSHIP (1 PER 60 SF OF FLOOR AREA AVAILABLE FOR SEATING AND 1 PER 8 FIXED SEATS)	69	0
TOTAL	868	812
TOTAL MISSING SPACES	56	

SPACES PROVIDED ON GARAGE		785
SPACES PROVIDED ON SURFACE		27
HANDICAP SPACES (2%)	17	19
HANDICAP VAN SPACES		2
E.V.S.E. SPACES (2%)	17	17
LOADING ZONES	5	5
BICYCLE RACK (5% OF PARKING SPCS.)	41	52

PASCUAL PEREZ KILIDDJIAN STARR
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LICENSE # AA 26001357
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TELEPHONE :(305) 592-1363
FACSIMILE : (305) 592-6865
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REVISIONS:

1. TAC - REV. 1 - 2024.01.20

OWNER:
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BAL HARBOUR, FL 33154

HOLLYWOOD OAKS
BY KUSHNER
4220 & 4231 N 58TH AVE.
HOLLYWOOD, FLORIDA

SEAL:

MASTER SITE PLAN

PLAN DEVELOPMENT

DATE :	2024-01-20
SCALE :	AS SHOWN
DRAWN :	SJ
CHECK BY:	MP / PK
JOB NO. :	24-26

MSP-1

SHEET NO. :

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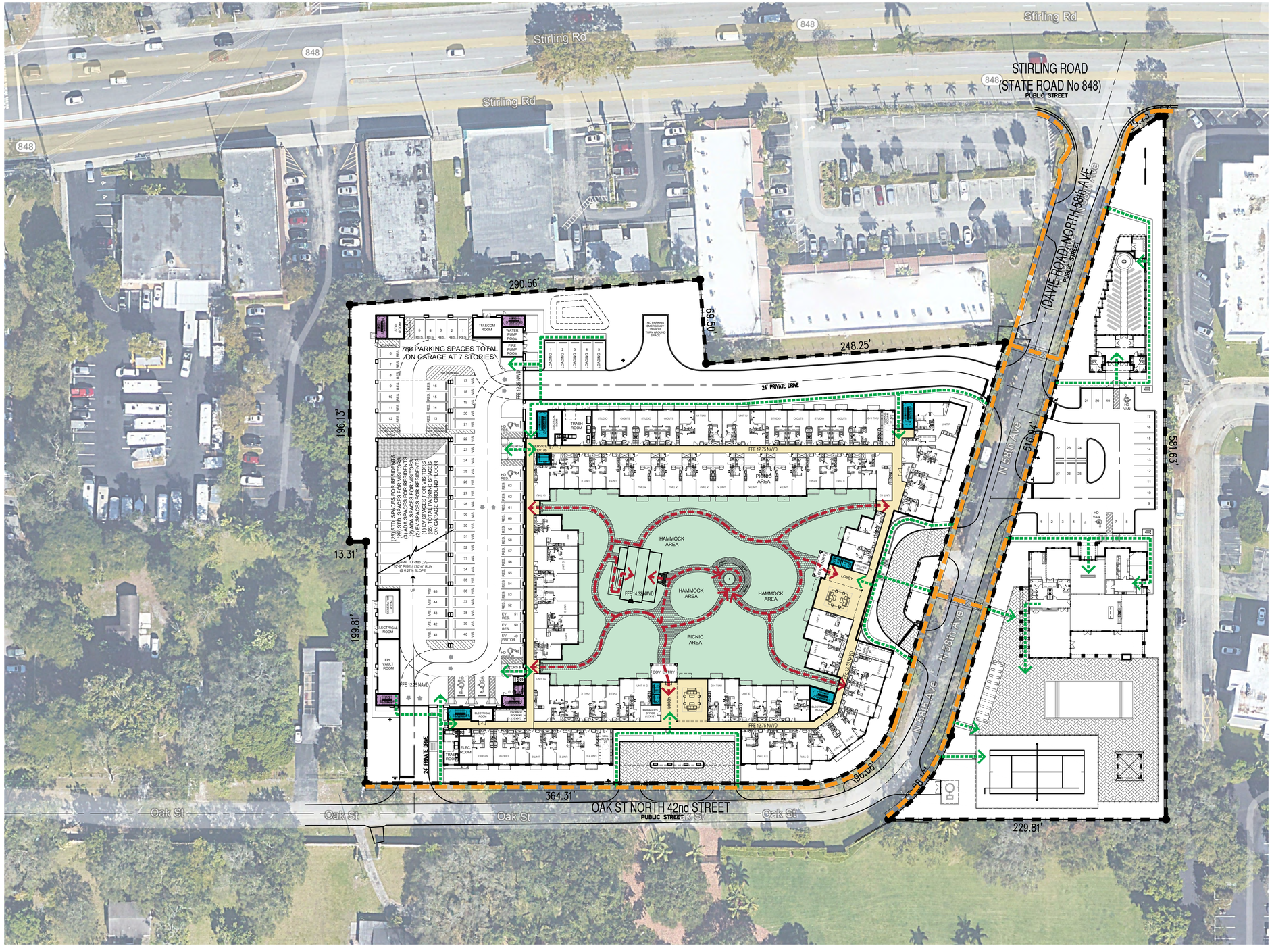

PEDESTRIAN CIRCULATION LEGEND

- COURTYARD PEDESTRIAN CONNECTIVITY
- INTERIOR PROPERTY PEDESTRIAN CIRCULATION
- PUBLIC PEDESTRIAN CIRCULATION
- PRIVATE COURTYARD AREA
- EGRESS STAIRS AND/OR ELEVATOR FOR RESIDENTIAL BUILDING
- EGRESS STAIRS AND/OR ELEVATOR FOR PARKING GARAGE
- GROUND LEVEL RESIDENTIAL BUILDING PEDESTRIAN CIRCULATION

NORTH

PEDESTRIAN CIRCULATION

SCALE: 1:40

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PASCUAL PEREZ KILIDDJIAN STARR
ARCHITECTS + PLANNERS
LICENSE # AA 26001357
EDGARDO PEREZ , AIA
LICENSE No. : AR 0015394
MARIO P. PASCUAL , AIA
LICENSE No. : AR 0008254
PETER KILIDDJIAN, RA
LICENSE No. : AR 0093067
ANDREW STARR, RA
LICENSE No. : AR 0095130
AT THE BEACON CENTER
1330 NW 84th AVENUE
DORAL, FLORIDA 33126
TELEPHONE :(305) 592-1363
FACSIMILE : (305) 592-6865
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REVISIONS:

1 TAC - REV. 1 - 2024.01.20

OWNER:
KUSHNER
188 BAL BAY DRIVE
BAL HARBOUR, FL 33154

HOLLYWOOD OAKS
BY KUSHNER
4220 & 4231 N 58TH AVE.
HOLLYWOOD, FLORIDA

SEAL:

MASTER SITE PLAN

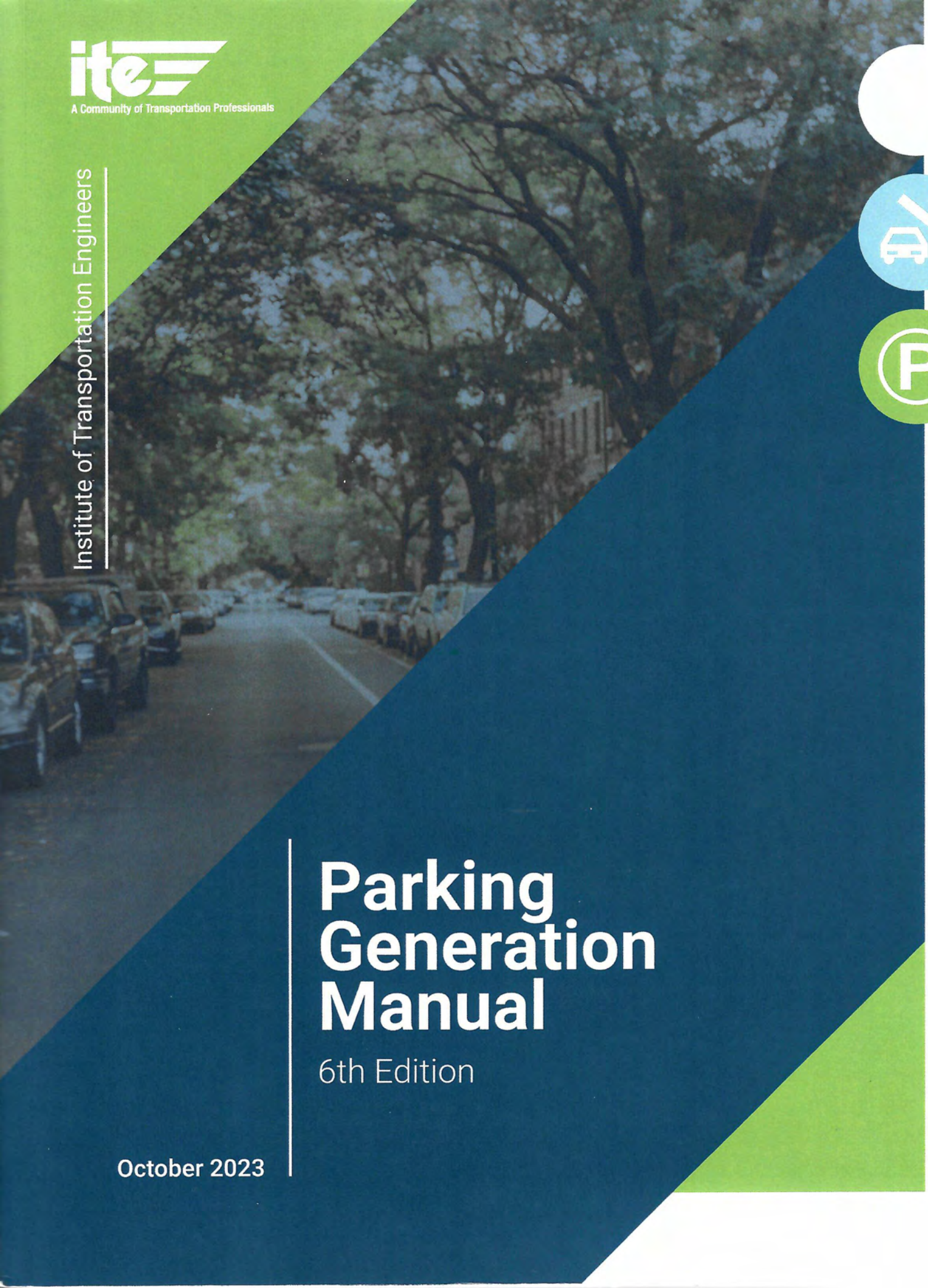
PEDESTRIAN CIRCULATION	
DATE :	2024-01-20
SCALE :	AS SHOWN
DRAWN :	SJ
CHECK BY:	MP / PK
JOB NO. :	24-26

MSP-3 (1)

SHEET NO. :

ATTACHMENT B

ITE Parking Generation



A Community of Transportation Professionals

Institute of Transportation Engineers

Parking Generation Manual

6th Edition

October 2023

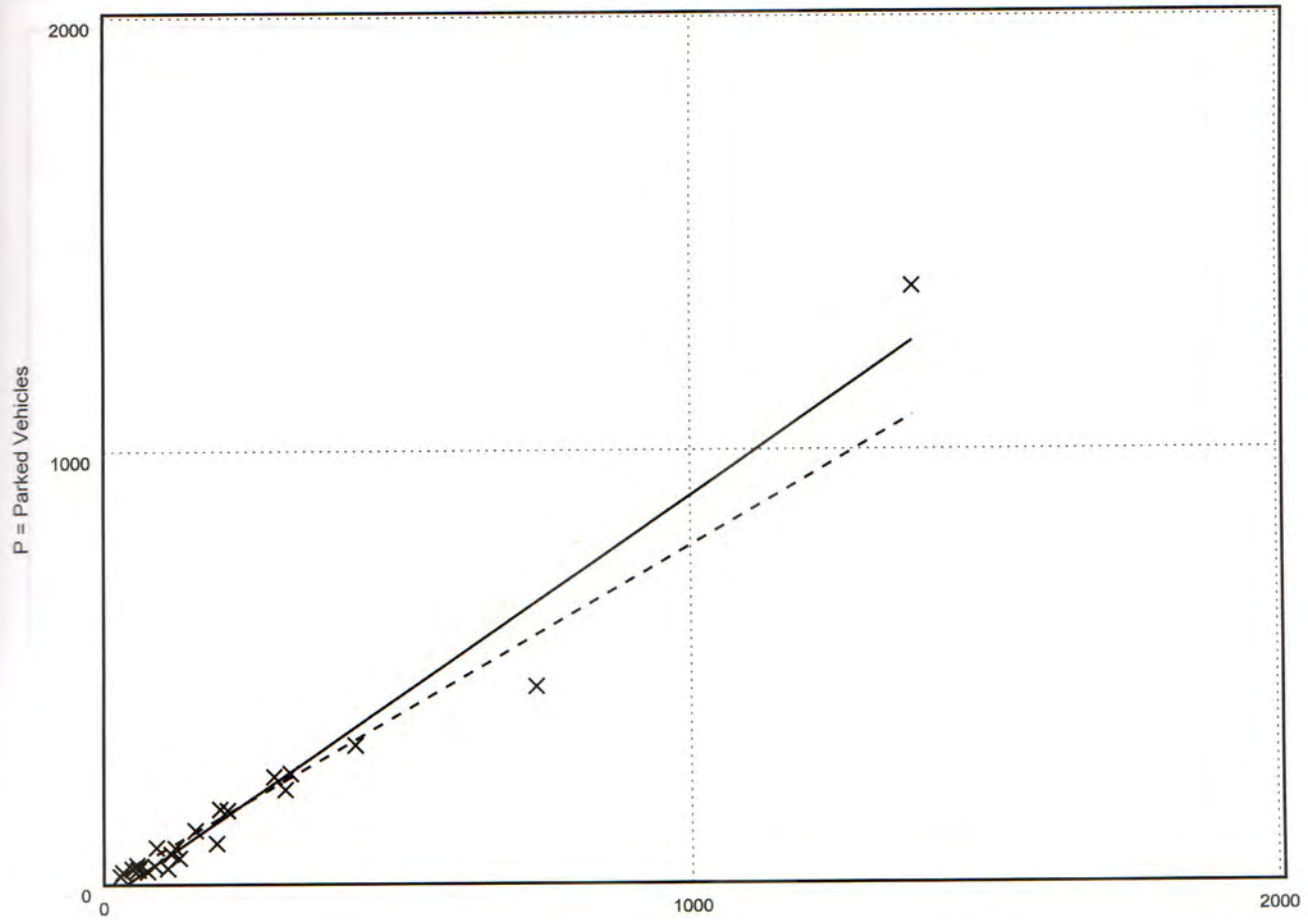
Multifamily Housing - 2+ BR (Mid-Rise) Not Close to Rail Transit (221)

Peak Period Parking Demand vs: Bedrooms
On a: Weekday (Monday - Friday)
Setting/Location: General Urban/Suburban
Number of Studies: 23
Avg. Num. of Bedrooms: 226

Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.78	0.34 - 1.00	0.62 / 0.88	0.71 - 0.85	0.18 (23%)

Data Plot and Equation



Fitted Curve Equation: P = 0.93(X) - 35.19

R^2= 0.96

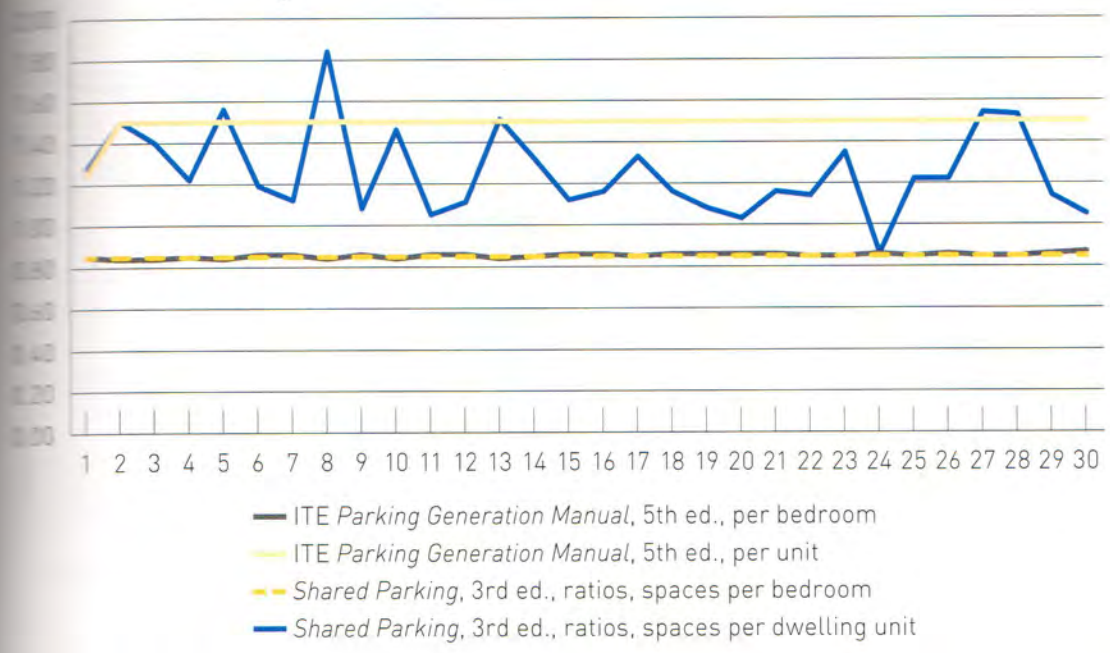
ATTACHMENT C

ULI Parking Rates

SHARED PARKING

THIRD EDITION

FIGURE 4-21 **Comparison of Ratios per Bedroom versus Spaces per Unit**



intended to capture the typical mix of units in residential components of shared parking projects today. The ratios were calibrated to result in an overall 0.85 spaces per total bedrooms (dotted yellow line in figure 4-21) across the 30 projects.

The average number of bedrooms per unit was 1.43 for these 30 projects. The recommended ratios for resident parking with an example calculation are as seen in figure 4-22.

The distribution of bedrooms in figure 4-22 is rounded from that for the 30 projects.

The recommended ratios for this edition are based on data collected overnight when there is little or no visitor parking. They are presumed to be the resident ratios; 0.10 spaces per unit on weekdays and 0.15 spaces per unit on weekends are added for visitor parking. The visitor components are the same as in the second edition, and were based on information provided by the team and residential developers.

Overall therefore for the example project, a total of 1.39 spaces per unit would be recommended.

The exercise also clearly demonstrates that the projection for an individual project will be more

FIGURE 4-22 **Residential Parking Ratios**

		Example calculation	
Type of unit	**Base ratio**	**Number of units**	**Parking demand**
Studio	0.85	10	9
1 bedroom	0.9	50	45
2 bedroom	1.65	35	58
3 or more bedrooms	2.5	5	13
Resident spaces	**1.25**	**100**	**125**
Visitors	0.15	100	15
Total spaces	**1.40**	**100**	**140**

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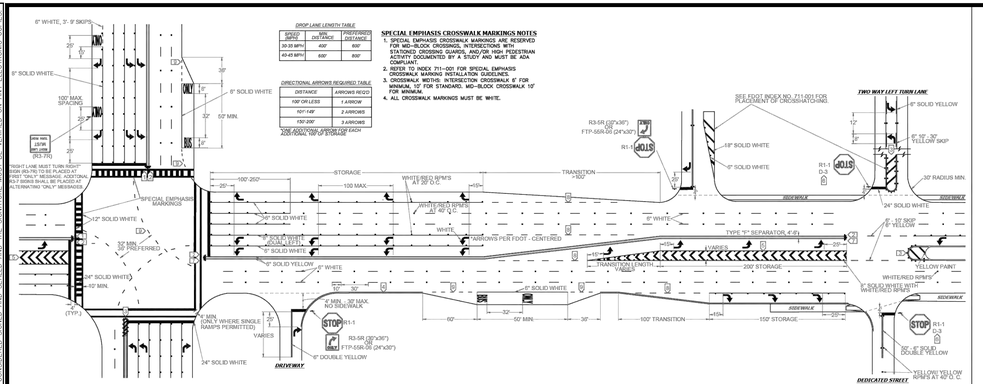


DROP LANE LENGTH TABLE		
SPEED LIMIT	DISTANCE	PREFERRED DISTANCE
30-35 MPH	400'	600'
40-45 MPH	600'	800'

DIRECTIONAL ARROWS REQUIRED TABLE	
DISTANCE	ARROWS REQ'D
100' OR LESS	1 ARROW
101'-149'	2 ARROWS
150'-200'	3 ARROWS

ADDITIONAL ARROWS SHALL BE PLACED EVERY 100' AFTER FIRST SET OF ARROWS

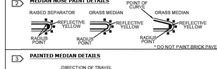
SPECIAL EMPHASIS CROSSWALK MARKINGS NOTES

1. SPECIAL EMPHASIS CROSSWALK MARKINGS ARE RESERVED FOR MID-BLOCK CROSSWALK INTERSECTIONS W/ SIGNALIZED OR STATIONED CROSSING GUARDS, AND/OR HIGH PEDESTRIAN ACTIVITY DOCUMENTED BY A STUDY AND MUST BE ADA COMPLIANT.
2. REFER TO INDEX 711-001 FOR SPECIAL EMPHASIS CROSSWALK MARKING INSTALLATION GUIDELINES.
3. CROSSWALK WIDTHS: INTERSECTION CROSSWALK 6' FOR MINIMUM, 10' FOR STANDARD, MID-BLOCK CROSSWALK 10' FOR MINIMUM.
4. ALL CROSSWALK MARKINGS MUST BE WHITE.

NOTES

1. ALL PAVEMENT MARKINGS SHALL BE ALKYD BASED THERMOPLASTIC AND FULLY RETROREFLECTORIZED.
2. ALL PAVEMENT MARKINGS ON PAVER SYSTEMS SHALL BE 3M 380/381 SERIES TAPE OR EQUIVALENT AND APPLIED WITH P60 ADHESIVE AS PER MANUFACTURERS SPECIFICATIONS.
3. ALL PAVEMENT MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", BCTED STANDARDS, AND FDOT DESIGN STANDARDS.
4. SEE FDOT INDEX NO 706-001 FOR PLACEMENT OF RPM's (FOR BULLNOSE RPM TREATMENT, SEE LEGEND NO. 1)
5. RPM's SHALL BE CLASS "B" OR EQUIVALENT, APPLIED WITH EPOXY OR BITUMINOUS ADHESIVE.
6. FDOT APPROVED SEALER SHALL BE USED WHEN APPLYING MARKINGS ON CONCRETE.
7. FOR BIKE LANE DETAILS SEE FDOT INDEX NO. 711-002.
8. EXISTING MARKINGS SHALL BE REMOVED BY WATER BLASTING OR SAND BLASTING.
9. ALL STOP LINES TO BE 4' BEHIND CROSSWALK OR SIDEWALK.
10. PAVEMENT MARKING REFLECTIVITY SHALL BE UNIFORM ACROSS THE ENTIRE STRIPE AND SHALL HAVE A MINIMUM REFLECTIVITY READING OF 250 MILLICANDELAS FOR WHITE AND 175 MILLICANDELAS FOR YELLOW.
11. ALL PRODUCTS MUST BE ON FDOT'S APPROVED PRODUCTS LIST (APL).
12. RPMS SHALL NOT BE INSTALLED ADJACENT TO BIKE LANES.
13. LONGITUDINAL CROSSWALK MARKINGS SHALL BE INSTALLED AT ALL CROSS STREETS ON COUNTY ROADS THAT ARE FOUR LANES OR GREATER.

LEGEND

1. **YELLOW/YELLOW RPM DETAILS**


2. **MEDIAN NOSE PAINT DETAILS**

3. **PAINTED MEDIAN DETAILS**

4. **EDGE LINE DETAILS**

5. **CHEVRON DETAILS - CROSSWALK AREAS AND IN FRONT OF CURB RAMPS**

6. **STREET NAME BLADE DETAILS**
SEE BCTED STOP SIGN AND STREET IDENTIFICATION ASSEMBLY TYPICAL DETAILS.

7. **TYPE IV SEPARATOR DETAILS**

8. **6" 135° SKIP DETAILS**
THE FOLLOWING SHALL BE USED FOR THE FOLLOWING CONDITIONS:
- 6 - 10 SKIPS 6" WHITE SHALL BE USED FOR THE FOLLOWING CONDITIONS:
- TRANSITIONS AT ALL LEFT AND RIGHT TURN LANES

9. **2'-6" SKIP DETAILS**
2'-6" SKIPS 6" WHITE SHALL BE USED FOR THE FOLLOWING CONDITIONS:
- RADIUS GUIDE LINES BETWEEN DUAL LEFTS TURN MOVEMENT OF RADIUS PREFERRED OR AS NOTED ON PLANS
- BUS BAY TRANSITIONS

STOP SIGN RPM
WHERE SIDE ROADS INTERSECT A MULTI LANE STREET OR HIGHWAY THAT HAS A SPEED LIMIT OF 45 MPH OR HIGHER, THE MINIMUM SIZE OF THE STOP SIGNS FACING THE SIDE ROAD APPROACHES, EVEN IF THE SIDE ROAD ONLY HAS ONE APPROACH LANE, SHALL BE 36"X36".

WHERE SIDE ROADS INTERSECT A MULTI-LANE (INCLUDING TURN LANE) STREET OR HIGHWAY THAT HAS A SPEED LIMIT OF 40 MPH OR LOWER, THE MINIMUM SIZE OF THE STOP SIGN FACING THE SIDE ROAD APPROACHES SHALL BE 30"X30".

REVISIONS	
DATE	DESCRIPTION
11-24-2020	UPDATED NOTES
04-14-2021	UPDATED NOTES
05-06-2022	UPDATED NOTES

BROWARD COUNTY FLORIDA

PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION

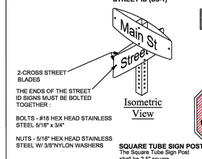
DESIGN BY: CARMELO CARATOZZOLO, P.E.	SCALE: NTS
DRAWN BY: STEPHON RAMOUTAR	
CHECKED BY: CARMELO CARATOZZOLO, P.E.	

PAVEMENT MARKINGS AND SIGNS DETAILS

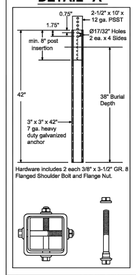
SHEET NO. 1 OF 1

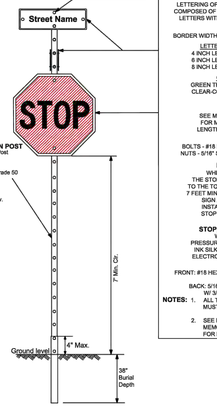
FOR SIGN ASSEMBLIES WITH MAXIMUM 8.75 SQUARE FOOT PANEL AREA

Typical Details



DETAIL "A"





STREET ID (D3-1) MATERIALS:

LETTERS
WHITE TYPE XI SHEETING
LETTERING OF STREET NAME SIGNS SHALL BE COMPOSED OF A COMBINATION OF LOWERCASE LETTERS WITH INITIAL UPPERCASE LETTERS

BORDER
BORDER WIDTHS WILL VARY BASED ON LETTER HEIGHTS

LETTER HEIGHTS - BORDER WIDTHS
4 INCH LETTER = 0.375 INCH BORDER WIDTH
6 INCH LETTER = 0.500 INCH BORDER WIDTH
8 INCH LETTER = 0.750 INCH BORDER WIDTH

GREEN BACKGROUND
GREEN TRANSLUCENT INK SILK-SCREENED CLEAR-COATED OR ELECTRO-CUT (EC) FILM OR EQUIVALENT

LETTER SIZES
SEE MUTCD TABLE 2D-2 (PG 183) FOR MINIMUM LETTER HEIGHTS
LENGTH VARIES BY STREET NAME

HARDWARE
BOLTS - #16 HEX HEAD STAINLESS STEEL 5/16" x 3"
NUTS - 5/16" STAINLESS STEEL W/ NYLON WASHERS.

REGULATORY SIGN
WHEN NO STREET ID IS PRESENT
THE STOP SIGN SHALL BE MOUNTED FLUSH TO THE TOP OF THE POST WHILE MAINTAINING 7 FEET MIN. CLEARANCE BETWEEN BOTTOM OF SIGN AND GROUND LEVEL. ANY SIGN INSTALLED BACK TO BACK WITH THE STOP SIGN SHALL BE SMALLER THAN THE STOP SIGN.

STOP_DO NOT ENTER OR YIELD
WHITE TYPE XI SHEETING
PRESSURE-SENSITIVE RED TRANSLUCENT INK SILK-SCREENED CLEAR-COATED OR ELECTRO-CUT (EC) FILM OR EQUIVALENT.

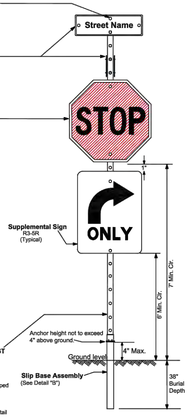
HARDWARE
FRONT: #16 HEX HEAD STAINLESS STEEL 5/16" x 3" BOLT W/ 3/8" NYLON WASHER
BACK: 5/16" HEX HEAD STAINLESS STEEL NUT W/ 3/8" STAINLESS STEEL WASHER.

NOTES: 1. ALL TYPE XI SHEETING UTILIZED MUST BE ON THE FDOT APL LIST.

2. SEE BCTED TECHNICAL POLICY MEMO #TPM - 16-001 - SPECIFICATIONS FOR RETROFLECTIVE TRAFFIC SIGN MATERIALS.

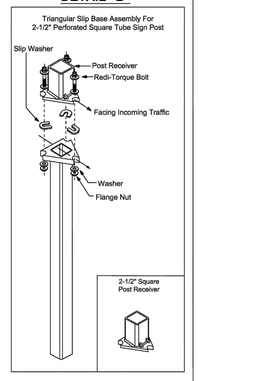
FOR SIGN ASSEMBLIES WITH GREATER THAN 8.75 SQUARE FOOT PANEL AREA WITH SUPPLEMENTAL SIGN

Typical Details



SQUARE TUBE SIGN POST
The Square Tube Sign Post shall consist of a 2.5" square tube inserted into a 2.5" square post receiver. Both tubes will be perforated, hot-dipped galvanized, 12-guage, grade 50 steel. The post shall be installed into the slip base assembly shown in detail "B".

DETAIL "B"



Notes:
1. Dimensions and certain details for the parts used to assemble the slip base connections are intentionally not shown. Slip base connections are patented manufactured products that are in compliance with NCHRP 350 crash test criteria. The base connection details are only shown on this plan to illustrate how the parts are assembled. The complete assembly must be designed to withstand 150 mph Base Wind Speed per 2013 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 6th edition and interims.

2. For standard ground sign installation, see detail entitled " Ground Sign Assembly Details".

REVISIONS	
DATE	DESCRIPTION
01-25-2018	N/A
04-09-2019	UPDATED MATERIAL NOTES
02-28-2020	ADDED ISOMETRIC VIEW

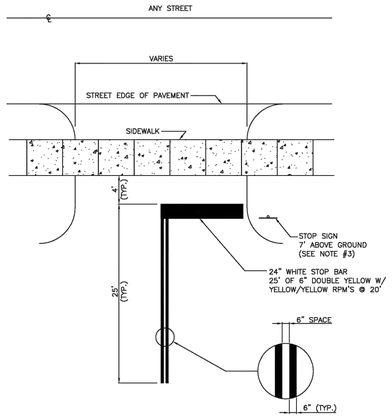
BROWARD COUNTY FLORIDA

PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION

DESIGN BY: CARMELO CARATOZZOLO, P.E.	SCALE: NTS
DRAWN BY: STEPHON RAMOUTAR	
CHECKED BY: ANDREW SEBO, P.E., PTOE	

STOP SIGN AND STREET IDENTIFICATION ASSEMBLY TYPICAL DETAILS

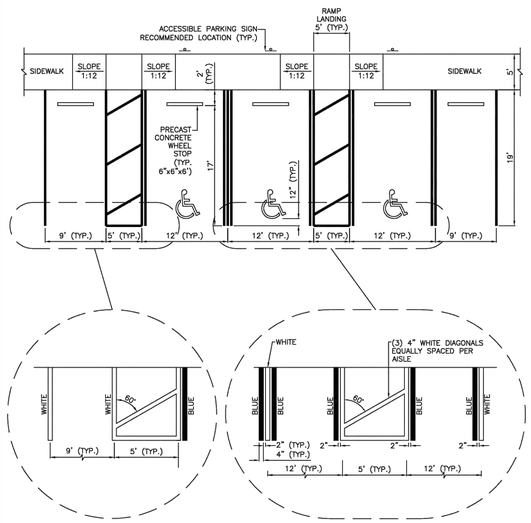
SHEET NO. 1 OF 1



NOTES:
1. USE TRAFFIC GRADE PAINT OR THERMOPLASTIC WHEN REQUIRED BY THE CITY ENGINEER.
2. ALL SIGNAGE AND MARKING SHALL BE IN ACCORDANCE WITH MANUAL OF UNIFROM TRAFFIC CONTROL DEVICES (MUTCD) STANDARD.
3. REFER TO STOP SIGN AND STREET IDENTIFICATION ASSEMBLY TYPICAL DETAILS FROM BROWARD COUNTY TRAFFIC ENGINEERING DIVISION (LATEST EDITION).

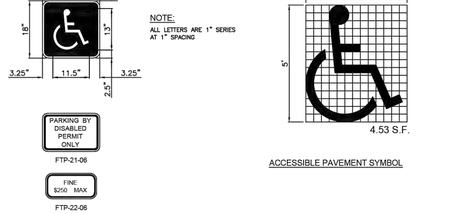
ISSUED: MAY 2023	DEPARTMENT OF DEVELOPMENT SERVICES ENGINEERING, TRANSPORTATION & MOBILITY DIVISION	REVISED: –	
DRAWN: EG	PARKING LOT EXIT–ENTRANCE DETAIL	DRAWING NO.: C–20	
APPROVED: JG			

ACCESSIBLE PARKING SPACE COMPLYING WITH FLORIDA AND ADA REQUIREMENTS (*)



(*) IN CASE OF CONFLICT PLANS TO COMPLY WITH ADA 406 & 502, AND FDOT 711-001 (SHEET 11)

ISSUED: MAY 2023	DEPARTMENT OF DEVELOPMENT SERVICES ENGINEERING, TRANSPORTATION & MOBILITY DIVISION	REVISED: –	
DRAWN: EG	ACCESIBLE PARKING SPACE DETAILS (1 OF 2)	DRAWING NO.: C–21	
APPROVED: JG			



NOTE:
ALL LETTERS ARE 1" SERIES AT 1" SPACING

NOTE:
1. SIZE TO BE 5 FEET IN HEIGHT AND WHITE IN COLOR.

ACCESSIBLE PAVEMENT SYMBOL

SIGNAGE NOTES:
1. FTP-21-06 & FTP-22-06 SIGN SHALL BE IN ACCORDANCE WITH FDOT STANDARD PLANS INDEX 700-102.
2. SIGN POST SHALL BE IN ACCORDANCE WITH BROWARD COUNTY TRAFFIC ENGINEERING DIVISION "GROUND SIGN ASSEMBLY DETAILS", LATEST REVISION.

NOTES:
1. PROVIDE PAVEMENT SYMBOL IN ACCESSIBLE PARKING SPACES. THE SYMBOL SHALL BE WHITE IN COLOR PER ADA STANDARDS.
2. BLUE MARKINGS SHALL BE SHADED.
3. SLOPES NO GREATER THAN 1:48 SHALL BE PERMITTED IN ALL DIRECTIONS FOR BOTH THE ACCESSIBLE PARKING SPACE AND ACCESSIBLE PARKING ACCESS AISLE.
4. ALL RAMPS, SIDEWALK, CURB RAMPS, AND ACCESSIBLE ROUTES SHALL BE ADA COMPLIANT.
5. WIDTH MEASUREMENTS OF PARKING SPACES AND ACCESS AISLES SHALL BE MADE FROM THE CENTERLINE OF THE WHITE PAVEMENT MARKINGS. HOWEVER, WHEN PARKING SPACES OR ACCESS AISLES ARE ADJACENT TO A CURB OR EDGE OF PAVEMENT AND NOT ADJACENT TO ANOTHER PARKING SPACE OR ACCESS AISLE; THEN THE WIDTH MEASUREMENTS MAY INCLUDE THE FULL WIDTH OF THE LAST PAVEMENT MARKING.
6. ALL ACCESSIBLE ELEMENTS SHALL BE COMPLIANT WITH THE DEPARTMENT OF JUSTICE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND THE FLORIDA BUILDING CODE LATEST EDITION FOR "ACCESSIBILITY".
7. ALL PARKING PAVEMENT MARKINGS SHALL BE 4" REFLECTORIZED PAINT MEETING FDOT/BCTED STANDARDS.
8. ACCESSIBLE PARKING SIGNS SHALL BE 60" MINIMUM ABOVE FINISH FLOOR OR GROUND SURFACE MEASURED FROM BOTTOM OF THE SIGN.

ISSUED: MAY 2023	DEPARTMENT OF DEVELOPMENT SERVICES ENGINEERING, TRANSPORTATION & MOBILITY DIVISION	REVISED: –	
DRAWN: EG	ACCESIBLE PARKING SPACE DETAILS (2 OF 2)	DRAWING NO.: C–22	
APPROVED: JG			

THOMAS ENGINEERING GROUP
CIVIL ENGINEERS - PROJECT MANAGERS - LAND PLANNING - LANDSCAPE ARCHITECTS
1502 W. FLETCHER AVE. SUITE 206 TAMPA, FL 33612
125 W. INDIANTOWN RD. UNIT NO. 101 JUPITER, FL 33458
P: (813) 379-4100
P: 561-203-7503

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REVISIONS:

REV:	DATE:	COMMENT:	BY:

Sunshine 811
Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.
Check positive response codes before you dig!

TAC SUBMITTAL

PROJECT No.:	F240042
DRAWN BY:	CAD
CHECKED BY:	MAT
DATE:	05/06/2025
CAD I.D.:	F240042 PMS

PROJECT:

HOLLYWOOD OAKS
4220 & 4231 N 58th Ave.
HOLLYWOOD, FL 33021

FOR

KUSHNER
188 BAL BAY DRIVE
BAL HARBOUR, FL 33154

THOMAS ENGINEERING GROUP
6300 NW 31ST AVENUE
FORT LAUDERDALE, FL 33309
PH: (954) 202-7000
FX: (954) 202-7070
www.ThomasEngineeringGroup.com

MICHAEL A. TROXELL LICENSE No. 50572 STATE OF FLORIDA PROFESSIONAL ENGINEER
June 30, 2025
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:
PAVEMENT MARKING & SIGNAGE PLAN DETAILS

SHEET NUMBER:
PMS-2.0

Michael Troxell

Digitally signed by Michael Troxell
Date: 2025.06.30 15:43:22 -04'00'

Printed on Monday, June 30, 2025, 12:55 PM by Carey Spivakovsky

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THE FOLLOWING FOUR (4) SHEETS, I.E., THE STORMWATER POLLUTION PREVENTION PLAN SPECIFICATIONS AND DETAILS, ARE ONLY A SUGGESTED APPROACH DEVELOPED BY THE PREPARER OF THE PLAN FOR USE BY THE OWNER/CONTRACTOR TO ASSIST THEM IN IMPLEMENTING APPROPRIATE POLLUTION PREVENTION TECHNIQUES IN COMPLYING WITH FLORIDA'S NPDES STORMWATER PERMITTING PROGRAM FOR CONSTRUCTION ACTIVITY, AS ESTABLISHED BY FDEP. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND IMPLEMENT THE BEST MANAGEMENT PRACTICES THAT ARE APPROPRIATE FOR THE PROJECT'S SITE SPECIFIC CONDITIONS DURING THE LIFE OF THE CONSTRUCTION ACTIVITIES.

PART V STORMWATER POLLUTION PREVENTION PLAN (FROM STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION GENERIC PERMIT FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES THAT DISTURB (5) FIVE OR MORE ACRES OF LAND (DATED: OCTOBER 2000)

D. CONTENTS OF PLAN

1. THE STORMWATER POLLUTION PREVENTION PLAN (S.W.P.P.P.)

   a. SHALL INCLUDE THE ITEMS SET FORTH IN PARAGRAPHS 2 THROUGH 10.

2. SITE DESCRIPTION. (DESCRIPTION OF POLLUTANT SOURCES AND OTHER INFORMATION):

   a. A DESCRIPTION OF THE NATURE OF THE CONSTRUCTION ACTIVITY:
   THE PROJECT CONSISTS OF THE CONSTRUCTION OF 470 APARTMENTS LOCATED IN TWO (2) 8-STORY BUILDINGS, PARKING STRUCTURE, SYNAGOGUE, CLUB HOUSE AND ASSOCIATED DRIVEWAYS, PARKING LOT, DRY STORM WATER RETENTION AREA AND ASSOCIATED INFRASTRUCTURE TO SUPPORT THE DEVELOPMENT. THE DESIGN INCLUDES DRAINAGE INLETS WHICH WILL DIVERT STORM WATER FROM THE PROPOSED SITE INTO AN ON-SITE STORM WATER RETENTION AREA AND UNDERGROUND STORAGE ARE. SITE WILL NOT HAVE A DRAINAGE OUTFALL.

   THE CONSTRUCTION FOR THE SITE INCLUDES INSTALLATION OF WATER AND SEWER MAINS, LIFT STATION AND FORCE MAIN WHICH WILL BE CONNECTED TO THE EXISTING CITY OF HOLLYWOOD UTILITY DEPARTMENT WATER MAIN FACILITIES LOCATED ADJACENT TO THE SITE AND A FORCE MAIN CONNECTION ON NW 56TH AVENUE.

   b. A DESCRIPTION OF THE INTENDED SEQUENCE OF MAJOR ACTIVITIES WHICH DISTURB SOILS FOR MAJOR PORTIONS OF THE SITE (E.G. GRUBBING, EXCAVATION, GRADING);

   THE PROJECT WILL BE BUILT IN ONE PHASE.

   c. ESTIMATES OF THE TOTAL AREA OF THE SITE AND THE TOTAL AREA OF THE SITE THAT IS EXPECTED TO BE DISTURBED BY EXCAVATION, GRADING, OR OTHER ACTIVITIES;

   TOTAL AREA OF SITE: 5.74 ACRES

   TOTAL AREA OF THE SITE TO BE DISTURBED: 5.74 ACRES

   d. EXISTING DATA DESCRIBING THE SOIL OR THE QUALITY OF ANY DISCHARGE FROM THE SITE AND AN ESTIMATE OF THE SIZE OF THE DRAINAGE AREA FOR EACH OUTFALL;

   WATER QUALITY REQUIREMENTS WILL BE MET BY ON-SITE DRY RETENTION AREA AND EXFILTRATION TRENCH.

   e. A SITE MAP INDICATING DRAINAGE PATTERNS AND APPROXIMATE SLOPES ANTICIPATED AFTER MAJOR GRADING ACTIVITIES, AREAS OF SOIL DISTURBANCE, AN OUTLINE OF AREAS WHICH MAY NOT BE DISTURBED, THE LOCATION OF MAJOR STRUCTURAL AND NONSTRUCTURAL CONTROLS IDENTIFIED IN THE PLAN, THE LOCATION OF AREAS WHERE STABILIZATION PRACTICES ARE EXPECTED TO OCCUR, SURFACE WATERS, WETLANDS, AND LOCATIONS WHERE STORM WATER IS DISCHARGED TO A SURFACE WATER;

   SEE PLANS ON THE FOLLOWING PAGES

   f. THE LOCATION IN TERMS OF LATITUDE AND LONGITUDE, TO THE NEAREST 15 SECONDS, OF EACH OUTFALL, THE NAME OF THE RECEIVING WATER(S) FOR EACH OUTFALL.

   LATITUDE = N/A – NO OUTFALL PROPOSED
   LONGITUDE = N/A
   NAME OF RECEIVING WATER(S): N/A

3. CONTROLS (SEE ACCOMPANYING DETAILS SHEETS):

   EACH PLAN SHALL INCLUDE A DESCRIPTION OF APPROPRIATE CONTROLS, BMPS, AND MEASURES THAT WILL BE IMPLEMENTED AT THE CONSTRUCTION SITE. THE PLAN WILL CLEARLY DESCRIBE FOR EACH MAJOR ACTIVITY IDENTIFIED IN PART V.D.2.b APPROPRIATE CONTROL MEASURES AND THE TIMING DURING THE CONSTRUCTION PROCESS THAT THE MEASURES WILL BE IMPLEMENTED.

   (FOR EXAMPLE, PERIMETER CONTROLS FOR ONE PORTION OF THE SITE WILL BE INSTALLED AFTER THE CLEARING AND GRUBBING NECESSARY FOR INSTALLATION OF THE MEASURE, BUT BEFORE THE CLEARING AND GRUBBING FOR THE REMAINING PORTIONS OF THE SITE. PERIMETER CONTROLS WILL BE ACTIVELY MAINTAINED UNTIL FINAL STABILIZATION OF THOSE PORTIONS OF THE SITE UPWARD OF THE PERIMETER CONTROL. TEMPORARY PERIMETER CONTROLS WILL BE REMOVED AFTER FINAL STABILIZATION.)

   ALL CONTROLS SHALL BE CONSISTENT WITH THE PERFORMANCE STANDARDS FOR EROSION AND SEDIMENT CONTROL AND STORMWATER TREATMENT AS SET FORTH IN THE SECTION 62-40.432, F. A. C., THE APPLICABLE STORMWATER OR ENVIRONMENTAL RESOURCE PERMITTING REQUIREMENTS OF THE FDEP OR APPROPRIATE WMD, AND THE GUIDELINES CONTAINED IN THE FLORIDA DEVELOPMENT MANUAL: A GUIDE TO SOUND LAND AND WATER MANAGEMENT (FDEP, 1988) AND ANY SUBSEQUENT AMENDMENTS. THE DESCRIPTION AND IMPLEMENTATION OF CONTROLS SHALL ADDRESS THE MINIMUM COMPONENTS SET FORTH IN PARAGRAPHS 4 AND 5 BELOW.

4. EROSION AND SEDIMENT CONTROLS:

   a. STABILIZATION PRACTICES. A DESCRIPTION OF INTERIM AND PERMANENT STABILIZATION PRACTICES, INCLUDING SITE-SPECIFIC SCHEDULING OF THE IMPLEMENTATION OF THE PRACTICES. SITE PLANS SHOULD ENSURE THAT EXISTING VEGETATION IS PRESERVED WHERE ATTAINABLE AND THAT DISTURBED PORTIONS OF THE SITE ARE STABILIZED. STABILIZATION PRACTICES MAY INCLUDE: TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, GEOTEXTILES, SOD STABILIZATION, VEGETATIVE BUFFER STRIPS, PROTECTION OF TREES, PRESERVATION OF MATURE VEGETATION, AND OTHER APPROPRIATE MEASURES. A RECORD OF THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR, WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE AND WHEN STABILIZATION MEASURES ARE INITIATED SHALL BE INCLUDED IN THE PLAN. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE, BUT IN NO CASE MORE THAN 14 DAYS, IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED.

   STABILIZATION PRACTICES:

   CONTRACTOR SHALL IMMEDIATELY SEED OR PLACE SOD AFTER RE-GRADING TO STABILIZE SLOPES.

   b. A DESCRIPTION OF STRUCTURAL PRACTICES, TO DIVERT FLOWS FROM EXPOSED SOILS, STORE FLOWS, RETAIN SEDIMENT ON-SITE, OR OTHERWISE LIMIT RUNOFF AND THE DISCHARGE OF POLLUTANTS FROM EXPOSED AREAS OF THE SITE. SUCH PRACTICES MAY INCLUDE SILT FENCES, EARTH DIKES, DIVERSIONS, SWALES, SEDIMENT TRAPS, CHECK DAMS, SUBSURFACE DRAINS, PIPE SLOPE DRAINS, LEVEL SPREADERS, STORM DRAIN INLET PROTECTION, ROCK OUTLET PROTECTION, REINFORCED SOIL RETAINING SYSTEMS, GABIONS, AND TEMPORARY OR PERMANENT SEDIMENT BASINS. STRUCTURAL BMPS SHALL BE PLACED ON UPLAND SOILS UNLESS A STATE OF FLORIDA WETLAND RESOURCE MANAGEMENT PERMIT OR ENVIRONMENTAL RESOURCE PERMIT ISSUED PURSUANT TO CHAPTER 373, FS, AND APPLICABLE REGULATIONS OF THE FDEP OR GOVERNING WMD AUTHORIZE OTHERWISE. THE INSTALLATION OF THESE DEVICES MAY BE SUBJECT TO SECTION 404 OF THE CWA.

   STRUCTURAL PRACTICES:
   CONTRACTOR SHALL LINE BERMS, RETENTION AREAS AND BANKS WITH FABRIC IF SODDING OR TEMPORARY SEEDING DOES NOT OCCUR WITHIN 1 WEEK OF GRADING THESE AREAS TO PREVENT EROSION

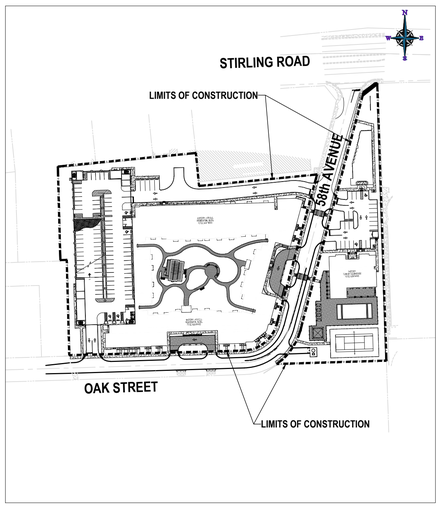
   c. FOR COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH MORE THAN 10 DISTURBED ACRES AT ONE TIME, A TEMPORARY (OR PERMANENT) SEDIMENT BASIN PROVIDING 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED, OR EQUIVALENT CONTROL MEASURES, SHALL BE PROVIDED WHERE ATTAINABLE UNTIL FINAL STABILIZATION OF THE SITE. 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. FOR DRAINAGE LOCATIONS WHICH SERVE MORE THAN 10 DISTURBED ACRES AT ONE TIME AND WHERE A TEMPORARY SEDIMENT BASIN PROVIDING 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED, OR EQUIVALENT CONTROLS IS NOT ATTAINABLE, SMALLER SEDIMENT TRAPS AND/OR SEDIMENT TRAPS SHOULD BE USED. AT A MINIMUM, SILT FENCES, OR EQUIVALENT SEDIMENT CONTROLS ARE REQUIRED FOR ALL SIDE SLOPE AND DOWN SLOPE BOUNDARIES OF THE CONSTRUCTION AREA.

   MISCELLANEOUS PRACTICES (GREATER THAN 10 AC.):

   THE AFFECTED SITE AREA IS LESS THAN 10 ACRES

   d. FOR DRAINAGE LOCATIONS SERVING LESS THAN 10 ACRES, SEDIMENT BASINS AND/OR SEDIMENT TRAPS ARE RECOMMENDED BUT NOT REQUIRED. AT A MINIMUM, SILT FENCES OR EQUIVALENT SEDIMENT CONTROLS ARE REQUIRED FOR ALL SIDE SLOPE AND DOWN SLOPE BOUNDARIES OF THE CONSTRUCTION AREA.

   MISCELLANEOUS PRACTICES (LESS THAN 10 AC.):
   TPRIOR TO START OF CONSTRUCTION, PERIMETER SILT FENCE AND STABILIZED CONSTRUCTION ENTRANCES SHALL BE ESTABLISHED. THE ON-SITE DRY RETENTION AREA SHALL BE EXCAVATED TO WITHIN ONE FOOT OF THE PROPOSED BOTTOM GRADE AND UTILIZED AS A TEMPORARY SEDIMENT BASIN WITH SITE RUNOFF DIRECTED TO THIS AREA VIA DRAINAGE PIPES AND/OR TEMPORARY SWALES. UPON ROUGH GRADING BEING COMPLETED AND TEMPORARY SEDIMENT CONTROL MEASURES PLACED, THE DRY RETENTION AREA CAN THEN BE EXCAVATED TO FINAL GRADE.



5. STORMWATER MANAGEMENT:

   A DESCRIPTION OF BMPS THAT WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORMWATER DISCHARGES THAT WILL OCCUR DURING CONSTRUCTION AND AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED. THESE CONTROLS SHALL BE CONSISTENT WITH THE PERFORMANCE STANDARDS FOR STORMWATER TREATMENT AS SET FORTH IN THE SECTION 62- 40.432, F. A. C., THE APPLICABLE STORMWATER OR ENVIRONMENTAL RESOURCE PERMITTING REGULATIONS OF THE FDEP OR THE APPROPRIATE WMD, AND THE GUIDELINES CONTAINED IN THE FLORIDA DEVELOPMENT MANUAL: A GUIDE TO SOUND LAND AND WATER MANAGEMENT (FDEP, 1988), AND ANY SUBSEQUENT AMENDMENTS. STRUCTURAL BMPS SHALL BE PLACED ON UPLAND SOILS UNLESS A STATE OF FLORIDA WETLAND RESOURCE MANAGEMENT PERMIT OR ENVIRONMENTAL RESOURCE PERMIT ISSUED PURSUANT TO CHAPTER 373, FS, AND APPLICABLE REGULATIONS OF THE FDEP OR WMD AUTHORIZE OTHERWISE. THE INSTALLATION OF THESE DEVICES MAY BE SUBJECT TO SECTION 404 OF THE CWA. THIS GENERIC PERMIT ONLY ADDRESSES THE INSTALLATION OF STORMWATER MANAGEMENT CONTROLS, AND NOT THE ULTIMATE OPERATION AND MAINTENANCE OF SUCH CONTROLS AFTER THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED AND THE SITE HAS UNDERGONE FINAL STABILIZATION. UNDER THIS GENERIC PERMIT, PERMITTEES ARE ONLY RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF STORMWATER MANAGEMENT BMPS PRIOR TO FINAL STABILIZATION OF THE SITE, AND ARE NOT RESPONSIBLE FOR MAINTENANCE AFTER STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY HAVE BEEN ELIMINATED FROM THE SITE. HOWEVER, ALL STORMWATER MANAGEMENT SYSTEMS AND BMPS SHALL BE OPERATED AND MAINTAINED IN PERPETUITY AFTER FINAL STABILIZATION IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN THE STATE OF FLORIDA STORMWATER OR ENVIRONMENTAL RESOURCE PERMIT ISSUED FOR THE SITE.

   a. SUCH CONTROLS OR BEST MANAGEMENT PRACTICES MAY INCLUDE: STORMWATER DETENTION SYSTEMS (INCLUDING WET PONDS); STORMWATER RETENTION SYSTEMS; FLOW ATTENUATION BY USE OF OPEN VEGETATED SWALES AND NATURAL DEPRESSIONS; EXFILTRATION OF RUNOFF ONSITE; AND SEQUENTIAL SYSTEMS WHICH COMBINE SEVERAL PRACTICES (BMP TREATMENT TRAIN). PURSUANT TO THE REQUIREMENTS OF SECTION 62-40.432, FAC, THE STORMWATER MANAGEMENT SYSTEM SHALL BE DESIGNED TO REMOVE AT LEAST 80 PERCENT OF THE AVERAGE ANNUAL LOAD OF POLLUTANTS WHICH CAUSE OR CONTRIBUTE TO VIOLATIONS OF WATER QUALITY STANDARDS (95 PERCENT IF THE SYSTEM DISCHARGES TO AN OUTSTANDING FLORIDA WATER). THE POLLUTION PREVENTION PLAN SHALL INCLUDE AN EXPLANATION OF THE TECHNICAL BASIS USED TO SELECT THE PRACTICES TO CONTROL POLLUTION WHERE FLOWS EXCEED PREDEVELOPMENT LEVELS.

   DISCUSSION OF BMPS:
   THE FOLLOWING SHALL BE INSTALLED PRIOR TO AND ROUTINELY MAINTAINED THROUGHOUT CONSTRUCTION: SOIL TRACKING PREVENTION DEVICE, PERIMETER SILT FENCE, INLET PROTECTION ON ALL INLETS AND ANY OTHER SEDIMENT CONTROL MEASURES DEEMED NECESSARY.

   b. VELOCITY DISSIPATION DEVICES SHALL BE PLACED AT DISCHARGE LOCATIONS AND ALONG THE LENGTH OF ANY OUTFALL CHANNEL FOR THE PURPOSE OF PROVIDING A NON-EROSIVE VELOCITY FLOW FROM THE STRUCTURE TO A WATER COURSE SO THAT THE NATURAL PHYSICAL AND BIOLOGICAL CHARACTERISTICS AND FUNCTIONS ARE MAINTAINED AND PROTECTED (E.G. NO SIGNIFICANT CHANGES IN THE HYDROLOGICAL REGIME OF THE RECEIVING WATER). EQUALIZATION OF THE PREDEVELOPMENT AND POST-DEVELOPMENT STORMWATER PEAK DISCHARGE RATE AND VOLUME SHALL BE A GOAL IN THE DESIGN OF THE POST-DEVELOPMENT STORMWATER MANAGEMENT SYSTEM.

   VELOCITY DISSIPATION DEVICES:

   CONTRACTOR SHALL DIRECT ALL STORMWATER RUNOFF TO ON-SITE DETENTION BASINS TO ATTENUATE ANY DISCHARGE FROM THE CONSTRUCTION SITE. ALL SLOPES AND SWALES SHALL BE PROTECTED BY HAY BALES, SILT FENCE OR FILTER FABRIC TO PREVENT EROSIVE VELOCITIES.

6. CONTROLS FOR OTHER POTENTIAL POLLUTANTS:

   a. WASTE DISPOSAL. NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED TO SURFACE WATERS, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT AND BY A STATE OF FLORIDA WETLAND RESOURCE MANAGEMENT PERMIT OR ENVIRONMENTAL RESOURCE PERMIT ISSUED PURSUANT TO CHAPTER 373, F.S., AND THE APPLICABLE REGULATIONS OF THE FDEP OR WMD.

   WASTE DISPOSAL:
   ALL WASTES SHALL BE STORED SAFELY ON-SITE PRIOR TO REMOVAL TO A STATE OF FLORIDA LICENSED FACILITY.

   b. OFF-SITE VEHICLE TRACKING /DUST CONTROL:
   A SOIL TRACKING PREVENTION SYSTEM PER SHALL BE INSTALLED AND MAINTAINED AT ALL CONSTRUCTION ENTRANCES AND EXITS TO AND FROM THE SITE.

   c. THE PLAN SHALL ENSURE AND DEMONSTRATE COMPLIANCE WITH APPLICABLE STATE AND/OR LOCAL WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS.

   ENSURE AND DEMONSTRATE COMPLIANCE WITH APPLICABLE STATE AND/OR LOCAL:
   CONTRACTOR SHALL MAINTAIN A LOG ON-SITE WHICH RECORDS THE REMOVAL AND DISPOSAL OF ALL MATERIALS. LOG SHALL DETAIL BOTH THE SPECIFICS OF THE MATERIALS INCLUDING HEALTH AND ENVIRONMENTAL HAZARDS AS WELL AS THE LOCATION AND RECEIPTS FROM THE DISPOSAL SITE.

   d. THE PLAN SHALL ADDRESS THE PROPER APPLICATION RATES AND METHODS FOR THE USE OF FERTILIZERS AND PESTICIDES AT THE CONSTRUCTION SITE AND SET FORTH HOW THESE PROCEDURES WILL BE IMPLEMENTED AND ENFORCED. NUTRIENTS WILL BE APPLIED ONLY AT RATES NECESSARY TO ESTABLISH AND MAINTAIN VEGETATION SUCH THAT DISCHARGES WILL NOT CAUSE OR CONTRIBUTE TO VIOLATIONS OF STATE SURFACE OR GROUND WATER QUALITY STANDARDS.

   PROPER APPLICATION RATES AND METHODS FERTILIZERS AND PESTICIDES:
   FERTILIZERS AND PESTICIDE USE SHALL BE IN CONFORMANCE WITH THE LANDSCAPING PLANS. NO DEVIATIONS SHALL BE ACCEPTED WITHOUT WRITTEN REQUEST.

   e. THE PLAN SHALL ENSURE THAT THE APPLICATION, GENERATION, AND MIGRATION OF TOXIC SUBSTANCES IS LIMITED AND THAT TOXIC MATERIALS ARE PROPERLY STORED AND DISPOSED.

   TOXIC MATERIAL STORAGE / DISPOSAL:
   CONTRACTOR SHALL MAINTAIN A LOG ON-SITE WHICH RECORDS THE REMOVAL AND DISPOSAL OF ALL MATERIALS. LOG SHALL DETAIL BOTH THE SPECIFICS OF THE MATERIALS INCLUDING HEALTH AND ENVIRONMENTAL HAZARDS AS WELL AS THE LOCATION AND RECEIPTS FROM THE DISPOSAL SITE.

7. APPROVED STATE OR LOCAL PLANS:

   a. FACILITIES WHICH DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES MUST INCLUDE IN THEIR STORMWATER POLLUTION PREVENTION PLAN PROCEDURES AND REQUIREMENTS SPECIFIED IN APPLICABLE SEDIMENT AND EROSION SITE PLANS OR SITE PERMITS, OR STORMWATER MANAGEMENT SITE PLANS OR SITE PERMITS APPROVED BY STATE, REGIONAL, OR LOCAL OFFICIALS. PERMITTEES SHALL PROVIDE A CERTIFICATION IN THEIR STORMWATER POLLUTION PREVENTION PLAN THAT THEIR STORMWATER POLLUTION PREVENTION PLAN REFLECTS REQUIREMENTS APPLICABLE TO PROTECTING SURFACE WATER RESOURCES IN SEDIMENT AND EROSION SITE PLANS OR SITE PERMITS, OR STORMWATER MANAGEMENT SITE PLANS OR SITE PERMITS APPROVED BY STATE, REGIONAL, OR LOCAL OFFICIALS. PERMITTEES SHALL COMPLY WITH ANY SUCH REQUIREMENTS DURING THE TERM OF THE PERMIT. THIS PROVISION DOES NOT APPLY TO PROVISIONS OF MASTER PLANS, COMPREHENSIVE PLANS, NON-ENFORCEABLE GUIDELINES OR TECHNICAL GUIDANCE DOCUMENTS THAT ARE NOT IDENTIFIED IN A SPECIFIC PLAN OR PERMIT THAT IS ISSUED FOR THE CONSTRUCTION SITE.

   CERTIFICATE OF COMPLIANCE WITH STORMWATER PERMITS APPROVED BY JURISDICTIONAL AGENCIES:
   CONTRACTOR SHALL PROVIDE A LETTER ON LETTERHEAD STATING THEY ARE AWARE OF FEDERAL, STATE AND LOCAL POLLUTION PREVENTION REQUIREMENTS AND WILL CONDUCT THEIR CONSTRUCTION EFFORTS ACCORDINGLY.

   b. STORMWATER POLLUTION PREVENTION PLANS MUST BE AMENDED TO REFLECT ANY CHANGE APPLICABLE TO PROTECTING SURFACE WATER RESOURCES IN SEDIMENT AND EROSION SITE PLANS OR SITE PERMITS, OR STORMWATER MANAGEMENT SITE PLANS OR SITE PERMITS APPROVED BY STATE, REGIONAL, OR LOCAL OFFICIALS FOR WHICH THE PERMITTEE RECEIVES WRITTEN NOTICE. WHERE THE PERMITTEE RECEIVES SUCH WRITTEN NOTICE OF A CHANGE, THE PERMITTEE SHALL PROVIDE A RE-CERTIFICATION IN THE STORMWATER POLLUTION PREVENTION PLAN THAT THE STORMWATER POLLUTION PREVENTION PLAN HAS BEEN MODIFIED TO ADDRESS SUCH CHANGES.

   CERTIFICATE OF COMPLIANCE THAT S.W.P.P.P. PERMIT WILL BE MODIFIED AS REQUIRED BY JURISDICTIONAL AGENCIES:
   CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY BROWARD COUNTY, CITY OF HOLLYWOOD AND FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION IF ALTERATIONS TO SWPPP ARE DESIRED. APPROVALS FROM APPLICABLE ENTITIES ARE REQUIRED PRIOR TO IMPLEMENTATION.

   c. DISCHARGERS SEEKING ALTERNATIVE PERMIT REQUIREMENTS SHALL SUBMIT AN INDIVIDUAL PERMIT APPLICATION IN ACCORDANCE WITH RULE 62-620, F.A.C. TO THE LOCAL DEPARTMENT OFFICE, ALONG WITH A DESCRIPTION OF WHY REQUIREMENTS IN APPROVED STATE, REGIONAL, OR LOCAL PLANS OR PERMITS, OR CHANGES TO SUCH PLANS OR PERMITS SHOULD NOT BE APPLICABLE AS A CONDITION OF THE INDIVIDUAL PERMIT.

   ALTERNATIVE PERMIT REQUEST:
   N/A

8. MAINTENANCE:

   THE PLAN SHALL INCLUDE A DESCRIPTION OF PROCEDURES THAT WILL BE FOLLOWED TO ENSURE THE TIMELY MAINTENANCE OF VEGETATION, EROSION AND SEDIMENT CONTROLS, STORMWATER MANAGEMENT PRACTICES, AND OTHER PROTECTIVE MEASURES AND BMPS SO THEY WILL REMAIN IN GOOD AND EFFECTIVE OPERATING CONDITIONS.

   DESCRIPTION OF PROCEDURES FOR MAINTENANCE:
   CONTRACTOR SHALL PERFORM SITE INSPECTIONS A MINIMUM OF ONCE PER WEEK AND AFTER ANY SINGLE STORM EVENT WHICH HAS 0.5 INCH OR MORE PRECIPITATION TO CONFIRM THE INTEGRITY OF THE SWPPP. A LOG OF THESE INSPECTIONS SHALL BE KEPT ON-SITE AT ALL TIMES.

9. INSPECTIONS (NOTE: ALL INSPECTION REPORTS SHALL BE KEPT IN A 3 RING BINDER ON-SITE):

   QUALIFIED PERSONNEL (PROVIDED BY THE DISCHARGER) SHALL INSPECT ALL POINTS OF DISCHARGE INTO SURFACE WATERS OR TO A MUNICIPAL SEPARATE STORM SEWER SYSTEM AND ALL DISTURBED AREAS OF THE CONSTRUCTION SITE AND SET FORTH HOW THESE AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROLS, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.25 INCHES OR GREATER. WHERE SITES HAVE BEEN FINALLY STABILIZED; SUCH INSPECTION SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH.

   a. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE STORMWATER SYSTEM. THE STORMWATER MANAGEMENT SYSTEM AND EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION AND SEDIMENT CONTROL AND STORMWATER TREATMENT MEASURES ARE EFFECTIVE IN MEETING THE PERFORMANCE STANDARDS SET FORTH IN SECTION 62-40.432, F.A.C. AND THE APPLICABLE STORMWATER OR ENVIRONMENTAL RESOURCE PERMITTING REGULATIONS OF THE FDEP OR APPROPRIATE WMD. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING.

   b. BASED ON THE RESULTS OF THE INSPECTION, ALL MAINTENANCE OPERATIONS NEEDED TO ASSURE PROPER OPERATION OF ALL CONTROLS, BMPS, PRACTICES, OR MEASURES IDENTIFIED IN THE STORMWATER POLLUTION PREVENTION PLAN SHALL BE DONE IN A TIMELY MANNER, BUT IN NO CASE LATER THAN 7 CALENDAR DAYS FOLLOWING THE INSPECTION. IF NEEDED, THE POLLUTION PREVENTION CONTROLS, BMPS, AND MEASURES IDENTIFIED IN THE PLAN SHALL BE REVISED AS APPROPRIATE, BUT IN NO CASE LATER THAN 7 CALENDAR DAYS FOLLOWING THE INSPECTION. SUCH MODIFICATIONS SHALL PROVIDE FOR TIMELY IMPLEMENTATION OF ANY CHANGES TO THE PLAN WITHIN 7 CALENDAR DAYS FOLLOWING THE INSPECTION.

   c. A REPORT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE STORMWATER POLLUTION PREVENTION PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PARAGRAPH V.D.9.b OF THE PERMIT SHALL BE MADE AND RETAINED AS PART OF THE STORMWATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED. SUCH REPORTS SHALL IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE. WHERE A REPORT DOES NOT IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE, THE REPORT SHALL CONTAIN A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN AND THIS PERMIT. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART VII.C OF THIS PERMIT.

10. NON-STORMWATER DISCHARGES:
    EXCEPT FOR FLOWS FROM FIRE FIGHTING ACTIVITIES, SOURCES OF NON-STORMWATER LISTED IN PART IV.A.3 OF THIS PERMIT THAT ARE COMBINED WITH STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY MUST BE IDENTIFIED IN THE PLAN. THE PLAN SHALL IDENTIFY AND ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION AND TREATMENT MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE.

    ONLY STORMWATER WILL ALLOWED TO BE DISCHARGED FROM PROJECT. DEWATERING IF APPLICABLE SHALL BE CLARIFIED PRIOR TO DISCHARGE AND A PERMIT FOR SUCH SHALL BE OBTAINED BY THE CONTRACTOR THROUGH SFWMD.

E. CONTRACTOR CERTIFICATION STATEMENT:

   a. ALL CONTRACTORS AND SUBCONTRACTORS THAT PERFORM WORK ON THIS PROJECT MUST FILL OUT AND SIGN THE APPROPRIATE DISCIPLINE BELOW PRIOR TO BEGINNING CONSTRUCTION. THE CERTIFICATION MUST INCLUDE THE NAME AND TITLE OF THE PERSON PROVIDING THE SIGNATURE IN ACCORDANCE WITH PART VII.C.2 OF THIS PLAN; THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE CONTRACTING FIRM; THE ADDRESS (OR OTHER IDENTIFYING DESCRIPTION) OF THE SITE; AND THE DATE THE CERTIFICATION IS MADE. BY SIGNING BELOW, THE CONTRACTOR CERTIFY'S THE FOLLOWING STATEMENT; "I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERIC STORMWATER PERMIT ISSUED PURSUANT TO SECTION 403.0885, F. S., THAT AUTHORIZES THE STORMWATER CHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION."

ADDRESS / VICINITY: _____
CITY: _____ COUNTY _____ STATE: ____ ZIP: _____

1. SITE INFORMATION

CONTRACTOR DISCIPLINE: GENERAL CONTRACTOR:
COMPANY NAME: _____
ADDRESS: _____
CITY: _____ STATE: _____ ZIP: _____
PHONE: (_____)_____–_____ FAX: (_____)_____–_____
PRINT NAME & TITLE: _____
_____ _____
CONTRACTOR SIGNATURE DATE OF CERTIFICATION
APPLICABLE CONTROL MEASURES: _____

CONTRACTOR DISCIPLINE: CLEARING AND GRUBBING
COMPANY NAME: _____
ADDRESS: _____
CITY: _____ STATE: _____ ZIP: _____
PHONE: (_____)_____–_____ FAX: (_____)_____–_____
PRINT NAME & TITLE: _____
_____ _____
CONTRACTOR SIGNATURE DATE OF CERTIFICATION
APPLICABLE CONTROL MEASURES: _____

CONTRACTOR DISCIPLINE: EXCAVATION
COMPANY NAME: _____
ADDRESS: _____
CITY: _____ STATE: _____ ZIP: _____
PHONE: (_____)_____–_____ FAX: (_____)_____–_____
PRINT NAME & TITLE: _____
_____ _____
CONTRACTOR SIGNATURE DATE OF CERTIFICATION
APPLICABLE CONTROL MEASURES: _____

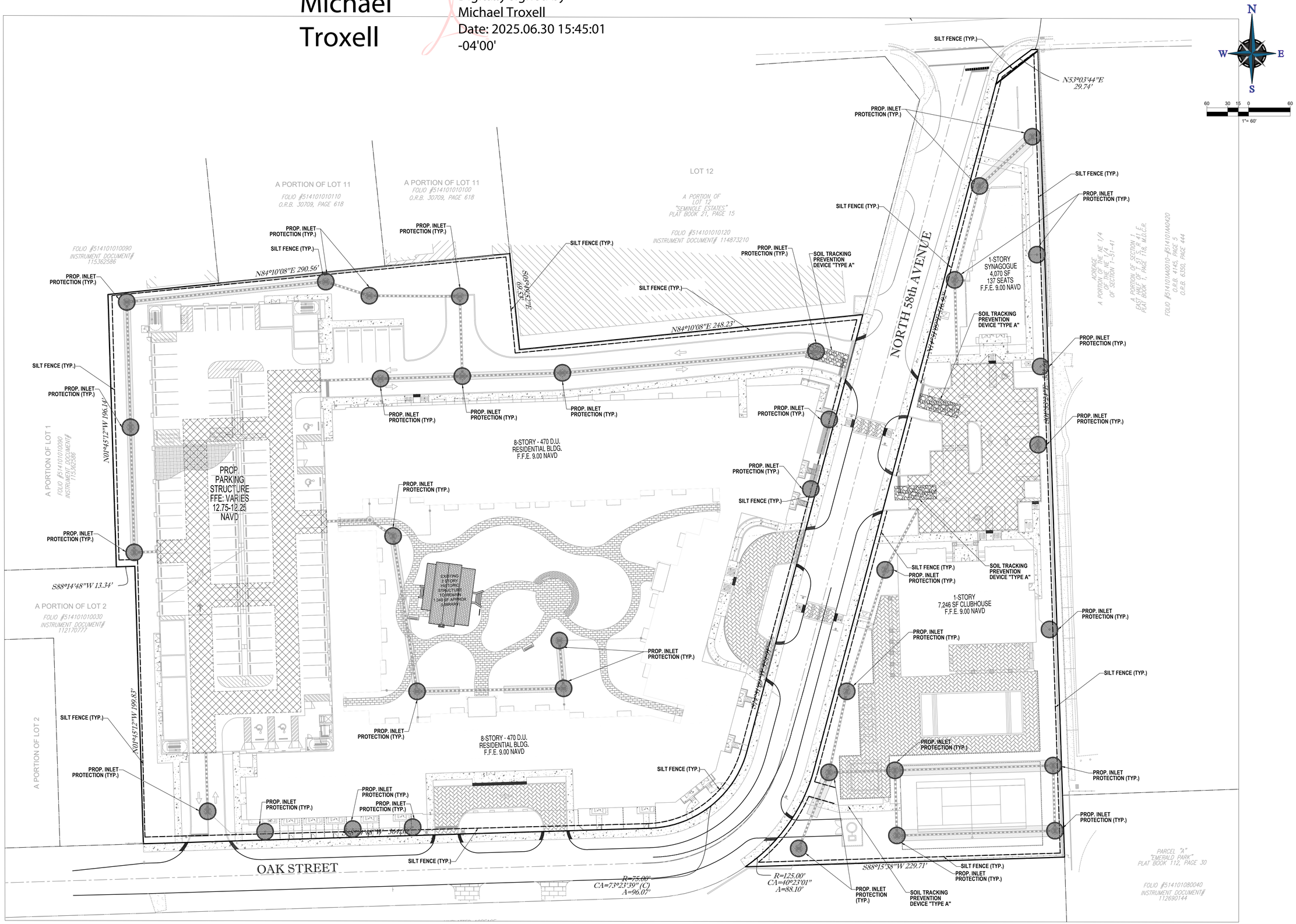
CONTRACTOR DISCIPLINE: FILLING
COMPANY NAME: _____
ADDRESS: _____
CITY: _____ STATE: _____ ZIP: _____
PHONE: (_____)_____–_____ FAX: (_____)_____–_____
PRINT NAME & TITLE: _____
_____ _____
CONTRACTOR SIGNATURE DATE OF CERTIFICATION
APPLICABLE CONTROL MEASURES: _____

CONTRACTOR DISCIPLINE: UTILITY INSTALLATION – WATER DISTRIBUTION SANITARY SEWER
COMPANY NAME: _____
ADDRESS: _____
CITY: _____ STATE: _____ ZIP: _____
PHONE: (_____)_____–_____ FAX: (_____)_____–_____
PRINT NAME & TITLE: _____
_____ _____
CONTRACTOR

MICHAEL A. TROXELL, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 50572
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY MICHAEL A. TROXELL, P.E. ON 6/30/2025. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES

Michael Troxell

Digitally signed by Michael Troxell
Date: 2025.06.30 15:45:01 -04'00'



THOMAS ENGINEERING GROUP
CIVIL ENGINEERS · PROJECT MANAGERS · LAND PLANNING · LANDSCAPE ARCHITECTS
1502 W. FLETCHER AVE. SUITE 101 TAMPA, FL 33612
125 W. INDIANTOWN RD. SUITE 206 JUPITER, FL 33458
P: (813) 379-4100
P: 561-203-7503

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REVISIONS:

REV:	DATE:	COMMENT:	BY:

Sunshine 811
Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.
Check positive response codes before you dig!

TAC SUBMITTAL

PROJECT No.:	F240042
DRAWN BY:	CAD
CHECKED BY:	MAT
DATE:	05/06/2025
CAD I.D.:	F240042 SWPP

PROJECT:

HOLLYWOOD OAKS
4220 & 4231 N 58th Ave.
HOLLYWOOD, FL 33021

FOR

KUSHNER
188 BAL BAY DRIVE
BAL HARBOUR, FL 33154

THOMAS ENGINEERING GROUP
6300 NW 31ST AVENUE
FORT LAUDERDALE, FL 33309
PH: (954) 202-7000
FX: (954) 202-7070
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MICHAEL A. TROXELL LICENSE No. 50572 STATE OF FLORIDA PROFESSIONAL ENGINEER
June 30, 2025
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

STORMWATER POLLUTION PROVENTION PLAN

SHEET NUMBER:

SWPP-2.0

Printed on Monday, June 30, 2025, 12:54 PM by Corey Spurgeon

MICHAEL A. TROXELL, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 50572
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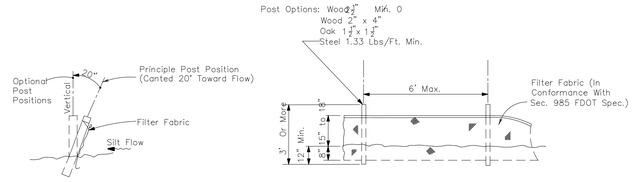
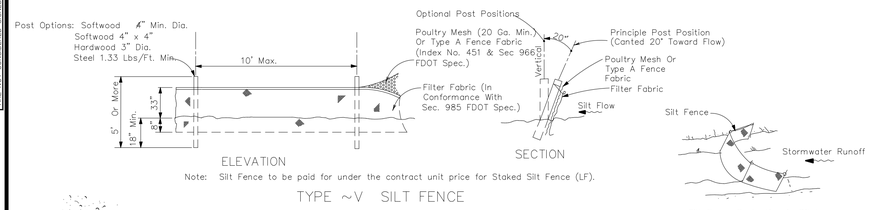
Michael Troxell

Digitally signed by Michael Troxell
Date: 2025.06.30 15:45:51 -04'00'



Note: Silt Fence to be paid for under the contract unit price for Staked Silt Fence (LF).

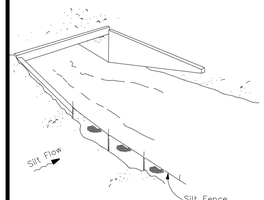
TYPE ~~~ SILT FENCE

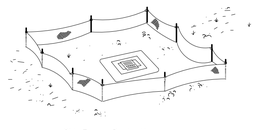


Note: Silt Fence to be paid for under the contract unit price for Staked Silt Fence (LF).

TYPE ~V SILT FENCE

Silt Fence Protection in Ditches with Intermittent Flow



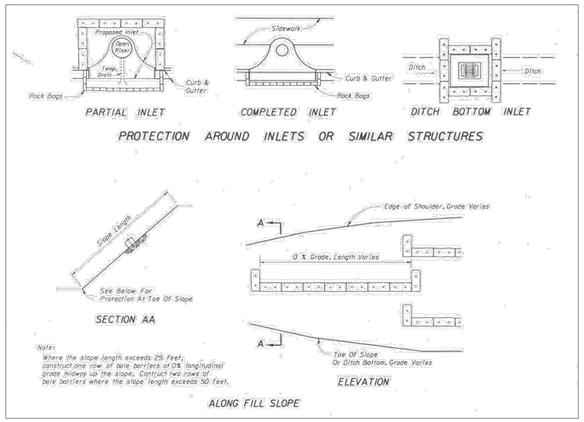


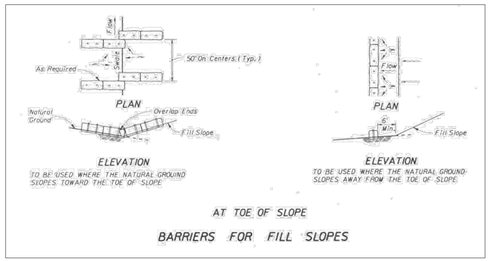
Silt Fence Protection Around Ditch Bottom Inlets.

NOTES FOR SILT FENCE

1. Type ~~~ Silt Fence to be used at most locations. Where used in Ditches the spacing for Type ~~~ Silt Fence shall be in accordance with char 1, Sheet 1.
2. Type ~V Silt Fence to be used where large sediment loads anticipated. Suggested use is where fill slope is 1:2 or steeper and length of slope exceeds 25 feet. Avoid use where the detained water may back into travel lanes or off the right of way.
3. Do not construct silt fences across permanent flowing watercourses. Silt fences are to be at upland locations and turbidity barriers used at permanent bodies of water.
4. Where used as slope protection, Silt Fence is to be constructed on 0% longitudinal grade to avoid channelizing runoff along the length of fence.

ROCK, BAG, BALED HAY, BALED STRAW AND SILT FENCE BARRIERS
SCALE: NONE





NOTES FOR BAILED HAY OR STRAW BARRIERS

1. Type I and II Barriers should be spaced in accordance with Chart I, Sheet I.
2. Hay bales shall be trenched 3" to 4" and anchored with 2" - 1" x 2" (or 1" dia.) x 4' wood stakes. Stakes of other material or shape providing equivalent strength may be used if approved by the Engineer. Stakes other than wood shall be removed upon completion of the project.
3. Rails and posts shall be 2" x 4" wood. Other materials providing equivalent strength may be used if approved by the engineer.
4. Adjacent bales shall be butted firmly together. Unavoidable gaps shall be plugged with hay or straw to prevent silt from passing.
5. Where used in conjunction with silt fence, hay bales shall be placed on the upstream side of the fence.

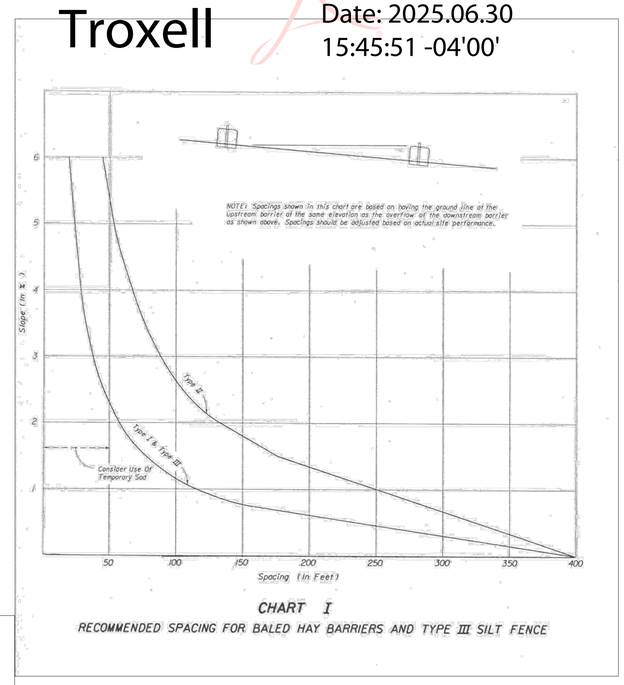
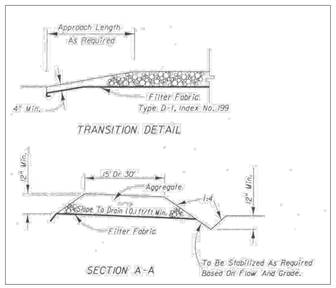
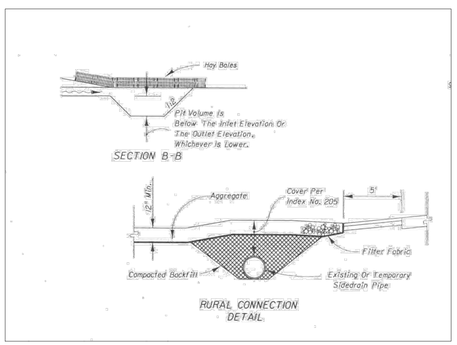
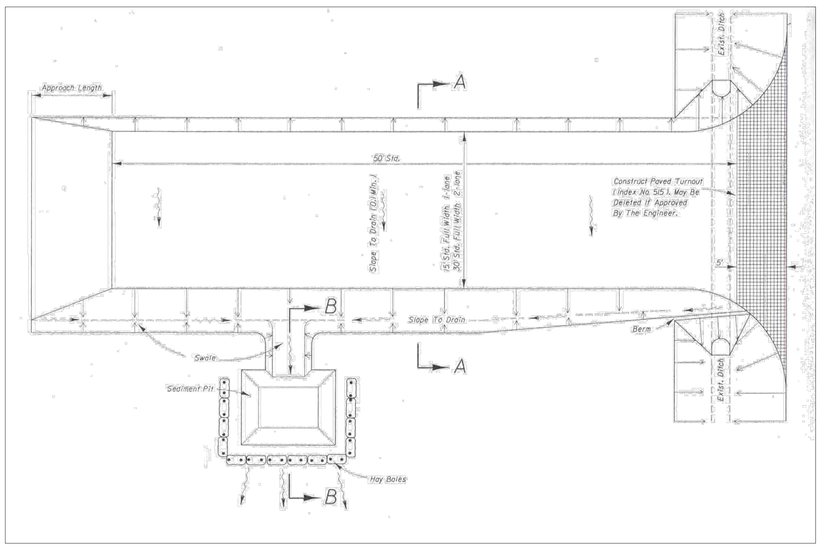


CHART I

RECOMMENDED SPACING FOR BALED HAY BARRIERS AND TYPE III SILT FENCE







GENERAL NOTES

1. A Soil Tracking Prevention Device (STPD) shall be constructed at locations designated by the engineer for points of egress from unstabilized areas of the project to public roads where offsite tracking of mud could occur. Traffic from unstabilized areas of the construction project shall be directed thru a STPD. Barriers, flagging, or other positive means shall be used as required to limit and direct vehicular egress across the STPD.
2. The Contractor may propose an alternative technique to minimize offsite tracking of sediment. The alternative must be reviewed and approved by the Engineer prior to its use.
3. All materials spilled, dropped, or tracked onto public roads (including the STPD aggregate and construction mat) shall be removed daily, or more frequently if so directed by the Engineer.
4. Aggregates shall be as described in Section 901 excluding 901-2.3. Aggregates shall be FDOT size #1, if this size is not available, the next available smaller size aggregate may be substituted with the approval of the Engineer. Sizes containing excessive small aggregate will track off the project and are unsuitable.
5. The sediment pit should provide a retention volume of 3600 cubic feet/acre of surface area draining to the pit. When the STPD is located from other drainage areas, the following pit volumes will satisfy this requirement:
   15' x 50' = 100 ft³ 30' x 50' = 200 ft³
   As an option to the sediment pit, the width of the swale bottom can be increased to obtain the volume. When the sediment pit or swale volume has been reduced to one half, it shall be cleaned. When a swale is used, hay bales or silt fence shall be placed along the entire length.
6. The swale ditch draining the STPD shall have a 0.2% minimum and a 1.0% maximum grade along the STPD and to the sediment pit.
7. Mitered end sections are not required when the sidedrain pipe satisfies the clear zone requirements.
8. The STPD shall be maintained in a condition that will allow it to perform its function. To prevent offsite tracking, the STPD shall be rinsed daily when in use) to move accumulated mud downward thru the stone. Additional stabilization of the vehicular route leading to the STPD may be required to limit the mud tracked.
9. The nominal size of a standard STPD is 15' x 50' unless otherwise shown in the plans. If the volume of entering and exiting vehicles warrant, a 30' width STPD may be used if approved by the Engineer. When a double width (30') STPD is used, the pay quantity shall be 2 for each location.

SOIL TRACKING PREVENTION DEVICE TYPE A
SCALE: NONE

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1502 W. FLETCHER AVE. SUITE 206 TAMPA, FL 33612
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Check positive response codes before you dig!

TAC SUBMITTAL

PROJECT No.:	F240042
DRAWN BY:	CAD
CHECKED BY:	MAT
DATE:	05/06/2025
CAD I.D.:	F240042 SWPP

PROJECT:

HOLLYWOOD OAKS
4220 & 4231 N 58th Ave.
HOLLYWOOD, FL 33021

FOR

KUSHNER
188 BAL BAY DRIVE
BAL HARBOUR, FL 33154

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FORT LAUDERDALE, FL 33309
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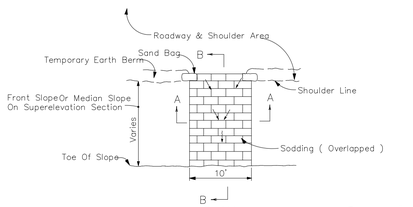
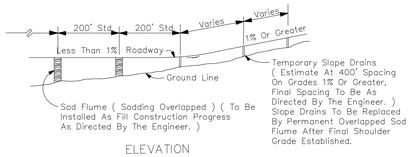
Michael Troxell

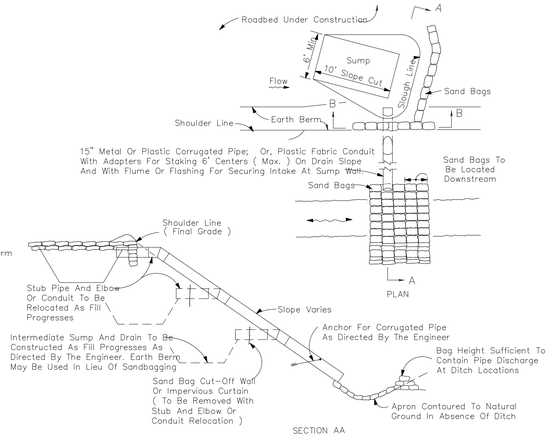
Digitally signed by Michael Troxell
Date: 2025.06.30 15:45:25 -04'00'



SOD FLUME (SODDING OVERLAPPED)



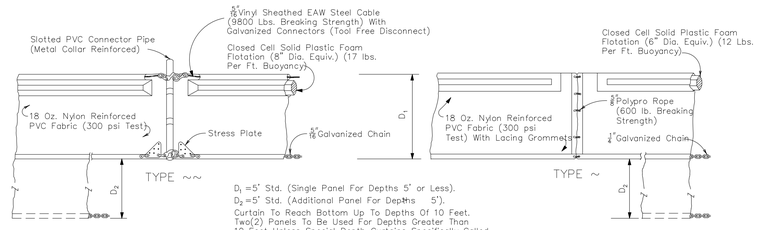
SLOPE DRAIN APPLICATION



TEMPORARY SLOPE DRAIN

TEMPORARY SLOPE DRAIN AND SOD FLUME

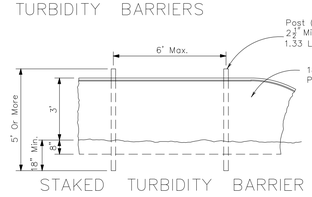
SCALE: NONE



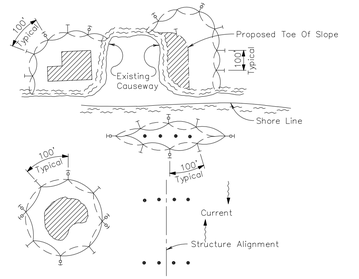
D_1 =5' Std. (Single Panel For Depths 5' or Less).
D_2 =5' Std. (Additional Panel For Depths 5').
Curtain To Reach Bottom Up To Depths Of 10 Feet. Two(2) Panels To Be Used For Depths Greater Than 10 Feet Unless Special Depth Curtains Specifically Called For In The Plans Or As Determined By The Engineer.

NOTICE: COMPONENTS OF TYPES ~ AND ~~ MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES ~ AND ~~ SHALL BE AS APPROVED BY THE ENGINEER.

FLOATING TURBIDITY BARRIERS

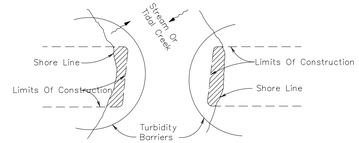


STAKED TURBIDITY BARRIER



LEGEND

- Pile Locations
- Dredge Or Fill Area
- Mooring Buoy w/Anchor
- Anchor
- Barrier Movement Due To Current Action



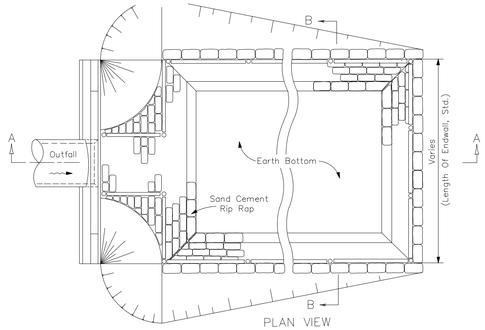
NOTES:
1. Turbidity barriers are to be used in all permanent bodies of water regardless of water depth.
2. Number and spacing of anchors dependent on current velocities.
3. Deployment of barrier around pile locations may vary to accommodate construction operations.
4. Navigation may require segmenting barrier during construction operations.
5. For additional information see Section 104 of the Standard Specifications.

Note: Turbidity barriers for flowing streams and tidal creeks may be either floating, or staked types or any combinations of types that will suit site conditions and meet erosion control and water quality requirements. The barrier type(s) will be at the Contractors option unless otherwise specified in the plans, however payment will be under the pay item(s) established in the plans for Floating Turbidity Barrier and/or Staked Turbidity Barrier. Posts in staked turbidity barriers to be installed in vertical position unless otherwise directed by the Engineer.

TURBIDITY BARRIER APPLICATIONS

TURBIDITY BARRIERS

SCALE: NONE

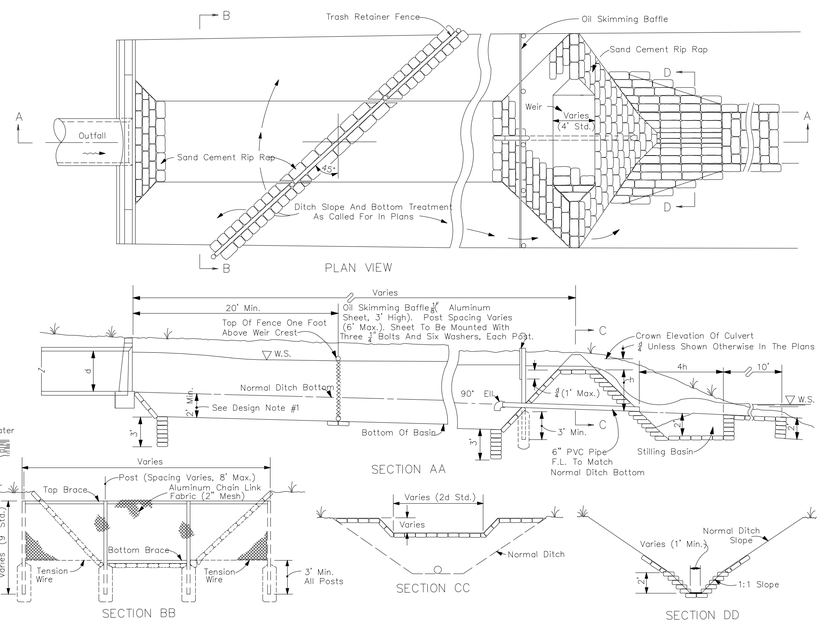


INTENDED FOR USE WHEN THE STORM SEWER OUTFALLS ADJACENT TO A SHORE LINE

TYPE A

DESIGN NOTES

1. Basins should be as deep as practical with a minimum depth of 2.0 feet.
2. In Type A, when the top of endwall is below high water, fence also will be required along the top of the endwall.
3. In Type B, the weir shall be located as far from the endwall as practical. On steep ditch grades two or more weirs may be required. Intermediate weirs shall be constructed without stilling basins.
4. In Type B, the 6" PVC pipe shall be constructed unless shown otherwise in the plans.



INTENDED FOR USE WHEN THE STORM SEWER OUTFALLS IN AN OPEN DITCH

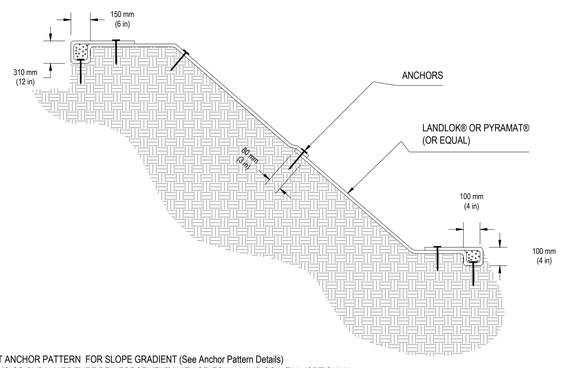
TYPE B

GENERAL CONSTRUCTION NOTES

1. Fence materials shall be aluminum or concrete only.
2. Aluminum posts shall be 3" diameter minimum. Aluminum rail braces shall be in accordance with Index 452. Concrete posts and rail braces shall be in accordance with Index 451. All posts to be set in concrete.
3. Fabric shall be installed to inside of posts and rail braces, and tied to posts and braces at 6" centers.
4. For additional details on fencing, see Index Nos. 451 and 452.
5. All basin slopes to be 1:1 unless detailed otherwise in the plans.
6. Sediment basins to be constructed prior to commencement of upland construction. Maintenance and clean out to be by the Contractor until acceptance of project by the Engineer.

TRASH RETAINER AND SEDIMENT BASIN

SCALE: NONE



NOTES:
1. UTILIZE CORRECT ANCHOR PATTERN FOR SLOPE GRADIENT (See Anchor Pattern Details)
2. INSTALL LANDLOK® OR PYRAMAT® TURF REINFORCEMENT MAT (OR EQUAL) AND SOIL FILL (OPTIONAL)

TYPICAL SLOPE CROSS-SECTION

SCALE: NONE

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Check positive response codes before you dig!

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DRAWN BY:	CAD
CHECKED BY:	MAT
DATE:	05/06/2025
CAD I.D.:	F240042 SWPP

PROJECT:

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4220 & 4231 N 58th Ave.
HOLLYWOOD, FL 33021

FOR

KUSHNER
188 BAL BAY DRIVE
BAL HARBOUR, FL 33154

THOMAS ENGINEERING GROUP
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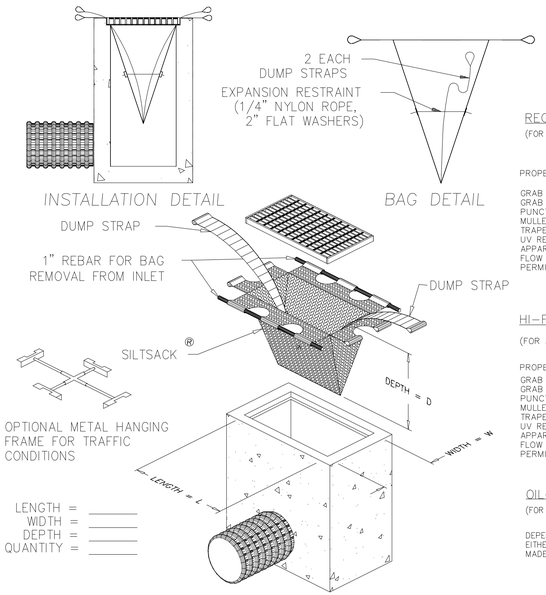


INLET SEDIMENT CONTROL DEVICE

SCALE: NONE

SILTSACK®
SPECIFICATIONS

NOTE: THE SILTSACK ® WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

REGULAR FLOW SILTSACK ®
(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

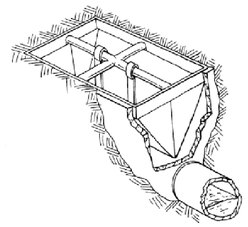
PROPERTIES	TEST METHODS	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

HI-FLOW SILTSACK ®
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHODS	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

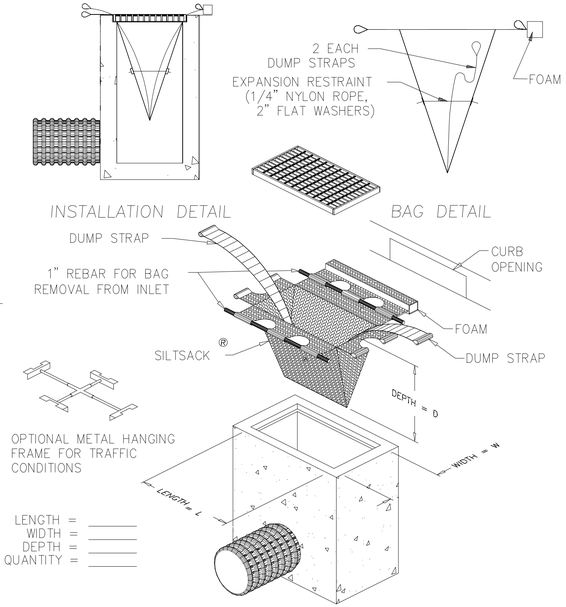
OIL-ABSORBANT SILTSACK ®
(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)

DEPENDING ON YOUR PARTICULAR APPLICATION, THE SILTSACK ®CAN BE MADE FROM EITHER ONE OF THE ABOVE FABRICS WITH AN OIL-ABSORBANT PILLOW INSERT OR, MADE COMPLETELY FROM AN OIL-ABSORBANT SILTSACK® , WITH A WOVEN PILLOW INSERT.



METAL HANGING FRAME

SCALE: NONE



INLET SEDIMENT CONTROL DEVICE W/ FOAM

SCALE: NONE

SILTSACK®
SPECIFICATIONS

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REGULAR FLOW SILTSACK ®
(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

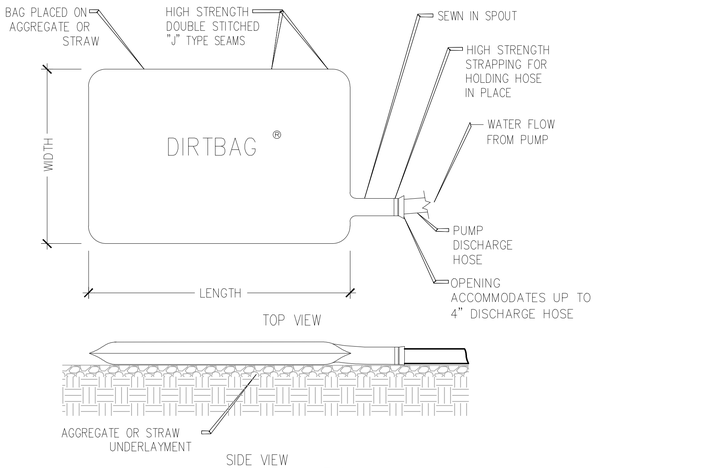
PROPERTIES	TEST METHODS	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

HI-FLOW SILTSACK ®
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHODS	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

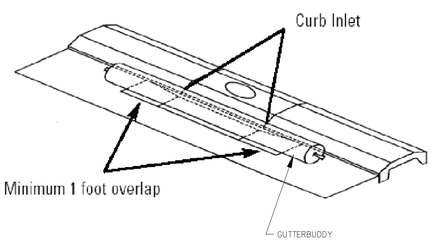
OIL-ABSORBANT SILTSACK ®
(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)

DEPENDING ON YOUR PARTICULAR APPLICATION, THE SILTSACK ®CAN BE MADE FROM EITHER ONE OF THE ABOVE FABRICS WITH AN OIL-ABSORBANT PILLOW INSERT OR, MADE COMPLETELY FROM AN OIL-ABSORBANT SILTSACK® , WITH A WOVEN PILLOW INSERT.



DIRTBAG PUMPED SILT CONTROL SYSTEM

SCALE: NONE



GUTTERBUDDY

SCALE: NONE

NOTES:

2.1 GUTTERBUDDY®

The Gutterbuddy® shall be a synthetic filter manufactured from recycled synthetic fibers.

2.1.1 The Gutterbuddy® will be manufactured to be 9" in diameter and are available in 3',6',12' and 16' lengths and a minimum of twenty four (24) inches longer than the curb inlet opening. This will allow for sufficient length to cover the inlet with twelve (12) inches beyond the inlet on both ends.

3.0 Construction Sequence

3.1 General

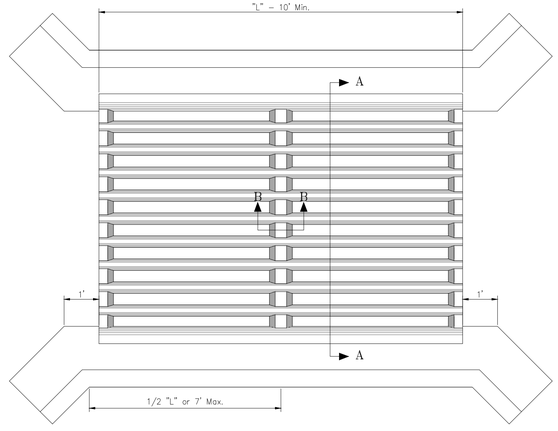
3.1.1 Install the Gutterbuddy® in front of the curb inlet opening. Each end of the Gutterbuddy® should overlap the curb inlet approximately 12".

3.1.2 The Gutterbuddy® should be cleaned if a visual inspection shows silt and debris build up around the Gutterbuddy®.

3.1.3 To remove the Gutterbuddy®, lift out of the opening.

3.1.4 The Gutterbuddy® is reusable once the construction project is complete and it is no longer needed for sediment control, remove, clean and store out of the sunlight until needed on the next project.

3.1.5 Ponding is likely if sediment is not removed regularly. Inspection of Gutterbuddy® should be on a regular basis and immediately after major rain events.



PLAN VIEW

MINIMUM SECTIONAL AREA OF MEMBERS

Intermediate Rail —— 28 sq. in.
Side Rail —— 50 sq. in.
Beam —— 48 sq. in.

Min. 2 bars per rail having a Min. total weight of 2.004 lbs. per ft.

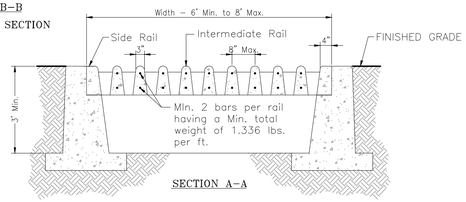
SECTION B-B
TYPICAL BEAM SECTION

NOTES

Any manufacturers fabrication meeting or exceeding the minimum design requirements detailed hereon will be acceptable.

All concrete in precast members to be 4000 PSI. Concrete in footing to be Class C1 or A3.

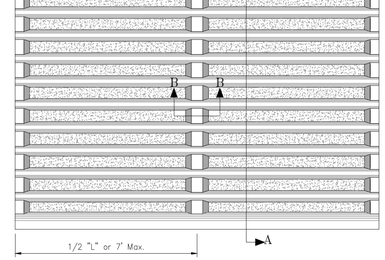
Length to be as shown on plans.



SECTION A-A

PRECAST CONCRETE CATTLE GUARD

SCALE: NONE



PLAN VIEW

Min. 2 bars per rail having a Min. total weight of 2.004 lbs. per ft.

SECTION B-B
TYPICAL BEAM SECTION

NOTES

Any manufacturers fabrication meeting or exceeding the minimum design requirements detailed hereon will be acceptable.

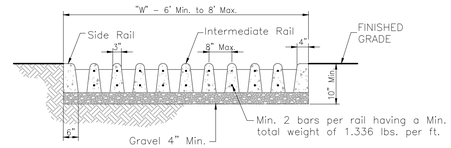
All concrete in precast members to be 4000 PSI.

Length to be as shown on plans.

* A rail spacing of 9 1/2" would be allowed provided
the space of beams does not exceed 3'.

MINIMUM SECTIONAL AREA OF MEMBERS

Intermediate Rail —— 28 sq. in.
Side Rail —— 50 sq. in.
Beam —— 48 sq. in.



SECTION A-A

PRECAST CONCRETE CATTLE GUARD ON GRADE

SCALE: NONE

THOMAS ENGINEERING GROUP
CIVIL ENGINEERS - PROJECT MANAGERS - LAND PLANNING - LANDSCAPE ARCHITECTS
1502 W. FLETCHER AVE. UNIT NO. 101 TAMPA, FL 33612
125 W. INDIANTOWN RD. SUITE 206 JUPITER, FL 33458
P: (813) 379-4100
P: 561-203-7503

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REVISIONS:

REV:	DATE:	COMMENT:	BY:

Sunshine 811
Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.
Check positive response codes before you dig!

TAC SUBMITTAL

PROJECT No.:	F240042
DRAWN BY:	CAD
CHECKED BY:	MAT
DATE:	05/06/2025
CAD I.D.:	F240042 SWPP

PROJECT:

HOLLYWOOD OAKS
4220 & 4231 N 58th Ave.
HOLLYWOOD, FL 33021

FOR

KUSHNER
188 BAL BAY DRIVE
BAL HARBOUR, FL 33154

THOMAS ENGINEERING GROUP
6300 NW 31ST AVENUE
FORT LAUDERDALE, FL 33309
PH: (954) 202-7000
FX: (954) 202-7070
www.ThomasEngineeringGroup.com

MICHAEL A. TROXELL LICENSE No. 50572 STATE OF FLORIDA PROFESSIONAL ENGINEER
June 30, 2025
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

STORMWATER POLLUTION PROVENTION PLAN

SHEET NUMBER:

SWPP-5.0

Printed on Monday, June 30, 2025, 12:54 PM by Corey Spivakovsky M:\2024\F240042 SWPP_____\CAD\F240042 SWPP.....

MICHAEL A. TROXELL, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 50572
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY MICHAEL A. TROXELL ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

FIRE FLOW CALCULATIONS (470 UNIT APARTMENT BUILDING):
PROPOSED 1-STORY 470 SF APARTMENT BUILDING. THE ENTIRE BUILDING IS NONCOMBUSTIBLE CONSTRUCTION (CONSTRUCTION TYPE I(332)). THE LARGEST THREE CONSECUTIVE FLOOR AREA FOR THE BUILDING IS 196,895 SF. PER NFPA 18.4.5.2.1 FIRE FLOW REQUIREMENTS, THE FIRE REQUIREMENT FOR A TYPE I(332) CONSTRUCTION BETWEEN 183,401 AND 203,700 SF FIRE FLOW AREA IS 4,750 GPM FOR 4 HOURS. NFPA 18.4.5.3.2 STATES THAT THE REQUIRED FIRE FLOW CAN BE REDUCED BY 75% IF THE BUILDING HAS AUTOMATIC SPRINKLERS.

4,750 GPM X 75% = 3,562.5 GPM (FIRE FLOW CREDIT)
4,750 GPM - 3,562.5 GPM = 1,187.5 GPM (ROUND TO 1,250 GPM)
*THE MINIMUM FIRE FLOW PER NFPA 18.4.5.2.1 IS 1,250 GPM

BASED ON THE FIRE FLOW TEST RESULTS DATED 10/23/2024, THE BELOW CALCULATIONS DEMONSTRATE THE PROVIDED FIRE FLOW AT 20 PSI.

Q2 = Q1 * [(S - P2)/(S - P1)]^0.54
WHERE Q1= FLOW TEST GPM = 900 GPM
S= FLOW TEST STATIC PSI = 55 PSI
P1= FLOW TEST RESIDUAL PSI = 48 PSI
P2= PSI PER NFPA 1, TABLE 18.4.5.1.2 = 20 PSI
Q2 = 900 * [(55 - 48)/(55 - 48)]^0.54
Q2 = 2,146 GPM AT 20 PSI > 1,250 GPM

ADDITIONALLY, THERE ARE THREE (3) EXISTING FIRE HYDRANTS WITHIN 250' OF THE PROPOSED BUILDING. NFPA TABLE 18.5.4.3 STATES THAT A HYDRANT LESS THAN 250' FROM THE BUILDING PROVIDE A MAXIMUM CAPACITY OF 1,500 GPM. BASED ON THIS INFORMATION, THE AGGREGATE FIRE FLOW CAPACITY FROM THE HYDRANTS IN THE VICINITY IS 2,146 GPM, EXCEEDING THE REQUIRED 1,500 GPM.

FIRE FLOW CALCULATIONS (SYNAGOGUE BUILDING):
PROPOSED 1-STORY 4,070 SF SYNAGOGUE BUILDING. THE ENTIRE BUILDING IS NONCOMBUSTIBLE CONSTRUCTION (CONSTRUCTION TYPE I(332)). PER NFPA 18.4.5.2.1 FIRE FLOW REQUIREMENTS, THE FIRE REQUIREMENT FOR A TYPE I(332) CONSTRUCTION BETWEEN 0 AND 22,700 SF FIRE FLOW AREA IS 1,500 GPM FOR 2 HOURS. NFPA 18.4.5.3.2 STATES THAT THE REQUIRED FIRE FLOW CAN BE REDUCED BY 75% IF THE BUILDING HAS AUTOMATIC SPRINKLERS.

1,500 GPM X 75% = 1,125 GPM (FIRE FLOW CREDIT)
1,500 GPM - 1,125 GPM = 375 GPM
*THE MINIMUM FIRE FLOW PER NFPA 18.4.5.2.1 IS 1,250 GPM

BASED ON THE FIRE FLOW TEST RESULTS DATED 10/23/2024, THE BELOW CALCULATIONS DEMONSTRATE THE PROVIDED FIRE FLOW AT 20 PSI.

Q2 = Q1 * [(S - P2)/(S - P1)]^0.54
WHERE Q1= FLOW TEST GPM = 900 GPM
S= FLOW TEST STATIC PSI = 55 PSI
P1= FLOW TEST RESIDUAL PSI = 48 PSI
P2= PSI PER NFPA 1, TABLE 18.4.5.1.2 = 20 PSI
Q2 = 900 * [(55 - 48)/(55 - 48)]^0.54
Q2 = 2,146 GPM AT 20 PSI > 1,250 GPM

ADDITIONALLY, THERE ARE ONE (1) EXISTING FIRE HYDRANTS WITHIN 250' OF THE PROPOSED BUILDING. NFPA TABLE 18.5.4.3 STATES THAT A HYDRANT LESS THAN 250' FROM THE BUILDING PROVIDE A MAXIMUM CAPACITY OF 1,500 GPM. BASED ON THIS INFORMATION, THE AGGREGATE FIRE FLOW CAPACITY FROM THE HYDRANTS IN THE VICINITY IS 2,146 GPM, EXCEEDING THE REQUIRED 1,500 GPM.

FIRE FLOW CALCULATIONS (CLUB HOUSE BUILDING):
PROPOSED 1-STORY 7,246 SF CLUB HOUSE BUILDING. THE ENTIRE BUILDING IS NONCOMBUSTIBLE CONSTRUCTION (CONSTRUCTION TYPE I(332)). PER NFPA 18.4.5.2.1 FIRE FLOW REQUIREMENTS, THE FIRE REQUIREMENT FOR A TYPE I(332) CONSTRUCTION BETWEEN 0 AND 22,700 SF FIRE FLOW AREA IS 1,500 GPM FOR 2 HOURS. NFPA 18.4.5.3.2 STATES THAT THE REQUIRED FIRE FLOW CAN BE REDUCED BY 75% IF THE BUILDING HAS AUTOMATIC SPRINKLERS.

1,500 GPM X 75% = 1,125 GPM (FIRE FLOW CREDIT)
1,500 GPM - 1,125 GPM = 375 GPM
*THE MINIMUM FIRE FLOW PER NFPA 18.4.5.2.1 IS 1,250 GPM

BASED ON THE FIRE FLOW TEST RESULTS DATED 10/23/2024, THE BELOW CALCULATIONS DEMONSTRATE THE PROVIDED FIRE FLOW AT 20 PSI.

Q2 = Q1 * [(S - P2)/(S - P1)]^0.54
WHERE Q1= FLOW TEST GPM = 900 GPM
S= FLOW TEST STATIC PSI = 55 PSI
P1= FLOW TEST RESIDUAL PSI = 48 PSI
P2= PSI PER NFPA 1, TABLE 18.4.5.1.2 = 20 PSI
Q2 = 900 * [(55 - 48)/(55 - 48)]^0.54
Q2 = 2,146 GPM AT 20 PSI > 1,250 GPM

ADDITIONALLY, THERE ARE ONE (1) EXISTING FIRE HYDRANTS WITHIN 250' OF THE PROPOSED BUILDING. NFPA TABLE 18.5.4.3 STATES THAT A HYDRANT LESS THAN 250' FROM THE BUILDING PROVIDE A MAXIMUM CAPACITY OF 1,500 GPM. BASED ON THIS INFORMATION, THE AGGREGATE FIRE FLOW CAPACITY FROM THE HYDRANTS IN THE VICINITY IS 2,146 GPM, EXCEEDING THE REQUIRED 1,500 GPM.

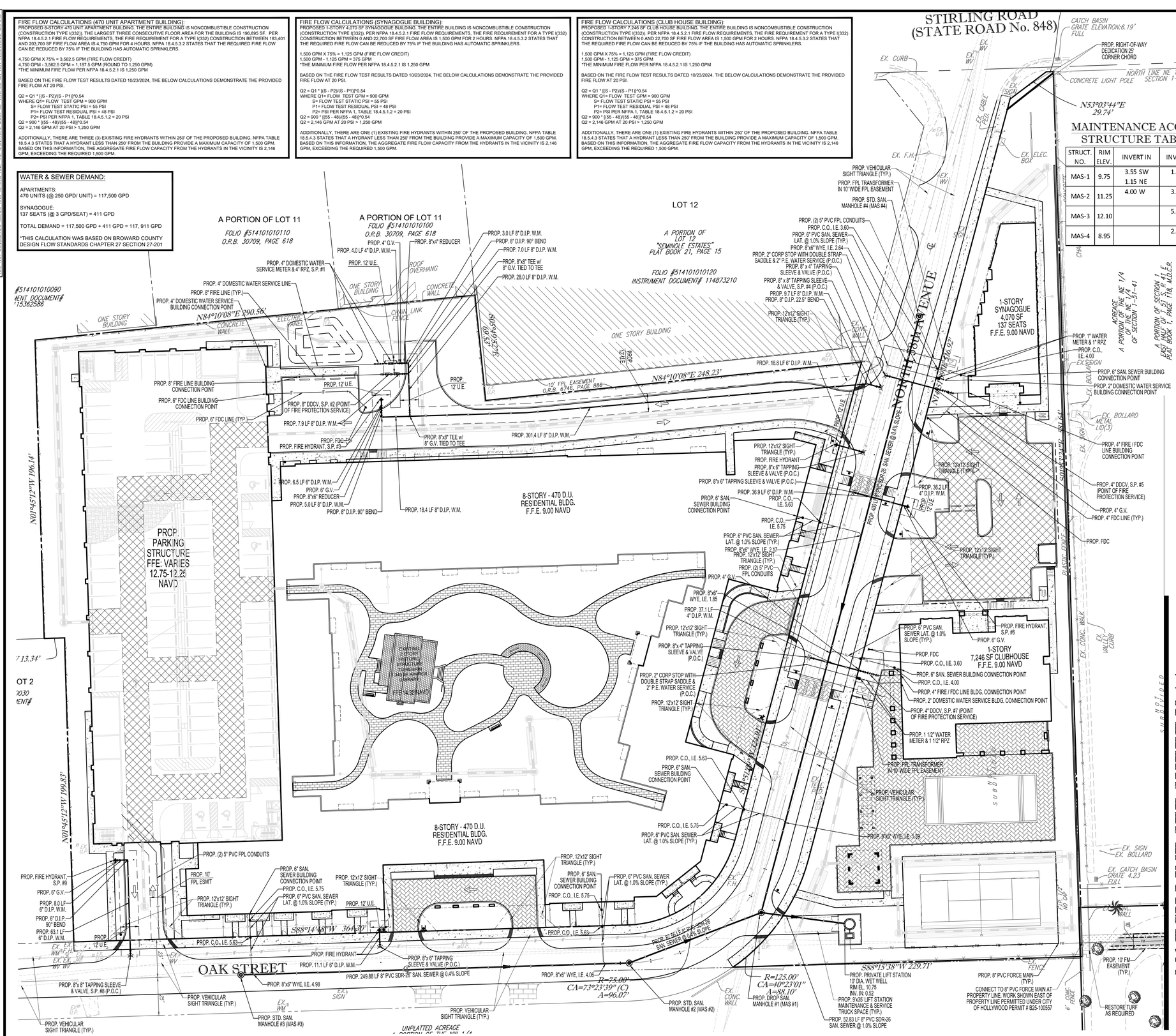
WATER & SEWER DEMAND:

APARTMENTS:
470 UNITS (@ 250 GPD/ UNIT) = 117,500 GPD

SYNAGOGUE:
137 SEATS (@ 3 GPD/SEAT) = 411 GPD

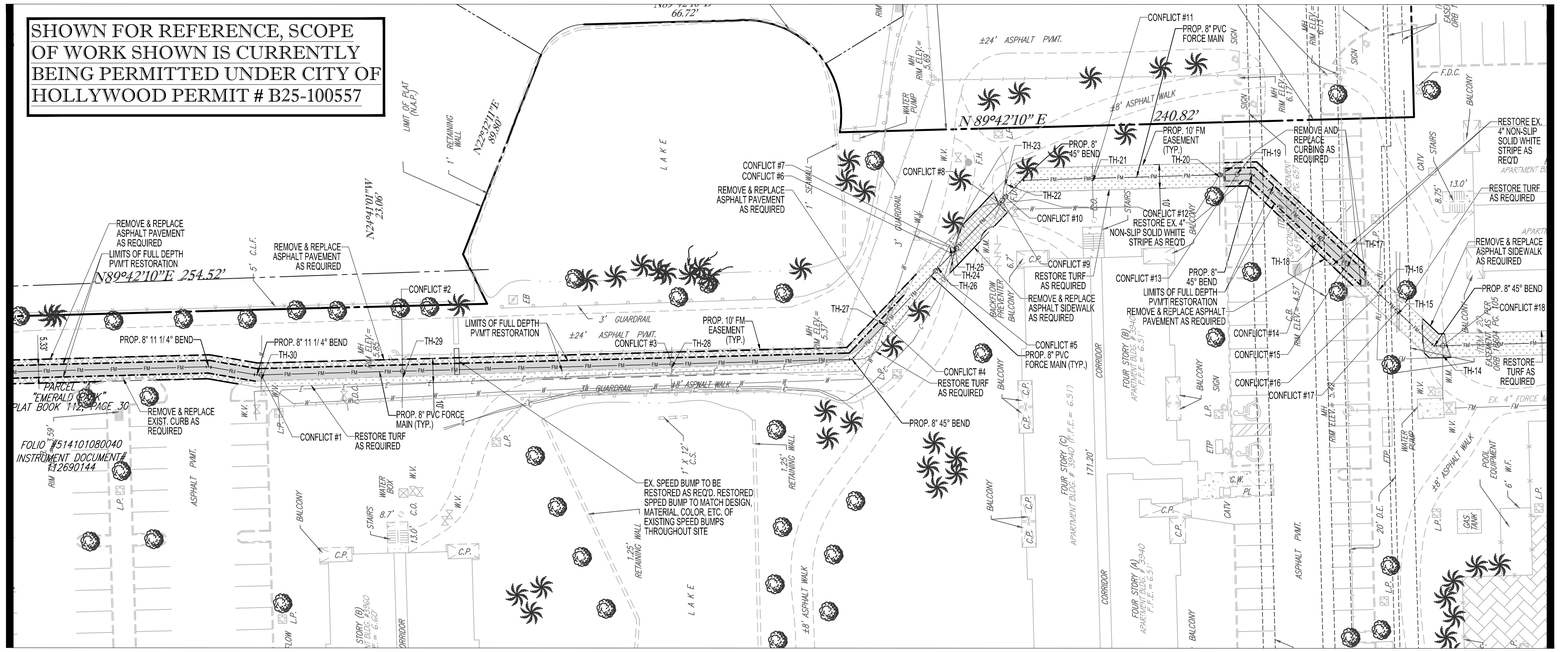
TOTAL DEMAND = 117,500 GPD + 411 GPD = 117, 911 GPD

*THIS CALCULATION WAS BASED ON BROWARD COUNTY DESIGN FLOW STANDARDS CHAPTER 27 SECTION 27-201

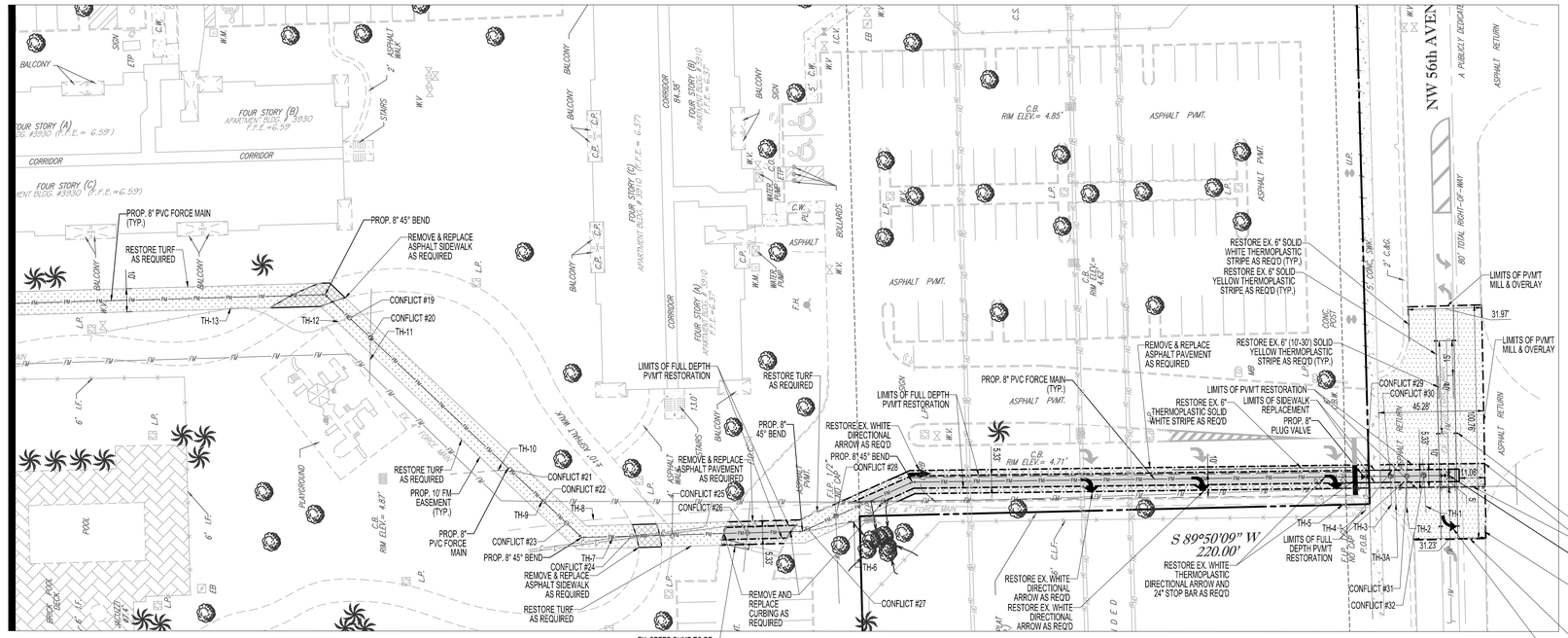

STIRLING ROAD (STATE ROAD No. 848)
CATCH BASIN GRATE ELEVATION:6.19' FULL
PROP. RIGHT-OF-WAY DEDICATION 25' CORNER CHORD
NORTH LINE NE 1/4 OF SECTION 1-51-41
CONCRETE LIGHT POLE
N53°03'44"E 29.74'
EX. CURB
EX. W
EX. CABLE
EX. F.H.
EX. ELEC. BOX
EX. CONC. WALK
EX. SIGN
PROP. VEHICULAR SIGHT TRIANGLE (TYP.)
PROP. FPL TRANSFORMER IN 10' WIDE FPL EASEMENT
PROP. STD. SAN. MANHOLE #4 (MAS #4)
LOT 12
A PORTION OF LOT 12 "SEMINOLE ESTATES" PLAT BOOK 21, PAGE 15
FOLIO #514101010120
INSTRUMENT DOCUMENT# 114873210
A PORTION OF LOT 11
FOLIO #514101010100
O.R.B. 30709, PAGE 618
A PORTION OF LOT 11
FOLIO #514101010110
O.R.B. 30709, PAGE 618
#514101010090
#ENT DOCUMENT#
'15362586
PROP. 4" DOMESTIC WATER SERVICE METER & 4" RPZ, S.P. #1
PROP. 4" DOMESTIC WATER SERVICE LINE
PROP. 8" FIRE LINE (TYP.)
PROP. 4" DOMESTIC WATER SERVICE BUILDING CONNECTION POINT
N84°10'08"E 290.56'
ONE STORY BUILDING
CONCRETE WALL
ELECTRIC PANEL
CHAIN LINK FENCE
ROOF OVERHANG
PROP. 4" G.V.
PROP. 4.0 LF 4" D.I.P. W.M.
PROP. 12' U.E.
PROP. 8"x4" REDUCER
PROP. 3.0 LF 8" D.I.P. W.M.
PROP. 8" D.I.P. 90° BEND
PROP. 7.0 LF 8" D.I.P. W.M.
PROP. 8"x8" TEE w/ 8" G.V. TIED TO TEE
PROP. 28.0 LF 8" D.I.P. W.M.
S05°49'52"E 69.32'
N84°10'08"E 248.23'
10' FPL EASEMENT O.R.B. 6746, PAGE 886
PROP. 18.8 LF 6" D.I.P. W.M.
PROP. 12'x12' SIGHT TRIANGLE (TYP.)
PROP. 6" SAN. SEWER BUILDING CONNECTION POINT
PROP. 2" DOMESTIC WATER SERVICE BUILDING CONNECTION POINT
PROP. 1" WATER METER & 1" RPZ
PROP. C.O., I.E. 4.00
EX. SIGN
EX. BOLLARD
EX. CONC. WALK
EX. CURB
EX. CATCH BASIN GRATE 4.23' FULL
PROP. 4" FIRE / FDC LINE BUILDING CONNECTION POINT
PROP. 4" DDCV, S.P. #5 (POINT OF FIRE PROTECTION SERVICE)
PROP. 4" G.V.
PROP. 4" FDC LINE (TYP.)
PROP. FDC
PROP. 10' FM EASEMENT (TYP.)
RESTORE TURF AS REQUIRED
1-STORY SYNAGOGUE 4,070 SF 137 SEATS F.F.E. 9.00 NAVD
NORTH 1/4 CORNER SECTION 1-51-41
N.W. 1/4 OF SECTION 1-51-41
ACREAGE A PORTION OF THE NE 1/4 OF THE NE 1/4 OF SECTION 1-51-41
A PORTION OF SECTION 1, EAST BOOK 1, PAGE 118, M.D.C.R.
FOLIO #514101AA0010-#514101AA0420
O.R.B. 4145, PAGE 5
O.R.B. 6350, PAGE 444
PROP. 12'x12' SIGHT TRIANGLE (TYP.)
PROP. 6" SAN. SEWER LAT. @ 1.0% SLOPE (TYP.)
PROP. 6" PVC SAN. SEWER LAT. @ 1.0% SLOPE (TYP.)
PROP. 6"x6" WYE, I.E. 2.64
PROP. 2" CORP STOP WITH DOUBLE STRAP SADDLE & 2" P.E. WATER SERVICE (P.O.C.)
PROP. 8" x 4" TAPPING SLEEVE & VALVE (P.O.C.)
PROP. 8" x 8" TAPPING SLEEVE & VALVE, S.P. #4 (P.O.C.)
PROP. 9.7 LF 6" D.I.P. W.M.
PROP. 6" D.I.P. 22.5° BEND
PROP. 12'x12' SIGHT TRIANGLE (TYP.)
PROP. 8" D.I.P. W.M.
PROP. 301.4 LF 8" D.I.P. W.M.
PROP. 12'x12' SIGHT TRIANGLE (TYP.)
PROP. FIRE HYDRANT
PROP. 8"x 6" TAPPING SLEEVE & VALVE (P.O.C.)
PROP. 8"x 6" TAPPING SLEEVE & VALVE (P.O.C.)
PROP. 36.9 LF 6" D.I.P. W.M.
PROP. C.O., I.E. 5.63
PROP. 6" SAN. SEWER BUILDING CONNECTION POINT
PROP. C.O., I.E. 5.75
PROP. 6" PVC SAN. SEWER LAT. @ 1.0% SLOPE (TYP.)
PROP. 8"x6" WYE, I.E. 2.17
PROP. 12'x12' SIGHT TRIANGLE (TYP.)
PROP. (2) 5" PVC FPL CONDUITS
PROP. 4" G.V.
PROP. 8"x6" WYE, I.E. 1.85
PROP. 37.1 LF 4" D.I.P. W.M.
PROP. 12'x12' SIGHT TRIANGLE (TYP.)
PROP. 8"x 4" TAPPING SLEEVE & VALVE (P.O.C.)
PROP. 2" CORP STOP WITH DOUBLE STRAP SADDLE & 2" P.E. WATER SERVICE (P.O.C.)
PROP. 12'x12' SIGHT TRIANGLE (TYP.)
PROP. C.O., I.E. 5.63
PROP. 6" SAN. SEWER BUILDING CONNECTION POINT
PROP. C.O., I.E. 5.75
PROP. 6" PVC SAN. SEWER LAT. @ 1.0% SLOPE (TYP.)
PROP. 460.1 LF 6" PVC SDR-26 SAN. SEWER @ 0.4% SLOPE
PROP. 36.2 LF 4" D.I.P. W.M.
PROP. 6" PVC SAN. SEWER LAT. @ 1.0% SLOPE (TYP.)
PROP. FIRE HYDRANT S.P. #6
PROP. 6" G.V.
PROP. FDC
PROP. C.O., I.E. 3.60
1-STORY 7,246 SF CLUBHOUSE F.F.E. 9.00 NAVD
PROP. 6" SAN. SEWER BUILDING CONNECTION POINT
PROP. C.O., I.E. 4.00
PROP. 4" FIRE / FDC LINE BLDG. CONNECTION POINT
PROP. 2" DOMESTIC WATER SERVICE BLDG. CONNECTION POINT
PROP. 4" DDCV, S.P. #7 (POINT OF FIRE PROTECTION SERVICE)
PROP. 1 1/2" WATER METER & 1 1/2" RPZ
PROP. FPL TRANSFORMER IN 10' WIDE FPL EASEMENT
PROP. VEHICULAR SIGHT TRIANGLE (TYP.)
PROP. 8"x6" WYE, I.E. 1.39
PROP. 6" PVC FORCE MAIN (TYP.)
CONNECT TO 8" PVC FORCE MAIN AT PROPERTY LINE. WORK SHOWN EAST OF PROPERTY LINE PERMITTED UNDER CITY OF HOLLYWOOD PERMIT # B25-100557
PROP. PRIVATE LIFT STATION 10' DIA. WET WELL RIM EL. 10.75 INV. IN 0.52
PROP. 9'X35' LIFT STATION MAINTENANCE & SERVICE TRUCK SPACE (TYP.)
PROP. 52.83 LF 8" PVC SDR-26 SAN. SEWER @ 1.0% SLOPE
S88°15'38"W 229.71'
PROP. DROP SAN. MANHOLE #1 (MAS #1)
R=125.00'
CA=102°23'01"
A=88.10'
PROP. STD. SAN. MANHOLE #2 (MAS #2)
R=75.00'
CA=73°23'39" (C)
A=96.07'
PROP. 249.88 LF 8" PVC SDR-26 SAN. SEWER @ 0.4% SLOPE
PROP. 8"x6" WYE, I.E. 4.06
PROP. 87.56 LF 6" PVC SDR-26 SAN. SEWER @ 0.4% SLOPE
PROP. C.O., I.E. 5.63
PROP. 6" PVC SAN. SEWER LAT. @ 1.0% SLOPE (TYP.)
PROP. 6" SAN. SEWER BUILDING CONNECTION POINT
PROP. 12'x12' SIGHT TRIANGLE (TYP.)
PROP. 12' U.E.
PROP. 10' FPL ESMT
PROP. 12'x12' SIGHT TRIANGLE (TYP.)
PROP. (2) 5" PVC FPL CONDUITS
PROP. 6" G.V.
PROP. 8.0 LF 6" D.I.P. W.M.
PROP. 6" D.I.P. 90° BEND
PROP. 63.1 LF 6" D.I.P. W.M.
PROP. 12' U.E.
S88°14'38"W 364.30'
PROP. C.O., I.E. 5.63
PROP. FIRE HYDRANT
PROP. 11.1 LF 8" D.I.P. W.M.
PROP. 8"x 6" TAPPING SLEEVE & VALVE (P.O.C.)
PROP. 8"x6" WYE, I.E. 4.98
PROP. 8"x 6" TAPPING SLEEVE & VALVE, S.P. #8 (P.O.C.)
PROP. VEHICULAR SIGHT TRIANGLE (TYP.)
PROP. STD. SAN. MANHOLE #3 (MAS #3)
PROP. VEHICULAR SIGHT TRIANGLE (TYP.)
OAK STREET
UNPLATTED ACREAGE A PORTION OF THE NW 1/4
PROP. PARKING STRUCTURE FFE: VARIES 12.75-12.25 NAVD
N01°45'12"W 196.14'
N01°45'12"W 199.83'
7 13.34'
OT 2
7030
ENT#
8-STORY - 470 D.U. RESIDENTIAL BLDG. F.F.E. 9.00 NAVD
EXISTING 2-STORY HISTORIC STRUCTURE TO BE RESTORED (1,948 SF APPROX. FOOTPRINT) FFE: 14.32 NAVD
PROP. 6' CONC. WALK
PROP. 6' CONC. CURB
PROP. 8' CONC. WALK
PROP. 6' CONC. CURB
PROP. 6

MICHAEL A. TROXELL, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 50572. THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY MICHAEL A. TROXELL ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

MATCH LINE SEE SHEET U-1.0



MATCH LINE SEE SHEET ABOVE



KEY PLAN

OFF-SITE PAVEMENT, CURB, MARKINGS & TURF RESTORATION QUANTITIES

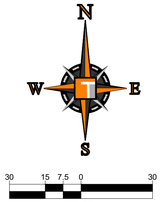
DESCRIPTION	UNIT	TOTAL
Full Depth Pavement Restoration	SY	399
Pavement Restoration	SY	307
Pavement Mill & Overlay	SY	-
Sidewalk Restoration	SY	74
Curb Restoration	LF	43
24" White Thermoplastic Stripe	LF	13
6" White Thermoplastic Stripe	LF	78
4" White Paint Stripe	LF	51
White Thermoplastic Directional Arrow	EA	1
White Paint Directional Arrow	EA	3
Speed Bump Restoration	LF	23
Turf Restoration	SY	752

RIGHT-OF-WAY PAVEMENT, CURB, MARKINGS & TURF RESTORATION QUANTITIES

DESCRIPTION	UNIT	TOTAL
Full Depth Pavement Restoration	SY	20
Pavement Restoration	SY	30
Pavement Mill & Overlay	SY	399
Sidewalk Restoration	SY	3
Curb Restoration	LF	-
6" White Thermoplastic Stripe	LF	21
6" Yellow Thermoplastic Stripe	LF	242
White Thermoplastic Directional Arrow	EA	1
MD/Y RPM	EA	12
Turf Restoration	SY	-

UTILITY CONFLICT TABLE

NUM.	GRADE	BOTTOM OF PIPE	TOP OF PIPE	CLR
1	5.19	0.81 (8"WTR)	(-)0.50 (8"FM)	1.31
2	5.28	1.67 (8"SAN)	(-)0.50 (8"FM)	2.17
3	5.47	1.03 (8"FM)	0.31 (STM)	0.72
4	5.23	1.01 (8"WTR)	(-)0.50 (8"FM)	1.51
5	5.37	0.71 (6"ELEC)	(-)0.50 (8"FM)	1.21
6	5.40	3.40 (2"COM)	(-)0.50 (8"FM)	3.90
7	5.46	1.99 (4"WTR)	(-)0.50 (8"FM)	2.49
8	4.85	3.40 (2"COM)	(-)0.50 (8"FM)	3.90
9	4.85	3.79 (1"TELE)	(-)0.50 (8"FM)	4.29
10	4.85	3.24 (1"ELEC)	(-)0.50 (8"FM)	3.74
11	4.17	1.01 (6"SAN)	(-)0.50 (8"FM)	1.51
12	5.89	3.92 (1"TELE)	(-)2.50 (8"FM)	6.42
13	5.48	(-)1.12 (36"STM)	(-)2.50 (8"FM)	1.38
14	5.08	(-)0.92 (36"STM)	(-)2.50 (8"FM)	1.58
15	5.29	(-)1.22 (8"SAN)	(-)2.50 (8"FM)	1.28
16	6.63	4.31 (8"FM)	(-)0.50 (8"FM)	4.81
17	5.90	3.70 (2"TELE)	(-)0.50 (8"FM)	4.20
18	5.91	2.14 (8"FM)	(-)0.50 (8"FM)	2.64
19	4.70	3.11 (1"ELEC)	(-)0.50 (8"FM)	3.61
20	5.04	3.15 (1"TELE)	(-)0.50 (8"FM)	3.65
21	4.66	0.36 (18"STM)	(-)0.50 (8"FM)	0.86
22	4.62	2.04 (4"FM)	(-)0.50 (8"FM)	2.54
23	4.62	2.64 (4"COM)	(-)0.50 (8"FM)	3.14
24	4.83	2.92 (1"COM)	(-)0.50 (8"FM)	3.42
25	5.40	2.29 (1"ELEC)	(-)0.50 (8"FM)	2.79
26	5.25	1.69 (6"ELEC)	(-)0.50 (8"FM)	2.19
27	5.65	4.06 (1"COM)	(-)0.50 (8"FM)	4.56
28	5.65	1.48 (8"WTR)	(-)0.50 (8"FM)	1.98
29	5.63	3.80 (1"COM)	(-)1.50 (8"FM)	5.30
30	5.21	(-)0.08 (RWM)	(-)1.50 (8"FM)	1.42
31	5.33	(-)0.37 (8"WTR)	(-)1.50 (8"FM)	1.13
32	5.04	0.93 (8"WTR)	(-)1.50 (8"FM)	2.43



HATCH LEGEND

PROPOSED CONCRETE (SEE CROSS SECTIONS FOR DETAILS)

PROPOSED STAMPED CONCRETE/PAVERS (SEE HARDSCAPE PLANS FOR DETAILS)

PROPOSED PAVEMENT/SIDEWALK RESTORATION

PROPOSED TURF RESTORATION

PROPOSED ASPHALT PAVEMENT MILL & OVERLAY

PROPOSED FULL DEPTH ASPHALT PAVEMENT

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CIVIL ENGINEERS · PROJECT MANAGERS · LAND PLANNING · LANDSCAPE ARCHITECTS
1502 W. FLETCHER AVE. SUITE 206 TAMPA, FL 33612 P: (813) 379-4100
125 W. INDIANTOWN RD. SUITE 206 JUPITER, FL 33458 P: 561-203-7503

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TAC SUBMITTAL

PROJECT No.:	F240042
DRAWN Y-x	CAD
CHECKED Y-x	MAT
DATE:	05/06/2025
CAD I.D.:	F240042 WSU

PROJECT:

HOLLYWOOD OAKS
4220 & 4231 N 58th Ave.
HOLLYWOOD, FL 33021

FOR

KUSHNER
188 BAL BAY DRIVE
BAL HARBOUR, FL 33154

THOMAS ENGINEERING GROUP
6300 NW 31ST AVENUE
FORT LAUDERDALE, FL 33309
PH: (954) 202-7000
FX: (954) 202-7070
www.ThomasEngineeringGroup.com

MICHAEL A. TROXELL LICENSE No. 50572 STATE OF FLORIDA PROFESSIONAL ENGINEER
June 30, 2025
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

UTILITY PLAN

SHEET NUMBER:

U-1.1

Michael Troxell
Digitally signed by Michael Troxell
Date: 2025.06.30 16:47:54 -04'00'

Printed on Monday, June 30, 2025, 4:39 PM by Corey Sprosansky

MICHAEL A. TROXELL, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 50572
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WATER SYSTEM NOTES:

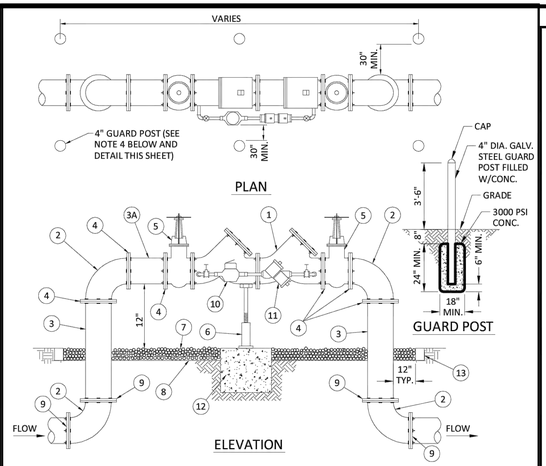
1. NEW OR RELOCATED UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT THAT WILL CROSS ANY EXISTING OR PROPOSED GRAVITY OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE OTHER PIPELINE OR AT LEAST 12 INCHES BELOW THE OTHER PIPELINE.
2. NEW OR RELOCATED UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT THAT WILL CROSS ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OTHER PIPELINE. [FAC 62-555.314(2); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)].
3. AT ALL UTILITY CROSSINGS DESCRIBED ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE WILL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE, OR THE PIPES WILL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORM WATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. [FAC 62-555.314(2); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)].
4. NEW UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT TO BE DUCTILE IRON PIPE (D.I.P.) WHEN CROSSING BELOW SANITARY SEWER MAINS.
5. POLYETHYLENE ENCASEMENT MATERIAL SHALL BE USED TO ENCASE ALL BURIED DUCTILE IRON PIPE, FITTINGS, VALVES, RODS, AND APPURTENANCES IN ACCORDANCE WITH AWWA C105, METHOD A. THE POLYETHYLENE TUBING SHALL BE CUT TWO FEET LONGER THAN THE PIPE SECTION AND SHALL OVERLAP THE ENDS OF THE PIPE BY ONE FOOT. THE POLYETHYLENE TUBING SHALL BE GATHERED AND LAPPED TO PROVIDE A SNUG FIT AND SHALL BE SECURED AT QUARTER POINTS WITH POLYETHYLENE TAPE. EACH END OF THE POLYETHYLENE TUBING SHALL BE SECURED WITH A WRAP OF POLYETHYLENE TAPE.
6. THE POLYETHYLENE TUBING SHALL PREVENT CONTACT BETWEEN THE PIPE AND BEDDING MATERIAL, BUT IS NOT INTENDED TO BE A COMPLETELY AIRTIGHT AND WATERTIGHT ENCLOSURE. DAMAGED POLYETHYLENE TUBING SHALL BE REPAIRED IN A WORKMANLIKE MANNER USING POLYETHYLENE TAPE, OR THE DAMAGED SECTION SHALL BE REPLACED. POLY WRAP WILL NOT BE PAID FOR AS A SEPARATE BID ITEM. IT SHALL BE CONSIDERED TO BE A PART OF THE PRICE BID FOR WATER MAINS.
7. FIRE HYDRANT BARRELS SHALL BE ENCASED IN POLY WRAP UP TO THE GROUND SURFACE AND THE WEEP HOLES SHALL NOT BE COVERED BY THE POLY WRAP.
8. GATE VALVES FOR USE WITH PIPE LESS THAN THREE INCHES (3") IN DIAMETER SHALL BE RATED FOR TWO HUNDRED (200) PSI WORKING PRESSURE, NON-SHOCK, BLOCK PATTERN, SCREWED BONNET, NON-RISING STEM, BRASS BODY, AND SOLID WEDGE. THEY SHALL BE STANDARD THREADED FOR PVC PIPE AND HAVE A MALLEABLE IRON HANDWHEEL. GATE VALVES 3" THROUGH 16" IN DIAMETER SHALL BE RESILIENT SEAT AND BIDIRECTIONAL FLOW ONLY. VALVES FOR SPECIAL APPLICATIONS WILL REQUIRE CITY UTILITY APPROVAL.
9. VALVE BOXES AND COVERS FOR ALL SIZE VALVES SHALL BE OF CAST IRON CONSTRUCTION AND ADJUSTABLE SCREW-ON TYPE. THE LID SHALL HAVE CAST IN THE METAL THE WORD "WATER" FOR THE WATER LINES. ALL VALVE BOXES SHALL BE SIX INCH (6") NOMINAL DIAMETER AND SHALL BE SUITABLE FOR DEPTHS OF THE PARTICULAR VALVE. THE STEM OF THE BURIED VALVE SHALL BE WITHIN TWENTY-FOUR INCHES (24") OF THE FINISHED GRADE UNLESS OTHERWISE APPROVED BY THE CITY.
10. ALL WATER MAIN INSTALLATIONS SHALL COMPLY WITH THE COLOR CODING REQUIREMENTS OF CHAPTER 62-555.320 F.A.C.

ISSUED:	03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN:	EAM	WATER SYSTEM NOTES	DRAWING NO. W-01
APPROVED:	XXX		

WATER SYSTEM NOTES (CONTINUED):

11. ALL WATER MAIN INSTALLATIONS SHALL COMPLY WITH THE COLOR CODING REQUIREMENTS OF CHAPTER 62-555.320 F.A.C.
12. ALL PVC PIPE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA C900 LATEST REVISION AND CLASS DR 18. ALL DIP WATER MAINS SHALL BE DUCTILE IRON PRESSURE CLASS 350, WITH WALL THICKNESS COMPLYING WITH CLASS 52. ALL DUCTILE IRON PIPE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA C151/A21.51-02 AND BE CEMENT LINED AND SEAL COATED PER ANSI/AWWA C104/A21.4-03.
13. FITTINGS SHALL BE DUCTILE IRON, MEETING ANSI/AWWA C153/A21.53-00 SPECIFICATIONS, WITH 350 PSI MINIMUM WORKING PRESSURE. FITTINGS MUST BE CEMENT LINED AND SEAL COATED PER ANSI/AWWA C104/A21.4-03. ALL DUCTILE IRON PIPE AND FITTINGS MUST BE MANUFACTURED IN THE UNITED STATES OF AMERICA.
14. ALL DUCTILE IRON PIPE TO BE MECHANICAL JOINTS, WRAPPED IN POLY. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY DESIGN.
15. PAVEMENT RESTORATION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY.
16. ALL TRENCHING, PIPE LAYING, BACKFILL, PRESSURE TESTING, AND DISINFECTING MUST COMPLY WITH THE CITY OF HOLLYWOOD SPECIFICATIONS.
17. THE MINIMUM DEPTH OF COVER OVER WATER MAINS IS 30" (DIP) OR 36" (PVC).
18. MINIMUM HORIZONTAL SEPARATION BETWEEN STORM STRUCTURES AND WATER MAINS SHALL BE 3'.
19. MAXIMUM DEFLECTION PER EACH JOINT SHALL BE 50% OF MANUFACTURES RECOMMENDATION (MAXIMUM) WHERE DEFLECTION IS REQUIRED.
20. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING CONFLICTS WITH WATER MAINS PLACED AT MINIMUM COVER. IN CASE OF CONFLICT, WATER MAIN SHALL BE LOWERED TO PASS UNDER CONFLICTS WITH 18" MINIMUM VERTICAL SEPARATION. NO ADDITIONAL PAYMENT SHALL BE DUE TO CONTRACTOR FOR LOWERING THE MAIN OR THE ADDITIONAL FITTINGS USED THEREON.
21. PIPE JOINT RESTRAINT SHALL BE PROVIDED BY THE USE OF DUCTILE IRON FOLLOWER GLANDS MANUFACTURED TO ASTM A 536-80. TWIST-OFF NUTS SHALL BE USED TO ENSURE PROPER ACTUATING OF THE RESTRAINING DEVICES. THE MECHANICAL JOINT RESTRAINING DEVICES SHALL HAVE A WORKING PRESSURE OF 250 PSI MINIMUM, WITH A MINIMUM SAFETY FACTOR OF 2:1, AND SHALL BE EBAA IRON INC., MEGALUG OR APPROVED EQUAL. JOINT RESTRAINTS SHALL BE PROVIDED AT A MINIMUM OF THREE JOINTS (60 FEET) FROM ANY FITTING.
22. WHENEVER IT IS NECESSARY, IN THE INTEREST OF SAFETY, TO BRACE THE SIDES OF A TRENCH, THE CONTRACTOR SHALL FURNISH, PUT IN PLACE AND MAINTAIN SUCH SHEETING OR BRACING AS MAY BE NECESSARY TO SUPPORT THE SIDES OF THE EXCAVATION TO ENSURE PERSONNEL SAFETY, AND TO PREVENT MOVEMENT WHICH CAN IN ANY WAY DAMAGE THE WORK OR ENDANGER ADJACENT STRUCTURES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SEQUENCE, METHODS AND MEANS OF CONSTRUCTION, AND FOR THE IMPLEMENTATION OF ALL OSHA AND OTHER SAFETY REQUIREMENTS.

ISSUED:	03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN:	EAM	WATER SYSTEM NOTES	DRAWING NO. W-02
APPROVED:	XXX		

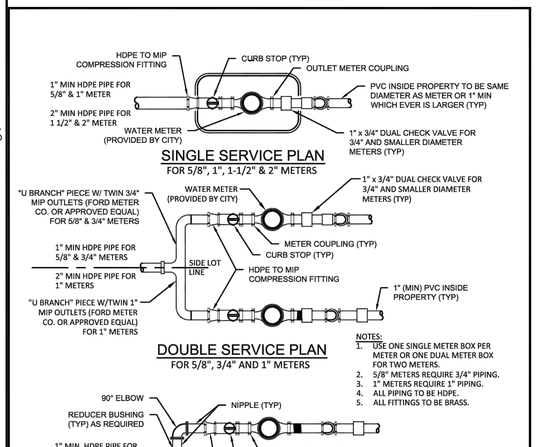


ITEM	QTY.	DESCRIPTION	ITEM	QTY.	DESCRIPTION
1	1	4",6",8" VALVE,DOUBLE CHECK	7	N/A	PEA GRAVEL (4" DEEP)
2	4	4",6",8" BEND-90°	8	N/A	PLASTIC LINER/WEED STOP (5 MILS)
3	2	4",6",8" D.I.P. SPOOL PIECE	9	4	RESTRAINED JOINTS
3A	1	4",6",8" D.I.P. SPOOL PIECE (24" LONG)	10	1	LOW FLOW METER
4	7	4",6",8" FLANGE, D.I.P.	11	1	VALVE, BYPASS DOUBLE CHECK
5	2	4",6",8" GATE VALVE (SEE NOTE 6)	12	1	16"X16"X16" CONC. SUPPORT
6	1	SCREW JACK/ANCHORED	13	1	P.T. 2X4 LUMBER ALL AROUND

MATERIALS

NOTES:
1. FIELD ADJUST AND CUT ITEM 3 TO THE PROPER LENGTH.
2. ALL PIPING SHALL BE D.I.P. CL 50/52 AS APPLICABLE TO MINIMUM STANDARDS.
3. ALL LOW FLOW METER PIPING SHALL BE BRASS OR COPPER.
4. PROTECTIVE 4" GALV. GUARD POSTS SHALL BE SPACED EVENLY APART AS SHOWN ABOVE OR IN ACCORDANCE WITH INSPECTOR'S DIRECTIONS.
5. MAY USE 45° BENDS (SEE DETAIL W-07.2) WHEN WORKING AREA IS NOT LIMITED, AS DIRECTED BY CITY.
6. GATE VALVES SHALL BE CHAINED AND LOCKED TOGETHER TO PREVENT TAMPERING.

ISSUED:	03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN:	EAM	TYPICAL 4", 6" AND 8" DOUBLE CHECK DETECTOR ASSEMBLY FOR FIRE SPRINKLER SERVICE (90° BENDS)	DRAWING NO. W-03
APPROVED:	XXX		

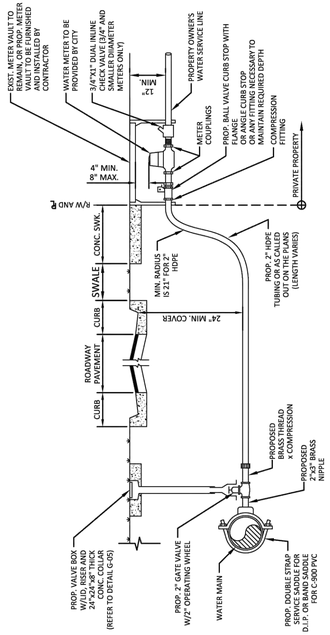


ISSUED:	03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 11/06/2017
DRAWN:	EAM	TYPICAL 5/8", 1", 1-1/2" AND 2" METER INSTALLATION	DRAWING NO. W-06
APPROVED:	XXX		

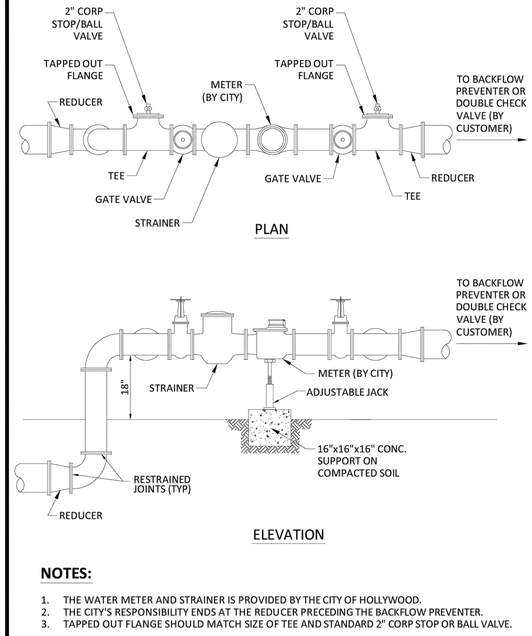
WATER METER SERVICE NOTES:

1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED NOT LESS THAN 18" ON CENTER.
2. P.E. TUBING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF AWWA STANDARD C901, "POLYETHYLENE (PE) PRESSURE PIPE AND TUBING, 1/2 IN. (13mm) THROUGH 3 IN. (76 mm), FOR WATER SERVICE".
3. MINIMUM SERVICE PIPE DIAMETER SHALL BE 1" FOR SINGLE OR DUAL ¾" OR SINGLE 1" DIAMETER METERS.
4. MINIMUM SERVICE PIPE DIAMETER SHALL BE 2" FOR SINGLE OR DUAL 1-½" OR SINGLE 2" DIAMETER METERS.
5. FOR METER DIAMETERS LARGER THAN 2", THE MINIMUM SERVICE PIPE DIAMETER SHALL BE THE SAME AS THE METER DIAMETER.
6. APPROVED COPPER TUBING MAY BE USED AT THE CITY'S DISCRETION.
7. FOR NEW METER INSTALLATIONS, ALL SADDLES, VALVES, PIPING, FITTINGS,CURB STOPS, METER VALVES, METER COUPLINGS, METER VAULTS AND COVERS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THE WATER METERS WILL BE PROVIDED AND INSTALLED BY THE CITY OF HOLLYWOOD (NEW ACCOUNTS).
8. FOR METER RELOCATIONS, ALL SADDLES, VALVES, PIPING, FITTINGS, CURB STOPS, METER VALVES, METER COUPLINGS, METER VAULTS AND COVERS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THE EXISTING WATER METER TO BE RELOCATED AND INSTALLED BY CONTRACTOR.
9. FOR EXISTING METERS ABUTTING THE RIGHT-OF-WAY THAT ARE BEING DISCONNECTED FROM EXISTING MAINS AND RECONNECTED TO NEW MAINS, THE CONTRACTOR SHALL:
   a. CUT AND PLUG THE EXISTING SERVICE LINE AT THE MAIN AND AT THE METER, AND REMOVE THE EXISTING BALL VALVE CURB STOP.
   b. FURNISH AND INSTALL SERVICE SADDLE, CORPORATION STOP OR SERVICE VALVE AND VALVE BOX, PIPING AND FITTINGS UP TO AND INCLUDING THE BALL VALVE CURB STOP.
12. THE ELEVATION AT THE TOP OF THE METER BOX SHALL MATCH THE ELEVATION OF THE BACK OF SIDEWALK, WHENEVER PRACTICAL.
13. AS PART OF THE SERVICE INSTALLATION, THE CONTRACTOR SHALL RESTORE THE RIGHT-OF-WAY TO MATCH EXISTING CONDITIONS, INCLUDING ROADWAY PAVEMENT, PAVEMENT MARKINGS AND RPMs, CONCRETE CURBS, SIDEWALKS, RAMPS (INCLUDING DETECTABLE WARNING SURFACE), SODDING, AND ALL OTHER IMPROVEMENTS REMOVED OR DAMAGED DURING THE SERVICE INSTALLATION.
14. FOR UNPAVED AREAS, THE MINIMUM GROUND COVER ACCEPTED BY THE CITY IS SODDING.

ISSUED:	03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 11/06/2017
DRAWN:	EAM	WATER METER SERVICE NOTES FOR 5/8" THROUGH 2" METERS	DRAWING NO. W-07
APPROVED:	XXX		

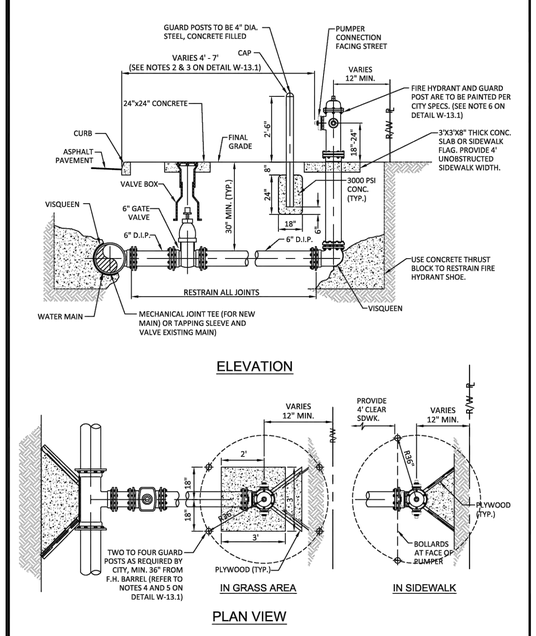


ISSUED:	03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 11/06/2017
DRAWN:	EAM	TYPICAL 2-INCH HDPE WATER SERVICE FOR SINGLE/DUAL 5/8" TO 1" METERS, AND ANY SINGLE 1-1/2" TO 2" METERS	DRAWING NO. W-09
APPROVED:	XXX		



NOTES:
1. THE WATER METER AND STRAINER IS PROVIDED BY THE CITY OF HOLLYWOOD.
2. THE CITY'S RESPONSIBILITY ENDS AT THE REDUCER PRECEDING THE BACKFLOW PREVENTER.
3. TAPPED OUT FLANGE SHOULD MATCH SIZE OF TEE AND STANDARD 2" CORP STOP OR BALL VALVE.

ISSUED:	03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN:	EAM	TYPICAL METER 3" DIAMETER AND LARGER	DRAWING NO. W-11
APPROVED:	XXX		



ISSUED:	03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 03/05/2019
DRAWN:	EAM	TYPICAL FIRE HYDRANT INSTALLATION	DRAWING NO. W-13
APPROVED:	XXX		

Michael Troxell Digitally signed by Michael Troxell
Date: 2025.06.30 15:47:51 -04'00'

THOMAS ENGINEERING GROUP
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PROJECT No.:	F240042
DRAWN BY:	CAD
CHECKED BY:	MAT
DATE:	05/08/2025
CAD I.D.:	F240042 WSU DTLS

PROJECT:

HOLLYWOOD OAKS
4220 & 4231 N 58th Ave.
HOLLYWOOD, FL 33021

FOR

KUSHNER
188 BAL BAY DRIVE
BAL HARBOUR, FL 33154

THOMAS ENGINEERING GROUP
6300 NW 31ST AVENUE
FORT LAUDERDALE, FL 33309
PH: (954) 202-7000
FX: (954) 202-7070
www.ThomasEngineeringGroup.com

MICHAEL A. TROXELL LICENSE No. 50572 STATE OF FLORIDA PROFESSIONAL ENGINEER
June 30, 2025
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

UTILITY DETAILS

SHEET NUMBER:

U-2.0

Printed on Monday, June 30, 2025, 12:56 PM by Corey Sprusansky I:\Work in Progress\F240042 WSU Phase 1\Drawings\Utility Plans\F240042 WSU DTLS.dwg

MICHAEL A. TROXELL, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 50572
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Michael Troxell

Digitally signed by Michael Troxell
Date: 2025.06.30 15:48:24 -04'00'

NOTES:

1. IN ALL CASES, PROVIDE 4' UNOBSTRUCTED SIDEWALK CLEAR OF THE FIRE HYDRANT AND BOLLARDS.
2. FIRE HYDRANTS SHALL BE LOCATED BETWEEN 4' AND 7' FROM THE FACE OF CURB.
3. FIRE HYDRANTS SHALL NOT BE LOCATED WITHIN A RADIUS OR WITHIN FDOT CLEAR DRIVING ZONE.
4. GUARD POSTS SHALL BE INSTALLED AS REQUIRED FOR SAFETY OR AS APPROVED BY THE DEPT. OF PUBLIC UTILITIES. IN SIDEWALK, LOCATE GUARD POSTS AT THE FACE OF THE PUMPER AND 2'-6' LEFT/RIGHT OF ℄ OF THE FIRE HYDRANT.EXTRA POSTS MAY BE REQUIRED IN INDUSTRIAL AND CONGESTED TRAFFIC AREAS. (4 POSTS MAX.)
5. FIRE HYDRANT CONCRETE SLAB AND CONCRETE GUARD POST FOOTINGS SHALL BE DIFFERENT POURS.
6. THE FIRE HYDRANT BONNET, OPERATING NUT, HOLD-DOWN NUT, PUMPER CAP AND HOSE CAPS SHALL BE PAINTED GREEN, AND THE HYDRANT UPPER BARREL SHALL BE PAINTED SILVER IN ACCORDANCE WITH CITY SPECIFICATIONS.

ISSUED:	03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN:	EAM	TYPICAL FIRE HYDRANT NOTES	DRAWING NO. W-13.1
APPROVED:	XXX		

WATER MAIN TESTING AND DISINFECTION NOTES:

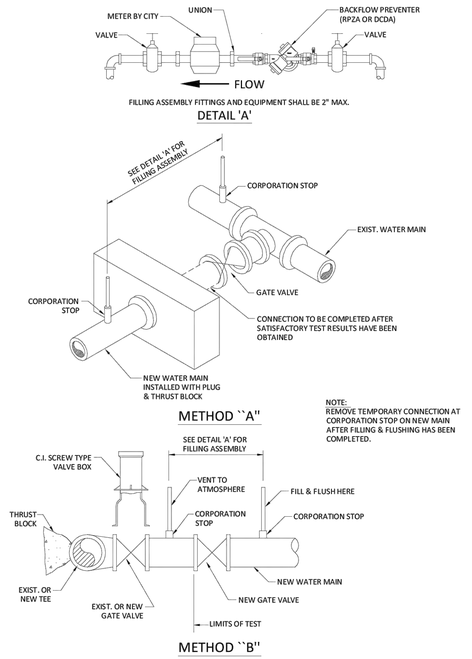
1. NO CONNECTIONS TO THE EXISTING LINES SHALL BE MADE UNTIL THE PRESSURE AND BACTERIOLOGICAL TESTS HAVE BEEN PERFORMED ON THE PROPOSED WATER MAINS AND THE SYSTEM HAS BEEN APPROVED BY THE CITY OF HOLLYWOOD AND THE BROWARD COUNTY HEALTH DEPARTMENT.
2. THE PRESSURE TEST SHALL BE PERFORMED FOR 2 HOURS AT A CONSTANT PRESSURE OF 150 PSI AND IN ACCORDANCE WITH RULE 62-555.330 (FAC) C600 AWWA LATEST REVISION, EXCEPT AS OTHERWISE SPECIFIED HEREIN AND IN SPECIFICATION SECTION 15995, "PIPELINE TESTING AND DISINFECTION". PRESSURE TEST SHALL BE WITNESSED BY THE CITY OF HOLLYWOOD. THE ALLOWABLE LEAKAGE SHALL BE LESS THAN THE NUMBER OF GALLONS PER HOUR AS DETERMINED BY THE FORMULA:

$$L = \frac{S \times D \times \sqrt{P}}{148{,}000}$$

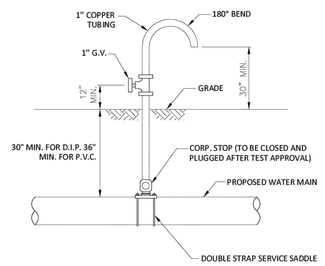
L = THE ALLOWABLE LEAKAGE IN GALLONS PER HOUR.
S = THE LENGTH OF PIPE BEING TESTED.
D = THE NOMINAL DIAMETER OF THE PIPE BEING TESTED.
P = THE AVERAGE TEST PRESSURE IN POUNDS PER SQUARE INCH.

3. THE COMPLETE LENGTH OF THE PROPOSED WATER MAIN SHALL BE TESTED, IN LENGTHS NOT TO EXCEED 2,000 FEET PER TEST.
4. PROPOSED WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH THE LATEST EDITION OF ANSI/AWWA STANDARD C651 AND BACTERIOLOGICAL TESTED FOR TWO CONSECUTIVE DAYS IN ACCORDANCE WITH SPECIFICATION SECTION 15995, "PIPELINE TESTING AND DISINFECTION".
5. BACTERIOLOGICAL TESTS SHALL BE REQUESTED AND PAID FOR BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL DIRECTLY HIRE A TESTING LABORATORY CERTIFIED BY THE FLORIDA DEPARTMENT OF HEALTH IN ORDER TO COLLECT AND TEST WATER SAMPLES FROM THE WATER DISTRIBUTION SYSTEM TO BE PLACED INTO SERVICE. SAMPLE COLLECTION AND BACTERIOLOGICAL ANALYSES SHALL BE PERFORMED IN ACCORDANCE WITH RULES 62-555.315(6), 62-555.340 AND 62-555.330 (FAC), AS WELL AS ALL REQUIREMENTS OF THE BROWARD COUNTY HEALTH DEPARTMENT PERMIT.
7. THE WATER DISTRIBUTION SYSTEM SHALL NOT BE CONSIDERED COMPLETE AND READY FOR FINAL INSPECTION UNTIL SUCCESSFUL TEST RESULTS ARE OBTAINED FOR ALL TESTS DESCRIBED ABOVE.

ISSUED:	03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN:	EAM	WATER MAIN TESTING AND DISINFECTION NOTES	DRAWING NO. W-14
APPROVED:	XXX		



ISSUED:	03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN:	EAM	FILLING AND FLUSHING DETAILS	DRAWING NO. W-15
APPROVED:	XXX		



NOTES:
SAMPLING POINT SHALL NOT BE REMOVED UNTIL APPROVAL IS OBTAINED FROM BROWARD COUNTY HEALTH DEPARTMENT.

ISSUED:	03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN:	EAM	SAMPLING POINT DETAIL	DRAWING NO. W-16
APPROVED:	XXX		

GENERAL NOTES:

1. THE INFORMATION PROVIDED IN THESE DRAWINGS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF CONDITIONS WHICH WILL BE ENCOUNTERED DURING THE COURSE OF THE WORK. THE CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSION REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH BIDS WILL BE BASED.
2. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO APPLICABLE STANDARDS AND SPECIFICATIONS OF THE CITY OF HOLLYWOOD DEPARTMENT OF PUBLIC UTILITIES, ENGINEERING AND CONSTRUCTION SERVICES DIVISION (ECSD), AND ALL OTHER LOCAL, STATE AND NATIONAL CODES, WHERE APPLICABLE.
3. LOCATIONS, ELEVATIONS, SIZES, MATERIALS, ALIGNMENTS, AND DIMENSIONS OF EXISTING FACILITIES, UTILITIES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS; AND DO NOT PURPORT TO BE ABSOLUTELY CORRECT. ALSO, THERE MAY HAVE BEEN OTHER IMPROVEMENTS, UTILITIES, ETC., WITHIN THE PROJECT AREA WHICH WERE CONSTRUCTED AFTER THE PREPARATION OF THESE PLANS AND/OR THE ORIGINAL SITE SURVEY. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND OTHER FEATURES AFFECTING HIS/HER WORK PRIOR TO CONSTRUCTION, AND NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICT BETWEEN DRAWINGS AND ACTUAL CONDITIONS ARE DISCOVERED. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ANY FACILITIES SHOWN OR NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL WORK AS NEEDED TO AVOID CONFLICT WITH EXISTING UTILITIES (NO ADDITIONAL COST SHALL BE PAID FOR THIS WORK). EXISTING UTILITIES SHALL BE MAINTAINED IN SERVICE DURING CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE RESPECTIVE UTILITY OWNER.
4. THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITIES TO ARRANGE FOR THE RELOCATION AND TEMPORARY SUPPORT OF UTILITY FEATURES, ETC. AS NECESSARY TO COMPLETE THE WORK.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ANY AND ALL EXISTING UTILITIES ON THIS PROJECT, AND TO ENSURE THAT EXISTING UTILITIES ARE MAINTAINED IN SERVICE DURING CONSTRUCTION UNLESS APPROVED OTHERWISE BY THE UTILITY OWNER.
6. CONTRACTOR SHALL ADJUST ALL EXISTING UTILITY CASTINGS INCLUDING VALVE BOXES, MANHOLES, HAND-HOLES, PULL-BOXES, STORMWATER INLETS, AND SIMILAR STRUCTURES IN CONSTRUCTION AREA TO BE OVERLAID WITH ASPHALT PAVEMENT.
7. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL APPLICABLE CONSTRUCTION AND ENVIRONMENTAL PERMITS PRIOR TO THE START OF CONSTRUCTION.
8. THE CONTRACTOR SHALL NOTIFY ECSD AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
9. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND INSTALLATION OF THE PROPOSED IMPROVEMENTS, SHOP DRAWINGS SHALL BE SUBMITTED TO ECSD IN ACCORDANCE WITH THE CONTRACT DOCUMENT'S REQUIREMENTS, FOR APPROVAL. IN ADDITION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY OTHER AGENCY SHOP DRAWING APPROVAL, IF REQUIRED.
10. THE CONTRACTOR SHALL NOTIFY ECSD IMMEDIATELY FOR ANY CONFLICT ARISING DURING CONSTRUCTION OF ANY IMPROVEMENTS SHOWN ON THESE DRAWINGS. THIS WORK BY THE CONTRACTOR SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
11. ELEVATIONS SHOWN ARE IN FEET AND ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

ISSUED:	03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN:	EAM	GENERAL NOTES	DRAWING NO. G-00
APPROVED:	XXX		

GENERAL NOTES (CONTINUED):

12. CITY OF HOLLYWOOD SHALL NOT PROVIDE STAGING / STORAGE AREA. CONTRACTOR SHALL SECURE STAGING / STORAGE AREA AS NECESSARY FOR CONSTRUCTION WORK.
13. CONTRACTOR SHALL HAUL AWAY EXCESSIVE STOCKPILE OF SOIL FOR DISPOSAL EVERY DAY. NO STOCKPILE SOIL IS ALLOWED TO BE LEFT ON THE CONSTRUCTION SITE OVER NIGHT.
14. CONTRACTOR SHALL CLEAN / SWEEP THE ROAD AT LEAST ONCE DAY OR AS REQUIRED BY THE ENGINEER.
15. CONTRACTOR SHALL PROTECT CATCH BASINS WITHIN / ADJACENT TO THE CONSTRUCTION SITE AS REQUIRED BY NPDES REGULATIONS.
16. THE CITY OF HOLLYWOOD HAS A NOISE ORDINANCE (CHAPTER 100) WHICH PROHIBITS EXCAVATION AND CONSTRUCTION BEFORE 8:00 A.M. AND AFTER 6:00 P.M., MONDAY THROUGH SATURDAY AND ALL DAY SUNDAY.
17. SUITABLE EXCAVATED MATERIAL SHALL BE USED IN FILL AREAS. NO SEPARATE PAY ITEM FOR THIS WORK, INCLUDE COST IN OTHER ITEMS.
18. ALL ROAD CROSSINGS ARE OPEN CUT AS PER THE REQUIREMENTS OF THE ECSD UNLESS OTHERWISE NOTED ON THE DRAWINGS.
19. THE CONTRACTOR SHALL REPLACE ALL PAVING, STABILIZING EARTH, DRIVEWAYS, PARKING LOTS, SIDEWALKS, ETC. TO SATISFY THE INSTALLATION OF THE PROPOSED IMPROVEMENTS WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION OR AS DIRECTED BY ECSD FIELD ENGINEER.
20. THE CONTRACTOR SHALL NOT ENCROACH INTO PRIVATE PROPERTY WITH PERSONNEL, MATERIAL OR EQUIPMENT. IN CASE WORK ON PRIVATE PROPERTY IS NEEDED, A CITY OF HOLLYWOOD "RIGHT OF ENTRY" FORM MUST BE SIGNED BY PROPERTY OWNER AND THE DIRECTOR OF PUBLIC UTILITIES. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ACCESS AT ALL TIMES TO PRIVATE HOMES/BUSINESSES.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE, REMOVAL OR MODIFICATION, CAUSED TO ANY IRRIGATION SYSTEM (PRIVATE OR PUBLIC) ACCIDENTALLY OR PURPOSELY. THE CONTRACTOR SHALL REPLACE ANY DAMAGED, REMOVED OR MODIFIED IRRIGATION PIPES, SPRINKLER HEADS OR OTHER PERTINENT APPURTENANCES TO MATCH OR EXCEED EXISTING CONDITIONS AT NO ADDITIONAL COST TO THE CITY.
22. MAIL BOXES, FENCES OR OTHER PRIVATE PROPERTY DAMAGED DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE REPLACED TO MATCH OR EXCEED EXISTING CONDITION.
23. CONTRACTOR SHALL PROVIDE MAINTENANCE OF TRAFFIC IN ACCORDANCE WITH FDOT STANDARDS AND CITY OF HOLLYWOOD DEPARTMENT OF PUBLIC UTILITIES STANDARDS.
24. NO TREES ARE TO BE REMOVED OR RELOCATED WITHOUT PRIOR APPROVAL FROM THE ECSD FIELD ENGINEER.
25. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE NECESSARY TREE REMOVAL OR RELOCATION PERMITS FROM THE CITY OF HOLLYWOOD BUILDING DEPARTMENT FOR TREES LOCATED IN THE PUBLIC RIGHT OF WAY.
26. IT IS THE INTENT OF THESE PLANS TO BE IN ACCORDANCE WITH APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION. ANY DISCREPANCIES BETWEEN THESE PLANS AND APPLICABLE REGULATORY STANDARDS / REQUIREMENTS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF ECSD.

ISSUED:	03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 11/06/2017
DRAWN:	EAM	GENERAL NOTES (CONTINUED)	DRAWING NO. G-00.1
APPROVED:	XXX		

GENERAL NOTES (CONTINUED):

27. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF AND MAKING THE REPAIRS TO EXISTING PAVEMENT, SIDEWALKS, PIPES, CONDUITS, CURBS, CABLES, ETC., WHETHER OR NOT SHOWN ON THE PLANS DAMAGED AS A RESULT OF THE CONTRACTORS OPERATIONS AND/OR THOSE OF HIS SUBCONTRACTORS, AND SHALL RESTORE THEM PROMPTLY AT NO ADDITIONAL EXPENSE TO THE OWNER. CONTRACTOR SHALL REPORT ANY DAMAGE TO SIDEWALK, DRIVEWAY, ETC., PRIOR TO BEGINNING WORK IN ANY AREA.
28. WHERE NEW PAVEMENT MEETS EXISTING, CONNECTION SHALL BE MADE IN A NEAT STRAIGHT LINE AND FLUSH WITH EXISTING PAVEMENT TO MATCH EXISTING CONDITIONS.
29. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR LEAVE EXCAVATED TRENCHES, OR PARTS OF, EXPOSED OR OPENED AT THE END OF THE WORKING DAY, WEEKENDS, HOLIDAYS OR OTHER TIMES, WHEN THE CONTRACTOR IS NOT WORKING, UNLESS OTHERWISE DIRECTED. ALL TRENCHES SHALL BE COVERED, FIRMLY SECURED AND MARKED ACCORDINGLY FOR PEDESTRIAN / VEHICULAR TRAFFIC.
30. ALL EXCAVATED MATERIAL REMOVED FROM THIS PROJECT SHALL BE DISPOSED OF OFF THE PROPERTY BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
31. ALL DUCTILE IRON PRODUCTS SHALL BE DOMESTIC MADE HEAVY DUTY CLASSIFICATION SUITABLE FOR HIGHWAY TRAFFIC LOADS, OR 20,000 LB.
32. ALL GRASSED AREAS AFFECTED BY CONSTRUCTION SHALL BE RE-SODDED.
33. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION, INSTALLATION AND MAINTENANCE OF ALL TRAFFIC CONTROL AND SAFETY DEVICES, IN ACCORDANCE WITH SPECIFICATIONS OF THE LATEST REVISION OF FDOT DESIGN STANDARDS. IN ADDITION, THE CONTRACTOR IS RESPONSIBLE FOR THE RESETTING OF ALL TRAFFIC CONTROL AND INFORMATION SIGNAGE REMOVED DURING THE CONSTRUCTION PERIOD.
34. EXCAVATED OR OTHER MATERIAL STORED ADJACENT TO OR PARTIALLY UPON A ROADWAY PAVEMENT SHALL BE ADEQUATELY MARKED FOR TRAFFIC SAFETY AT ALL TIMES.
35. TEMPORARY PATCH MATERIAL MUST BE ON THE JOB SITE WHENEVER PAVEMENT IS CUT, OR THE CITY'S INSPECTOR WILL SHUT THE JOB DOWN.
36. CONTRACTOR MUST PROVIDE FLASHER ARROW SIGNAL FOR ANY LANE THAT IS CLOSED OR DIVERTED.
37. CONTRACTOR SHALL NOTIFY LAW ENFORCEMENT AND FIRE PROTECTION SERVICES TWENTY-FOUR (24) HOURS IN ADVANCE OF TRAFFIC DETOUR IN ACCORDANCE WITH SECTION 336.07 OF FLORIDA STATUTES.
38. CONTRACTOR TO RESTORE PAVEMENT TO ORIGINAL CONDITION AS REQUIRED.
39. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DEWATERING PER SPECIFICATION SECTION 02140 DEWATERING.

ISSUED:	03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 11/06/2017
DRAWN:	EAM	GENERAL NOTES (CONTINUED)	DRAWING NO. G-00.2
APPROVED:	XXX		

GENERAL NOTES (CONTINUED):

40. THE CONTRACTOR SHALL GIVE AT LEAST 48 HOURS NOTICE TO UTILITY COMPANIES TO PROVIDE FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES IN ADVANCE OF CONSTRUCTION. CONTACT UTILITIES NOTIFICATION CENTER AT 811 OR 1-800-432-4770 (SUNSHINE ONE-CALL OF FLORIDA).

Always call 811 two full business days before you dig
Sunshine811.com

41. WHEN PVC PIPE IS USED, A METALLIZED MARKER TAPE SHALL BE INSTALLED CONTINUOUSLY 18" ABOVE THE PIPE. THE MARKER TAPE SHOULD BE IMPRINTED WITH A WARNING THAT THERE IS BURIED PIPE BELOW. THE TAPE SHALL BE MAGNA TEC, AS MANUFACTURED BY THOR ENTERPRISES INC. OR APPROVED EQUAL.
42. ALL CONNECTIONS TO EXISTING MAINS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. WATER CONNECTIONS SHALL BE METERED, AND THE COST OF WATER AND TEMPORARY METER SHALL BE BORNE BY THE CONTRACTOR.
43. A COMPLETE AS-BUILT SURVEY SHALL BE ACCURATELY RECORDED OF THE UTILITY SYSTEM DURING CONSTRUCTION. AS-BUILT SURVEY SHALL BE SUBMITTED TO ECSD SIGNED AND SEALED BY A FLORIDA REGISTERED SURVEYOR PRIOR TO FINAL INSPECTION AND ACCEPTANCE OF PROJECT. THE COST OF SIGNED AND SEALED AS-BUILTS SHALL BE COVERED IN OVERALL BID. THE AS-BUILT SURVEY SHALL INCLUDE:
    a. PLAN VIEW SHOWING THE HORIZONTAL LOCATIONS OF EACH MANHOLE, INLET, VALVE, FITTING, BEND AND HORIZONTAL PIPE DEFLECTIONS WITH COORDINATES AND IN REFERENCE TO A SURVEY BASELINE OR RIGHT-OF-WAY CENTERLINE.
    b. THE PLAN VIEW SHALL ALSO SHOW SPOT ELEVATIONS OF THE TOP OF THE MAIN (WATER MAIN AND FORCE MAIN) OR PIPE INVERTS (GRAVITY MAINS) AT INTERVALS NOT TO EXCEED 100 FEET AS MEASURED ALONG MAIN. THE PLAN VIEW SHALL ALSO INCLUDE SPOT ELEVATIONS AT EACH MANHOLE, INLET, VALVE, FITTING, BEND AND VERTICAL PIPE DEFLECTION.
    c. THE PLAN VIEW SHALL ALSO SHOW THE HORIZONTAL SEPARATION FROM UNDERGROUND UTILITIES IMMEDIATELY ADJACENT OR PARALLEL TO THE NEW MAIN.
    d. PROFILE VIEW WITH SPOT ELEVATIONS OF THE TOP OF THE MAIN (WATER MAIN AND FORCE MAIN) OR PIPE INVERT (GRAVITY MAIN) AND OF THE FINISHED GRADE OR MANHOLE RIM DIRECTLY ABOVE THE MAIN AT INTERVALS NOT TO EXCEED 100 FEET AS MEASURED ALONG THE MAIN. THE PROFILE VIEW SHALL ALSO INCLUDE SPOT ELEVATIONS AT EACH MANHOLE, INLET, VALVE, FITTING, BEND AND VERTICAL PIPE DEFLECTION.
    e. THE PROFILE VIEW SHALL SHOW ALL UNDERGROUND UTILITIES CROSSING THE NEW MAIN AND THE VERTICAL SEPARATION PROVIDED BETWEEN THAT UNDERGROUND UTILITY AND THE NEW MAIN.
    f. ALL CADD FILES MUST BE CREATED FOLLOWING THE CITY OF HOLLYWOOD "SURVEY / AS-BUILT CAD DRAWING STANDARDS"

ISSUED:	03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 11/06/2017
DRAWN:	EAM	GENERAL NOTES (CONTINUED)	DRAWING NO. G-00.3
APPROVED:	XXX		

THOMAS ENGINEERING GROUP
CIVIL ENGINEERS · PROJECT MANAGERS · LAND PLANNING · LANDSCAPE ARCHITECTS
1502 W. FLETCHER AVE. SUITE 206 TAMPA, FL 33612 P: (813) 379-4100
125 W. INDIANTOWN RD. SUITE 206 JUPITER, FL 33458 P: 561-203-7503
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REV:	DATE:	COMMENT:	BY:

Sunshine 811
Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.
Check positive response codes before you dig!

TAC SUBMITTAL

PROJECT No.:	F240042
DRAWN BY:	CAD
CHECKED BY:	MAT
DATE:	05/06/2025
CAD I.D.:	F240042 WSU DTLS

PROJECT:
HOLLYWOOD OAKS
4220 & 4231 N 58th Ave.
HOLLYWOOD, FL 33021
FOR
KUSHNER
188 BAL BAY DRIVE
BAL HARBOUR, FL 33154

THOMAS ENGINEERING GROUP
6300 NW 31ST AVENUE
FORT LAUDERDALE, FL 33309
PH: (954) 202-7000
FX: (954) 202-7070
www.ThomasEngineeringGroup.com

MICHAEL A. TROXELL LICENSE No. 50572 STATE OF FLORIDA PROFESSIONAL ENGINEER
June 30, 2025
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:
UTILITY DETAILS
SHEET NUMBER:
U-2.1

Printed on Monday, June 30, 2025, 12:56 PM by Corey Sprusansky

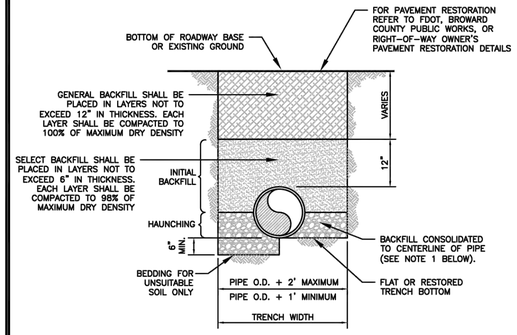
MICHAEL A. TROXELL, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 50572
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY. ADDITIONS OR DELETIONS TO REPORTS OR DOCUMENTS BEARING THE SEAL OF A PROFESSIONAL ENGINEER ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE AND SEAL SHALL NOT BE AFFIXED TO ANY ELECTRONIC COPIES.

WATER MAIN SEPARATION IN ACCORDANCE WITH F.A.C. RULE 62-555.314

OTHER PIPE	HORIZONTAL SEPARATION	CROSSING (1), (4)	JOINT SPACING @ CROSSING (FULL JOINT CENTERED) (8)
STORM SEWER, STORM WATER FORCE MAIN, RECLAIMED WATER (2)	WATER MAIN — 3 ft minimum	WATER MAIN — 12 inches is the minimum except for storm sewer, then 6 inches is the minimum and 12 inched is preferred	Alternate 3 ft minimum — WATER MAIN
GRAVITY SANITARY SEWER, (3) SANITARY SEWER FORCE MAIN, RECLAIMED WATER	WATER MAIN — 10 ft prefered, 6 ft minimum	WATER MAIN — 12 inches is the minimum except for gravity sewer, then 6 inches is the minimum and 12 inched is preferred	Alternate 6 ft minimum — WATER MAIN
ON-SITE SEWAGE TREATMENT & DISPOSAL SYSTEM	10 ft minimum	———	———

1. WATER MAIN SHOULD CROSS ABOVE OTHER PIPE, WHEN WATER MAIN MUST BE BELOW OTHER PIPE, THE MINIMUM SEPARATION IS 12 INCHES.
2. RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
3. 3 FT. FOR GRAVITY SANITARY SEWER WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST 6 INCHES ABOVE THE TOP OF THE GRAVITY SANITARY SEWER.
4. 18" VERTICAL MINIMUM SEPARATION REQUIRED BY CITY OF HOLLYWOOD, UNLESS OTHERWISE APPROVED.
5. A MINIMUM 6 FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.
6. IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10 FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.
7. WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 18 INCHES IN A PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SANITARY SEWER OR FORCE MAIN SHALL BE CONSTRUCTED OF DIP WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).
8. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALY RESTRAINED.

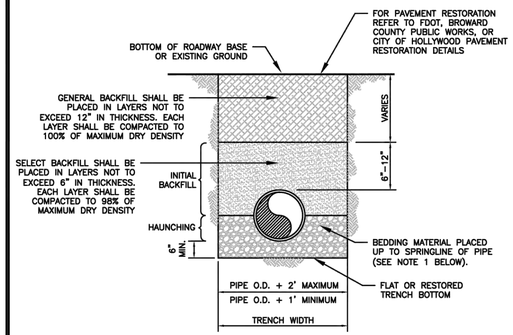
ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 11/06/2017
DRAWN: EAM	SEPARATION REQUIREMENTS OF F.D.E.P.	DRAWING NO. G-01.1
APPROVED: XXX		



NOTES:

1. WHEN PIPE INSTALLATION IS ABOVE THE GROUND WATER TABLE ELEVATION, OR WHENEVER BEDDING COPPER PIPE UNDER ANY CONDITION, BEDDING MATERIAL SHALL BE CLEAN SANDY SOIL IF AVAILABLE WITHIN THE LIMITS OF CONSTRUCTION. IMPORTED BEDDING SHALL BE WELL GRADED, WASHED CRUSHED STONE (OR DRAINFIELD LIMEROCK). CRUSHED STONE SHALL CONSIST OF HARD, DURABLE, SUB-ANGULAR PARTICLES OF PROPER SIZE AND GRADATION, AND SHALL BE FREE FROM ORGANIC MATERIAL, WOOD, TRASH, SAND, LOAM, CLAY, EXCESS FINES, AND OTHER DELETERIOUS MATERIALS.
2. ALL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY BEFORE ANY PIPE IS LAID. FOR ADDITIONAL MATERIAL SPECIFICATIONS REFER TO SPECIFICATION SECTION 02222, "EXCAVATION AND BACKFILL FOR UTILITIES".
3. DENSITY TESTING SHALL BE IN ACCORDANCE WITH AASHTO T-180 AND ASTM D-3017.
4. BACKFILL TO COMPLY WITH FDOT DESIGN STANDARDS 125-8.

ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	PIPE LAYING CONDITION TYPICAL SECTION (D.I.P.)	DRAWING NO. G-02
APPROVED: XXX		



NOTES:

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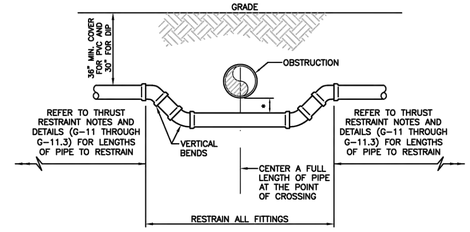
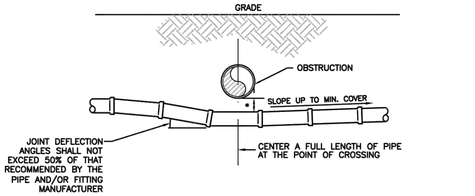
4. BACKFILL TO COMPLY WITH FDOT DESIGN STANDARD 125-8.

ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	PIPE LAYING CONDITION TYPICAL SECTION (P.V.C.)	DRAWING NO. G-03
APPROVED: XXX		



UTILITY CROSSING USING FITTINGS

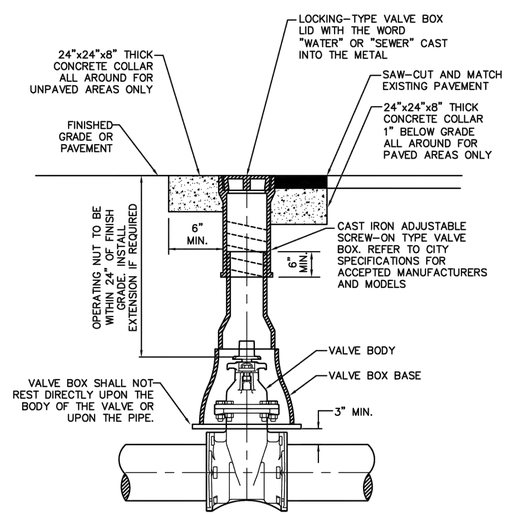
* REFER TO STANDARD DETAIL G-01.1, "SEPARATION REQUIREMENTS", FOR FDEP AND HEALTH DEPARTMENT SEPARATION REQUIREMENTS.



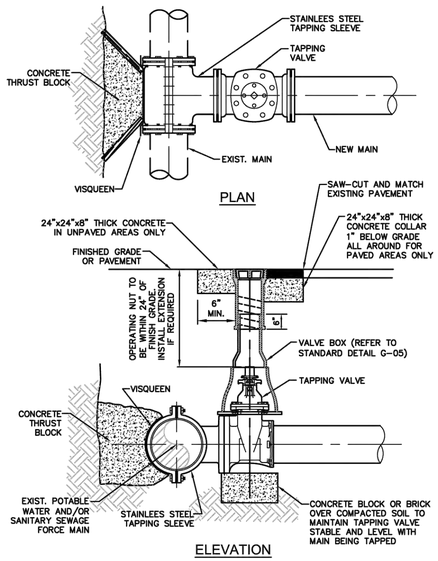
UTILITY CROSSING USING JOINT DEFLECTIONS

* REFER TO STANDARD DETAIL G-01.1, "SEPARATION REQUIREMENTS", FOR FDEP AND HEALTH DEPARTMENT SEPARATION REQUIREMENTS.

ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	UTILITY CROSSING DETAIL	DRAWING NO. G-04
APPROVED: XXX		



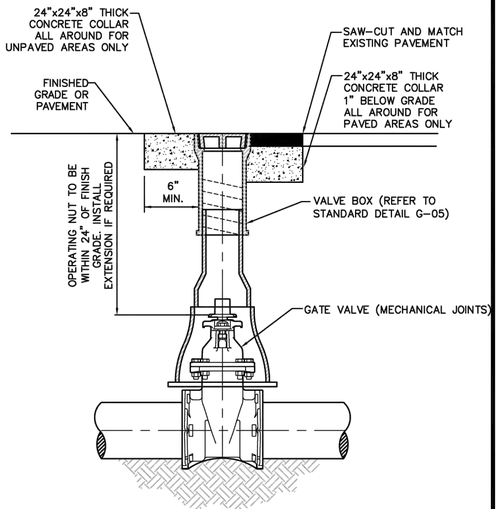
ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	TYPICAL VALVE BOX SETTING	DRAWING NO. G-05
APPROVED: XXX		



NOTES:

1. NOTIFY THE CITY OF HOLLYWOOD 48 HOURS IN ADVANCE OF PROPOSED TAP.
2. TAPPING MUST BE DONE IN THE PRESENCE OF AN AUTHORIZED CITY REPRESENTATIVE.
3. TEMPORARY THRUST BLOCKS TO BE INSTALLED AND REMAIN IN PLACE DURING TAPPING OPERATIONS.
4. FOR SEWAGE FORCE MAINS, REFER TO DETAIL OF PRIVATE FORCE MAIN TIE-IN AT PROPERTY LINE.
5. FOR WATER MAINS, A GATE VALVE OF SAME DIAMETER SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF THE TAPPING VALVE.

ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	TYPICAL TAPPING SLEEVE AND VALVE SETTING	DRAWING NO. G-06
APPROVED: XXX		



ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	TYPICAL GATE VALVE AND VALVE BOX SETTING	DRAWING NO. G-07
APPROVED: XXX		

RESILIENT SEATED GATE VALVE SPECIFICATIONS:

4" THROUGH 12" SIZE
(WATER AND FORCE MAIN)

1. GATE VALVES SHALL BE RESILIENT SEATED, MANUFACTURED TO MEET OR EXCEED THE REQUIREMENTS OF AWWA C509 (LATEST REVISION) AND IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

1.1. VALVES SHALL HAVE AN UNOBSTRUCTED WATERWAY EQUAL TO OR GREATER THAN THE FULL NOMINAL DIAMETER OF THE VALVE.

1.2. THE VALVES ARE TO BE NON-RISING STEM WITH THE STEM MADE OF CAST, FORGED OR ROLLED BRONZE SHOWN IN AWWA C509, TWO STEM SEALS SHALL BE PROVIDED AND SHALL BE OF THE O-RING TYPE, ONE ABOVE AND ONE BELOW THE THRUST COLLAR WITH LUBRICANT BETWEEN O-RING.

1.3. THE STEM NUT, ALSO MADE OF BRONZE, MAY BE INDEPENDENT OF THE GATE OR CAST INTEGRALLY WITH THE GATE. IF THE STEM NUT IS CAST INTEGRALLY, THE THREADS SHALL BE STRAIGHT AND TRUE WITH THE AXIS OF THE STEM TO AVOID BINDING DURING THE OPENING OR CLOSING CYCLE.

1.4. THE SEALING MECHANISM SHALL CONSISTS OF A CAST IRON GATE HAVING A VULCANIZED SYNTHETIC RUBBER COATING OR A RUBBER SEAT MECHANICALLY RETAINED ON THE GATE, THE RESILIENT SEALING MECHANISM SHALL PROVIDE ZERO LEAKAGE AT THE WATER WORKING PRESSURE WHEN INSTALLED WITH THE LINE FLOW IN EITHER DIRECTION.

1.5. A 2-INCH SQUARE WRENCH NUT SHALL BE PROVIDED FOR OPERATING THE VALVE.

1.6. ALL VALVES ARE TO BE SUPPLIED COMPLETE AND READY FOR INSTALLATION INCLUDING, BUT NOT LIMITED TO ALL NUTS, BOLTS RINGS AND RUBBERS.

1.7. ALL VALVES ARE TO BE TESTED IN STRICT ACCORDANCE WITH AWWA C509 LATEST REVISION).

ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	RESILIENT SEATED GATE VALVE SPECIFICATIONS	DRAWING NO. G-07.1
APPROVED: XXX		

Michael Troxell
Digitally signed by Michael Troxell
Date: 2025.06.30 15:48:50 -04'00'

THOMAS ENGINEERING GROUP
CIVIL ENGINEERS - PROJECT MANAGERS - LAND PLANNING - LANDSCAPE ARCHITECTS
1502 W. FLETCHER AVE. TAMPA, FL 33612 P: (813) 379-4100
125 W. INDIANTOWN RD. SUITE 206 JUPITER, FL 33458 P: 561-203-7503
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PROJECT No.:	F240042
DRAWN BY:	CAD
CHECKED BY:	MAT
DATE:	05/06/2025
CAD I.D.:	F240042 WSU DTLS

PROJECT:

HOLLYWOOD OAKS
4220 & 4231 N 58th Ave.
HOLLYWOOD, FL 33021

FOR

KUSHNER
188 BAL BAY DRIVE
BAL HARBOUR, FL 33154

THOMAS ENGINEERING GROUP
6300 NW 31ST AVENUE
FORT LAUDERDALE, FL 33309
PH: (954) 202-7000
FX: (954) 202-7070
www.ThomasEngineeringGroup.com

MICHAEL A. TROXELL LICENSE No. 50572 STATE OF FLORIDA PROFESSIONAL ENGINEER
June 30, 2025
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

UTILITY DETAILS

SHEET NUMBER:

U-2.2

Printed on Monday, June 30, 2025, 12:57 PM by Corey Sprusansky

MICHAEL A. TROXELL, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO. 50572
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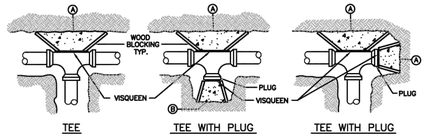
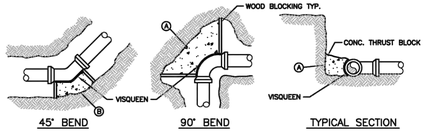


TEE | TEE WITH PLUG | TEE WITH PLUG



45° BEND | 90° BEND | TYPICAL SECTION

MINIMUM CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL (SQ. FT.)				
MARK	PIPE SIZE			
	4" OR 6"	8"	10"	12"
A				
B				

NOTES:

1. THRUST BLOCKS ARE TO BE USED IN COMBINATION WITH, AND NOT IN LIEU OF, MECHANICAL JOINT RESTRAINTS AS REQUIRED BY THE CITY. REFER TO THRUST RESTRAINT DESIGN TABLE IN STANDARD DETAIL G-10.
2. THE AREAS IN THE TABLE ARE BASED ON _____ POUNDS PER SQUARE FOOT SOIL BEARING AGAINST THE UNDISTURBED TRENCH WALL AND ARE TO REPRESENT THE MINIMUM VERTICAL PROJECTED AREA AT THE THRUST BLOCK IN A PLANE PERPENDICULAR TO THE LINE BISECTING THE INCLUDING ANGLE OF THE FITTING.
3. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EVACUATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL.
4. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
5. DO NOT COVER COUPLING OR JOINTS WITH CONCRETE.
6. CONCRETE TO BE 2500 P.S.I. MINIMUM 28 DAY STRENGTH.
7. TABLE TO BE COMPLETED BY DESIGN ENGINEER.

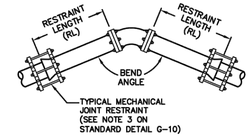
ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	THRUST BLOCK DESIGN	DRAWING NO. G-10
APPROVED: XXX		

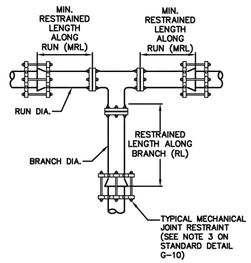
THRUST RESTRAINT NOTES:

1. ALL JOINTS BETWEEN BENDS AT HORIZONTAL & VERTICAL OFFSETS SHALL BE RESTRAINED.
2. MECHANICAL THRUST RESTRAINTS FOR D.I.P. FITTINGS ON D.I.P. OR P.V.C. PIPE SHALL BE MEGALUG AS MANUFACTURED BY EBAA IRON, INC., OR APPROVED EQUAL.
3. DUCTILE IRON FITTINGS UP TO 20-INCHES IN DIAMETER SHALL BE RESTRAINED BY MECHANICAL MEANS, I.E., MEGALUGS OR APPROVED EQUAL.
4. DUCTILE IRON FITTINGS 24-INCH IN DIAMETER AND ABOVE SHALL BE RESTRAINED BY MECHANICAL MEANS, I.E., MEGALUGS OR APPROVED EQUAL, WITH THE ADDITION OF THRUST BLOCKS AND CONCRETE ANCHORS AT THE DISCRETION OF THE ENGINEER OF RECORD.
5. ANY THRUST BLOCKS AND ANCHORS ARE TO BE DESIGNED BY THE ENGINEER OF RECORD. SIGNED AND SEALED CALCULATIONS SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO INSTALLATION.
6. THRUST BLOCKS CONSISTING OF POURED-IN-PLACE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGH OF 2,500 PSI AFTER 28 DAYS.

ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	JOINT RESTRAINT DESIGN FOR PVC AND DIP THRUST RESTRAINT NOTES	DRAWING NO. G-11
APPROVED: XXX		

HORIZONTAL BENDS			
PIPE DIA. (INCHES)	BEND (ANGLE)	RESTRAINED LENGTH (RL) (FT)	
		PVC	*DIP
24	11 ¼	.	.
	22 ½	.	.
	45	.	.
	90	.	.
16	11 ¼	.	.
	22 ½	.	.
	45	.	.
	90	.	.
12	11 ¼	.	.
	22 ½	.	.
	45	.	.
	90	.	.
8	11 ¼	.	.
	22 ½	.	.
	45	.	.
	90	.	.
6	11 ¼	.	.
	22 ½	.	.
	45	.	.
	90	.	.
4	11 ¼	.	.
	22 ½	.	.
	45	.	.
	90	.	.





TEES AND TAPPING SLEEVES								
RUN DIA. (INCHES)	BRANCH DIA. (INCHES)	MINIMUM RESTRAINED LENGTH ALONG RUN (FT.)	MINIMUM RESTRAINED LENGTH ALONG BRANCH (FT.)		RUN DIA. (INCHES)	BRANCH DIA. (INCHES)	MINIMUM RESTRAINED LENGTH ALONG RUN (FT.)	MINIMUM RESTRAINED LENGTH ALONG BRANCH (FT.)	
			PVC	*DIP				PVC	*DIP
24"	24"	.	.	.	12"	12"	.	.	.
	16"	.	.	.		8"	.	.	.
	12"	.	.	.		6"	.	.	.
	8"	.	.	.		4"	.	.	.
	6"	.	.	.	8"	8"	.	.	.
	4"	.	.	.		6"	.	.	.
16"	16"	.	.	.		4"	.	.	.
	12"	.	.	.	6"	6"	.	.	.
	8"	.	.	.		4"	.	.	.
	6"	.	.	.	4"	4"	.	.	.
	4"	.	.	.	.	.	.	.	.

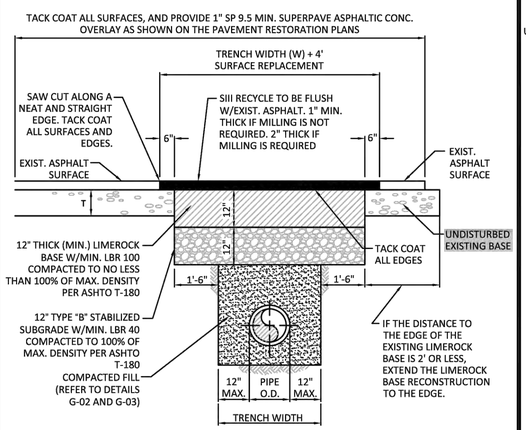
*ALL DIP JOINT-RESTRAINT CALCULATIONS ASSUME THE PIPE WILL BE WRAPPED IN POLYETHYLENE ENCASEMENT

ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	JOINT RESTRAINT DESIGN FOR PVC AND DIP HORIZONTAL BENDS AND TEES	DRAWING NO. G-11.1
APPROVED: XXX		

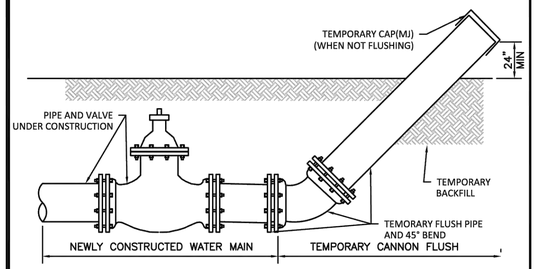
FLEXIBLE PAVEMENT RESTORATION NOTES:

1. THE ABOVE DETAILS APPLY ONLY TO ASPHALT PAVEMENT RESTORATION OVER UTILITY TRENCHES CUT WITHIN CITY OF HOLLYWOOD RIGHTS-OF-WAY. FOR PAVEMENT RESTORATION WITHIN BROWARD COUNTY OR FDOT RIGHTS-OF-WAY REFER TO THE CORRESPONDING DETAILS FOR THOSE AGENCIES.
2. LIMEROCK BASE MATERIAL SHALL HAVE A MINIMUM L.B.R. OF 100 AND A MINIMUM CARBONATE CONTENT OF 70%. REPLACED BASE MATERIAL OVER TRENCH SHALL BE A MINIMUM OF 12" THICK".
3. LIMEROCK BASE MATERIAL SHALL BE PLACED IN 12" MAXIMUM (LOOSE MEASUREMENT) THICKNESS LAYERS WITH EACH LAYER THOROUGHLY ROLLED OR TAMPED AND COMPACTED TO 100% OF MAXIMUM DENSITY, PER AASHTO T-180, PRIOR TO THE PLACEMENT OF THE SUCCEEDING LAYERS.
4. STABILIZED SUBGRADE MATERIAL SHALL BE GRANULAR AND SHALL HAVE A MINIMUM L.B.R. OF 40.
5. BACKFILL SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH THE PIPE LAYING CONDITION TYPICAL SECTIONS IN DETAILS G-02 AND G-03, AND THE SPECIFICATIONS, BUT TESTING WILL BEGIN 12" ABOVE THE INSTALLED FACILITY.
6. ALL EDGES AND JOINTS OF EXISTING ASPHALT PAVEMENT SHALL BE SAW CUT TO STRAIGHT LINES, PARALLEL TO OR PERPENDICULAR TO THE ROADWAY, PRIOR TO THE RESURFACING.
7. RESURFACING MATERIAL SHALL BE FDOT SUPERPAVE, AND SHALL BE APPLIED A MINIMUM OF TWO INCH IN THICKNESS.
8. MILL AND BUTT JOINT TO EXISTING PAVEMENT.
9. IF THE TRENCH IS FILLED TEMPORARILY, IT SHALL BE COVERED WITH A 2" ASPHALTIC CONCRETE PATCH TO KEEP THE FILL MATERIAL FROM RAVELING UNTIL REPLACED WITH A PERMANENT PATCH.
10. REFER TO SPECIFICATIONS FOR DETAILED PROCEDURES.
11. WHERE THE UTILITY TRENCH CROSSES EXISTING ASPHALT DRIVEWAYS, THE LIMEROCK BASE THICKNESS MAY BE A MINIMUM OF 6 INCHES THICK. REGARDLESS OF THE EXTENT OF IMPACT, THE ENTIRE DRIVEWAY SURFACE BETWEEN THE EDGE OF THE ROADWAY PAVEMENT AND PROPERTY LINE OR FRONT OF SIDEWALK SHALL BE OVERLAID USING 2-INCH THICK MINIMUM ASPHALTIC CONCRETE SURFACE COURSE WHERE INDICATED ON THE PLANS OR AS DIRECTED BY THE CITY/ENGINEER.

ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 11/06/2017
DRAWN: EAM	FLEXIBLE PAVEMENT RESTORATION NOTES	DRAWING NO. G-12
APPROVED: XXX		



ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 11/06/2017
DRAWN: EAM	FLEXIBLE PAVEMENT RESTORATION FOR TRENCHES CUT PERPENDICULAR AND PARALLEL TO THE ROADWAY	DRAWING NO. G-12.1
APPROVED: XXX		



GENERAL NOTES:

1. FLUSHING LOCATIONS ARE TO BE PROPOSED BY CONTRACTOR AND APPROVED BY ECSD.
2. UPON COMPLETION OF THE PIPE INSTALLATION FOR ANY SECTION, THE MAIN SHALL BE CANNON FLUSHED TO REMOVE DIRT AND ANY OTHER FOREIGN MATTER.
3. INSTALL A TEMPORARY 45° BEND AND ASSOCIATED TEMPORARY PIPING AS SHOWN TO DIRECT THE FLUSHING WATER AWAY FROM THE IMMEDIATE WORK AREA AND EXERCISE DUE CARE SO AS TO ENSURE THAT THE WATER USED IN FLUSHING DOES NOT CAUSE A NUISANCE OR INFLICT PROPERTY DAMAGE.
4. BENDS AND PIPING SHALL BE THE SAME SIZE OR LARGER AS THE LINE BEING FLUSHED.
5. PRIOR TO THE ACTUAL LINE FLUSHING OPERATION THE CONTRACTOR SHALL PROPERLY NOTIFY ECSD INSPECTOR OF SUCH INTENDED WATER USE.
6. NO EXISTING VALVE SHALL BE OPERATED, EXCEPT BY AUTHORIZED CITY PERSONNEL.
7. FLUSHING SHALL NOT BE ACCOMPLISHED WITHOUT THE ACTUAL PRESENCE OF THE ECSD INSPECTOR.
8. AFTER THE LINE UNDER CONSTRUCTION HAS BEEN SUCCESSFULLY FLUSHED, THE CONTRACTOR SHALL REMOVE THE TEMPORARY PIPING ARRANGEMENT AND PROCEED WITH THE REMAINING CONSTRUCTION AS SPECIFIED.
9. ALL PIPING SHALL BE MECHANICALLY RESTRAINED IN ACCORDANCE WITH CITY STANDARDS.
10. IF REQUIRED BY ECSD, WATER SHALL MAINS SHALL BE CLEANED BY PIGGING.
11. CONTRACTOR WILL INSTALL A PRESSURE GAUGE AT OR NEAR THE FILL AND FLUSH LOCATION AND MAINTAIN A MINIMUM PRESSURE OF 40 PSI AT ALL TIMES. THE FILL VALVE WILL BE OPENED AND CLOSED SLOWLY TO AVOID RAPID PRESSURE CHANGES IN THE WATER SYSTEM.
12. CONTRACTOR IS CAUTIONED THAT GOVERNING AGENCIES OR UTILITIES MAY HAVE REGULATIONS LIMITING OR PROHIBITING DISCHARGE INTO SEWERS, SURFACE WATERS, CANALS, DITCHES AND OTHER CONVEYANCES/RETENTION AREA. ALL COMPLIANCE WITH GOVERNING AGENCIES REQUIREMENTS (INCLUDING PERMITTING, IF REQUIRED) IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
13. CANNON FLUSHING TO PROCEED AFTER HEALTH DEPARTMENT CLEARANCE IS RECEIVED.

ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	CANNON FLUSHING	DRAWING NO. G-13
APPROVED: XXX		

Michael Troxell

Digitally signed by Michael Troxell
Date: 2025.06.30 15:49:46 -04'00'

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1502 W. FLETCHER AVE. TAMPA, FL 33612 P: (813) 379-4100
125 W. INDIANTOWN RD. SUITE 206 JUPITER, FL 33458 P: 561-203-7503
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PROJECT No.:	F240042
DRAWN BY:	CAD
CHECKED BY:	MAT
DATE:	05/06/2025
CAD I.D.:	F240042 WSU DTLS

PROJECT:

HOLLYWOOD OAKS
4220 & 4231 N 58th Ave.
HOLLYWOOD, FL 33021

FOR

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188 BAL BAY DRIVE
BAL HARBOUR, FL 33154

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6300 NW 31ST AVENUE
FORT LAUDERDALE, FL 33309
PH: (954) 202-7000
FX: (954) 202-7070
www.ThomasEngineeringGroup.com

MICHAEL A. TROXELL LICENSE No. 50572 STATE OF FLORIDA PROFESSIONAL ENGINEER
June 30, 2025
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

UTILITY DETAILS

SHEET NUMBER:

U-2.3

Printed on Monday, June 30, 2025, 12:57 PM by Corey Sprusansky

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SEWER NOTES:

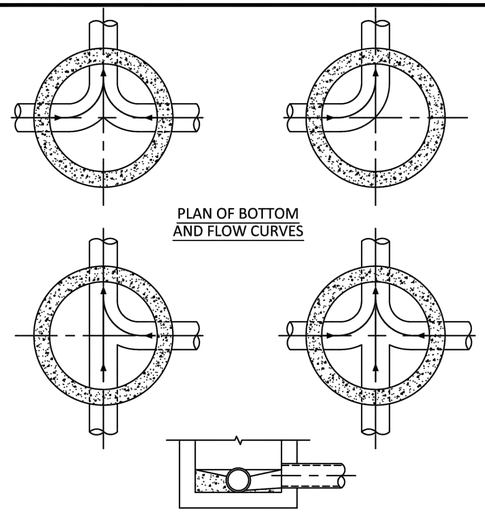
1. THE MINIMUM DEPTH OF COVER OVER D.I.P. SANITARY SEWER GRAVITY OR FORCE MAINS IS 30". THE MINIMUM DEPTH OF COVER OVER PVC SANITARY SEWER OR FORCE MAINS IS 36".
2. ALL CONNECTIONS TO EXISTING MAINS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. LEAKAGE TESTS AND ALIGNMENT (LAMPING) TESTS SHALL BE PERFORMED ON ALL NEW SEWER LINES UP TO THE CONNECTION POINT WITH THE EXISTING SEWER SYSTEM. THESE TESTS SHALL BE REQUESTED AND PAID FOR BY THE CONTRACTOR.
4. LAMPING TESTS SHALL BE PERFORMED ON GRAVITY SEWERS FROM MANHOLE TO MANHOLE UP TO AND INCLUDING THE POINT OF CONNECTION TO THE EXISTING SEWER SYSTEM.
5. LEAKAGE TESTS SHALL BE PERFORMED ON ALL SEGMENTS OF A GRAVITY SEWER SYSTEM, INCLUDING SERVICE LATERALS AND MANHOLES, FOR A CONTINUOUS PERIOD OF NO LESS THAN 2 HOURS. AT THE END OF THE TEST, THE TOTAL MEASURED LEAKAGE SHALL NOT EXCEED 100 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM, WITH ZERO ALLOWABLE LEAKAGE FOR LATERALS AND MANHOLES. AN EXFILTRATION OR INFILTRATION TEST SHALL BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET ON THE SECTION BEING TESTED.
6. FORCE MAINS SHALL BE PRESSURE-TESTED IN ACCORDANCE WITH RULE 62-555.330 (FAC). THE PRESSURE TEST SHALL CONSIST OF HOLDING A TEST PRESSURE OF 150 PSI ON THE PIPELINE FOR A CONTINUOUS PERIOD OF 2 HOURS THE MAXIMUM ALLOWABLE LEAKAGE SHALL BE DETERMINED BY THE FOLLOWING FORMULA:

$$\frac{L = S \times D \times \sqrt{P}}{148{,}000}$$

WHERE:
L = ALLOWABLE LEAKAGE FOR SYSTEM IN GALLONS PER HOUR
D = PIPE DIAMETER IN INCHES
S = LENGTH OF LINES IN LINEAL FEET
P = AVERAGE TEST PRESSURE IN PSI

7. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTYFYING CONFLICTS WITH FORCE MAINS PLACED AT MINIMUM COVER. IN CASE OF CONFLICT, FORCE MAIN SHALL BE LOWERED TO PASS UNDER CONFLICTS WITH 12" MINIMUM SEPARATION FROM WATER MAINS AND 6" MINIMUM SEPARATION FROM OTHER UTILITIES. NO ADDITIONAL PAYMENT SHALL BE DUE TO CONTRACTOR FOR LOWERING THE MAIN OR THE ADDITIONAL FITTINGS USED THEREON.
8. WHENEVER IT IS NECESSARY, IN THE INTEREST OF SAFETY, TO BRACE THE SIDES OF A TRENCH, THE CONTRACTOR SHALL FURNISH, PUT IN PLACE AND MAINTAIN SUCH SHEETING OR BRACING AS MAY BE NECESSARY TO SUPPORT THE SIDES OF THE EXCAVATION TO ENSURE PERSONNEL SAFETY, AND TO PREVENT MOVEMENT WHICH CAN IN ANY WAY DAMAGE THE WORK OR ENDANGER ADJACENT STRUCTURES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SEQUENCE, METHODS AND MEANS OF CONSTRUCTION, AND FOR THE IMPLEMENTATION OF ALL OSHA AND OTHER SAFETY REQUIREMENTS.

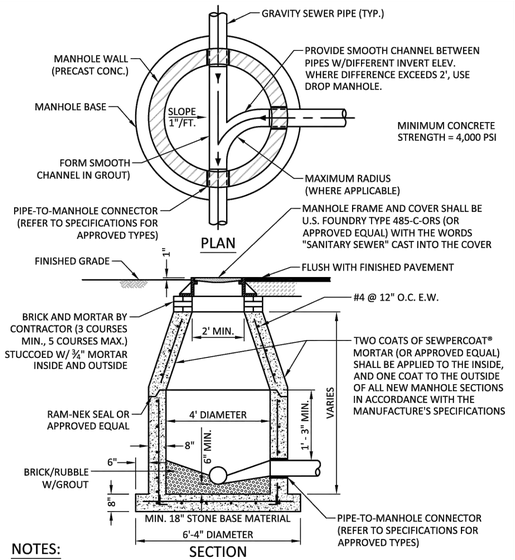
ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	SANITARY SEWER MAIN CONSTRUCTION NOTES	DRAWING NO. S-01
APPROVED: XXX		



NOTES:

1. INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS.
2. SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING SMOOTH FLOWS.
3. CHANNELS FOR FUTURE CONNECTIONS (STUBS) SHALL BE CONSTRUCTED FILLED WITH SAND & COVERED WITH 1" OF MORTAR.
4. WHEN FLOW LINE DEFLECTS MORE THAN 45°, A DROP OF 0.10' IS REQUIRED.

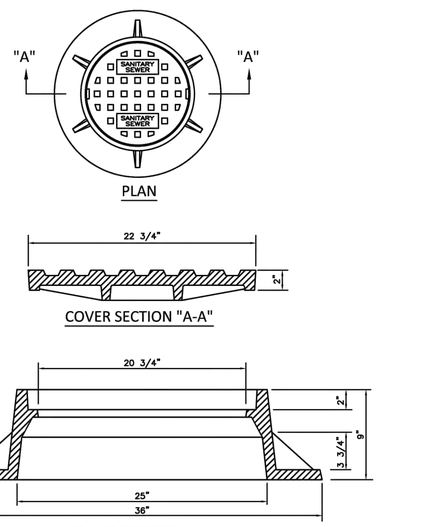
ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	MANHOLE FLOW PATTERNS	DRAWING NO. S-02
APPROVED: XXX		



NOTES:

1. SHOP DRAWINGS SHOWING ALL DIMENSIONS, INCLUDING CONCRETE REINFORCEMENT AND BUOYANCY, SHALL BE SUBMITTED TO THE CITY PRIOR TO INSTALLATION.
2. THE BOTTOM SLAB SHALL BE CAST MONOLITHICALLY WITH THE LOWER WALL SECTION TO A MINIMUM OF 3' ABOVE SLAB BASE.
3. NO CONSTRUCTION JOINTS ARE ALLOWED BELOW ELEVATION +2.00 NAVD. ABOVE ELEVATION +2.00 NAVD CONSTRUCTION JOINTS ARE ALLOWED, IF ADEQUATE JOINTS WITH KEY-WAYS AND WATER STOPS ARE PROVIDED. SUBMIT SHOP DRAWINGS OF JOINT DETAILS TO THE ENGINEER FOR APPROVAL.

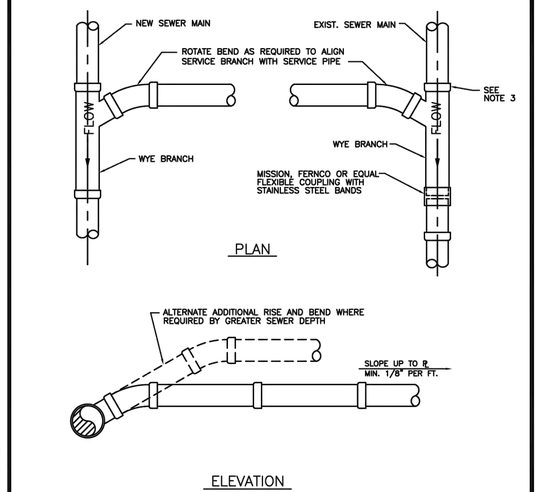
ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 07/18/2018
DRAWN: EAM	STANDARD PRECAST MANHOLE	DRAWING NO. S-03
APPROVED: XXX		



NOTES:

1. LETTERS ON COVER TO BE 3/8" HIGH, 1/4" TO 5/16" THICK AND FLUSH WITH TOP OF COVER.
2. ALL BEARING SURFACES TO BE MACHINED.
3. MINIMUM WEIGHTS: COVER - 160 LBS., TOTAL - 400 LBS.
4. MANHOLE FRAME AND COVER SHALL BE U.S. FOUNDRY 485-C-ORS WITH THE WORDS "SANITARY SEWER" CAST INTO THE COVER.

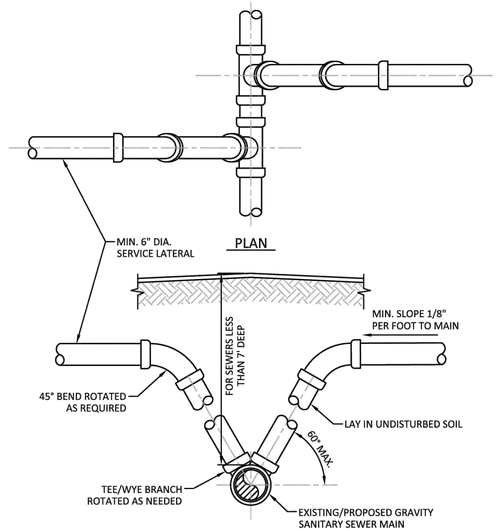
ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	MANHOLE FRAME AND COVER	DRAWING NO. S-06
APPROVED: XXX		



NOTES:

1. SINGLE SERVICE CONNECTIONS SHALL USE 6" PIPE AND FITTINGS.
2. USE RISER CONNECTIONS WHERE INVERT OF SEWER IS GREATER THAN 7'-0" DEEP.
3. WHERE BELL OF WYE AND SPIGOT OF EXISTING MAIN ARE NOT COMPATIBLE, USE A SECOND FLEXIBLE COUPLING.

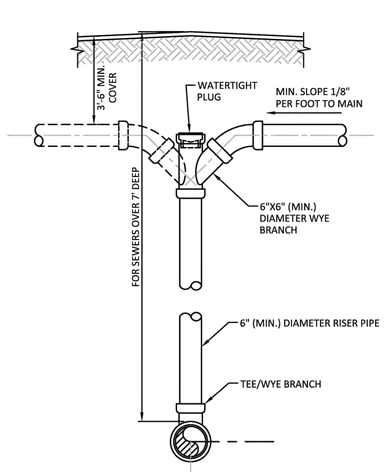
ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	WYE BRANCH CONNECTION	DRAWING NO. S-09
APPROVED: XXX		



NOTES:

1. MODIFIED RISER CONNECTION TO BE USED ONLY WHEN DIRECTED BY THE CITY.
2. NO. 57 ROCK OR ¾" DRAINFIELD LIMEROCK MAY BE USED AS BEDDING OVER UNDISTURBED SOIL WITH PVC PIPE.
3. SINGLE SERVICE CONNECTIONS SHALL USE 6" (MIN.) DIAMETER PIPE AND FITTINGS.

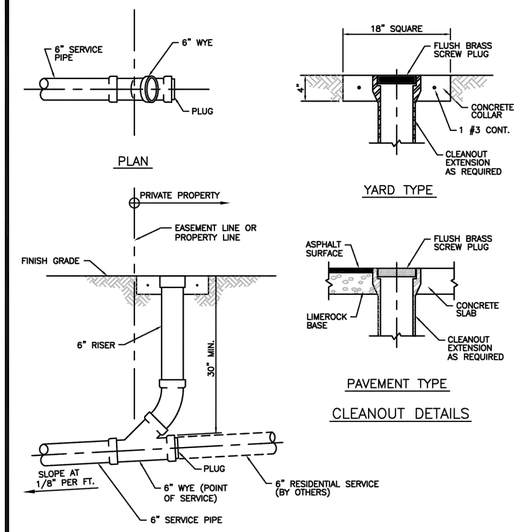
ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	SANITARY SEWER LATERAL MODIFIED RISER	DRAWING NO. S-10
APPROVED: XXX		



NOTES:

1. RISER CONNECTION TO BE USED ONLY WHEN SANITARY SEWER IS MORE THAN 7'-0" DEEP OR WHEN DIRECTED BY THE CITY.
2. NO. 57 ROCK OR ¾" DRAINFIELD LIMEROCK MAY BE USED AS BEDDING OVER UNDISTURBED SOIL WITH PVC PIPE.
3. SINGLE SERVICE CONNECTIONS SHALL USE 6" (MIN.) DIAMETER PIPE AND FITTINGS.

ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	SANITARY SEWER LATERAL VERTICAL RISER	DRAWING NO. S-11
APPROVED: XXX		



ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	SEWER SERVICE CONNECTION AND CLEANOUT AT PROPERTY LINE	DRAWING NO. S-12
APPROVED: XXX		

Michael Troxell

Digitally signed by Michael Troxell
Date: 2025.06.30 15:50:06 -04'00'

THOMAS ENGINEERING GROUP
CIVIL ENGINEERS - PROJECT MANAGERS - LAND PLANNING - LANDSCAPE ARCHITECTS
1502 W. FLETCHER AVE. TAMPA, FL 33612
125 W. INDIANTOWN RD. SUITE 206 JUPITER, FL 33458
P: (813) 379-4100 P: 561-203-7903

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REVISIONS:

REV:	DATE:	COMMENT:	BY:

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Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.
Check positive response codes before you dig!

TAC SUBMITTAL

PROJECT No.:	F240042
DRAWN BY:	CAD
CHECKED BY:	MAT
DATE:	05/06/2025
CAD I.D.:	F240042 WSU DTLS

PROJECT:
HOLLYWOOD OAKS
4220 & 4231 N 58th Ave.
HOLLYWOOD, FL 33021

FOR
KUSHNER
188 BAL BAY DRIVE
BAL HARBOUR, FL 33154

THOMAS ENGINEERING GROUP
6300 NW 31ST AVENUE
FORT LAUDERDALE, FL 33309
PH: (954) 202-7000
FX: (954) 202-7070
www.ThomasEngineeringGroup.com

MICHAEL A. TROXELL LICENSE No. 50572 STATE OF FLORIDA PROFESSIONAL ENGINEER
June 30, 2025
FLORIDA BUSINESS PERT. OF AUTH. No. 27528

SHEET TITLE:
UTILITY DETAILS

SHEET NUMBER:
U-2.4

Printed on Monday, June 30, 2025, 12:57 PM by Corey Sprusansky

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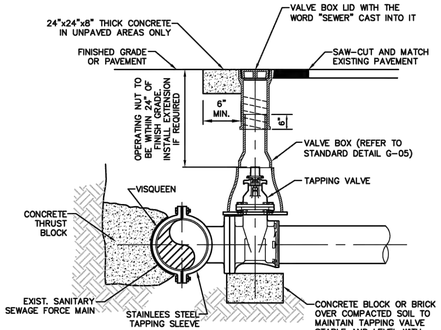
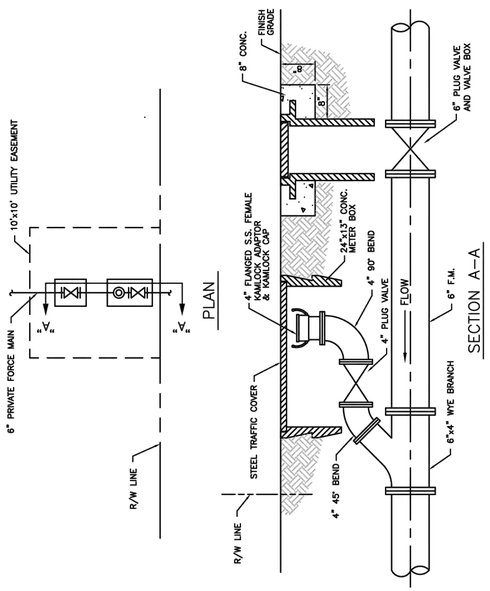


ELEVATION

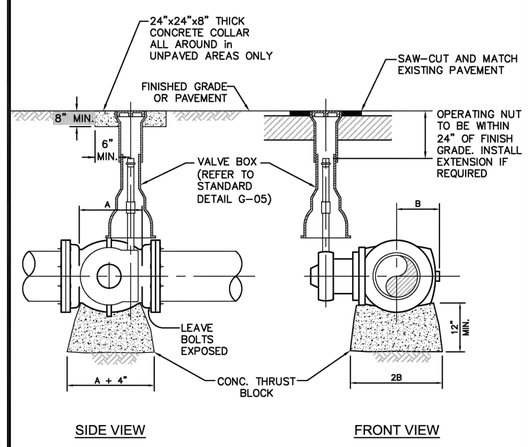
NOTES:

1. REFER TO STANDARD DETAIL GS-06, "TYPICAL TAPPING SLEEVE AND VALVE SETTING"
2. REFER TO STANDARD DETAIL S-14, "PRIVATE FORCE MAIN TIE-IN AT PROPERTY LINE".

ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	FORCE MAIN CONNECTION	DRAWING NO. S-13
APPROVED: XXX		



ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	PRIVATE FORCE MAIN TIE-IN AT PROPERTY LINE	DRAWING NO. S-14
APPROVED: XXX		



SIDE VIEW FRONT VIEW

NOTE:
ALL CONCRETE TO BE 3000 P.S.I.

ISSUED: 03/01/1994	DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAIL	REVISED: 06/08/2014
DRAWN: EAM	PLUG VALVE	DRAWING NO. S-15
APPROVED: XXX		

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REVISIONS:

REV:	DATE:	COMMENT:	BY:

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MICHAEL A. TROXELL LICENSE No. 50572 STATE OF FLORIDA PROFESSIONAL ENGINEER
June 30, 2025
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

UTILITY DETAILS

SHEET NUMBER:

U-2.5

Michael Troxell

Digitally signed by Michael Troxell
Date: 2025.06.30 15:50:28 -04'00'

Printed on Monday, June 30, 2025, 12:57 PM by Corey Sinusansky ...\Utility and Details\...\UTILITY DETAILS.dwg

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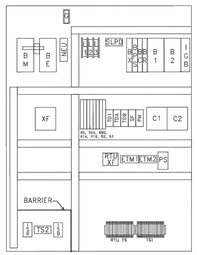
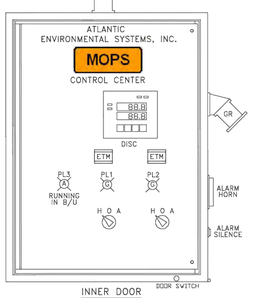
MOPS CONTROL CENTER

CONTROL CENTER DESIGNED & MANUFACTURED TO MEET ALL D.E.P. REQUIREMENTS

SEE SCHEDULE FOR ELECTRICAL SERVICE REQUIREMENTS



INTERIOR LAYOUT



INNER DOOR

(OUTER DOOR NOT NOT SHOWN FOR CLARITY)

PANEL COMPONENTS

ALT	ALTERNATOR (IN DISC)
AS	ALARM SILENCE SWITCH
B1–2	MOTOR BREAKERS
BC	CONTROL BREAKER
BE	EMERGENCY BREAKER
BM	MAIN BREAKER
BR	GFI RECEPTACLE BREAKER
BPS	POWER SUPPLY BREAKER
BX	TRANSFORMER BREAKER
C1–2	MOTOR START CONTACTORS
CR	GFI CONVENIENCE RECEPTACLE
DISC	DUPLEX INTRINSICALLY– SC100 SAFE CONTROLLER
ETM	ELAPSED TIME METER
G	GROUND
GR	GENERATOR RECEPTACLE
H	HORN
HOA	HAND–OFF–AUTO SWITCH– GE (ON DISC)
IGB	INLET GRINDER BREAKER
NEU	NEUTRAL
PL1,2,3	PILOT LIGHT (GE)
PM	PHASE MONITOR
PS	POWER SUPPLY
R2–3	RELAYS
RBA–B	BATTERY RELAYS
RS	SILENCE RELAY
R1A–B	RELAYS
RTUXF	RTU TRANSFORMER
SF	SEAL FAIL RELAY
SLPD	SURGE/LIGHTNING PROTECTION DEVICE
TS1	TERMINAL STRIP FOR PUMPS
TS2	TERMINAL STRIP FOR I.S.
XF	50/60Hz 0.5KVA TRANSFORMER

ENCLOSURE

NEMA 4X STAINLESS STEEL
SINGLE DOOR w/PADLOCK HASP
ALUMINUM INNER (DEAD FRONT) DOOR
30"H x 30"W x 8"D
PANEL LABELED FOR U.L. 508A "MOTOR CONTROL CENTERS" AND U.L. 698A "HAZARDOUS LOCATION PANELS"

NOTE:

SEE CONTROL PANEL DETAIL SHEET FOR ADDITIONAL NOTES.

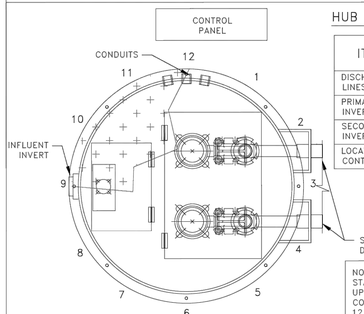
27	NEU	NEU	L1	120	L2	120	S1	#1–20	COM	SF1	SF2	T1	T2	T3
RECEPTACLE	NEU		120V		RTU TERMINALS		PUMP SEAL FAIL		MOTOR 1 LEADS					

TS1 TERMINAL SCHEDULE

15	16	P1G	T1	T2	T3	17	18	P2G
MT1 MOTOR 1	N	G	MOTOR 2 LEADS			MT2 MOTOR 2	N	G
		D						D

TS2 TERMINAL SCHEDULE

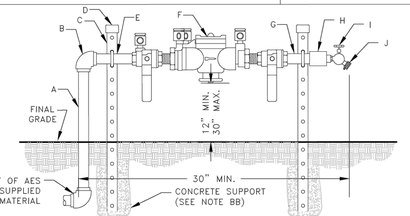
HUB AND INVERT LOCATION



ITEMS	CLOCK POSITION
DISCHARGE LINES	3:00
PRIMARY INVERT	9:00
SECONDARY INVERT	N/A
LOCATION OF CONTROL PANEL	12:00

SCHEMATIC BASED ON THE STATION'S DISCHARGE BEING LOCATED AT THE #3 CLOCK POSITION. SEE SCHEDULE FOR LOCATION OF INVERTS AND CONTROL PANEL. LOCATIONS SUBJECT TO CHANGE.

NOTE: BACKFILL AROUND LIFT STATION FROM ANTI FLOATATION RING UP TO FINISHED GRADE SHALL BE COMMON FILL COMPACTED IN 12 INCH MAX. LIFTS TO 98% DENSITY PER AASHTO T 180. CONTRACTOR SHALL EXERCISE CARE NOT TO DAMAGE WETWELL DURING COMPACTION.



MATERIALS		
ITEM	QTY.	DESCRIPTION
A	1	3/4" x 24" S.S. NIPPLE
B	2	3/4" x 1" S.S. 90° ELBOW
C	2	1"x1"x40" S.S. SUPPORT BRACKET
D	2	SUPPORT BRACKET CAPS P/N 2080
E	2	3/4" S.S. PIPE BOLTS

MATERIALS		
ITEM	QTY.	DESCRIPTION
F	1	3/4" APP. BACKFLOW PREVENTER
G	1	3/4" x 4" S.S. NIPPLE
H	1	3/4" x 3/4" S.S. COUPLING
I	1	3/4" BRONZE HOSE BIB
J	1	3/4" VACUUM BREAKER

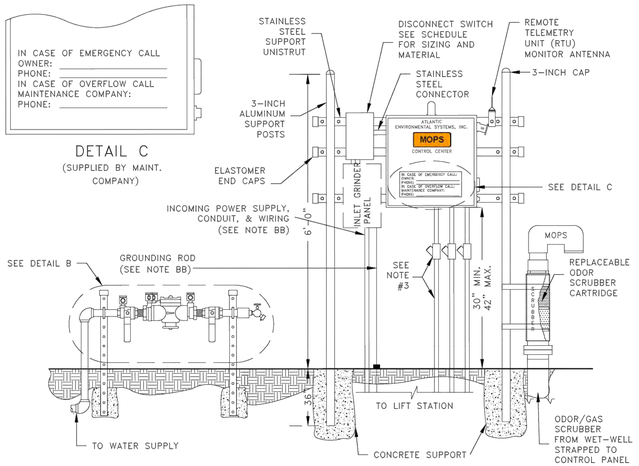
DETAIL B

R.P.Z. BACKFLOW PREVENTER ASSEMBLY DETAIL

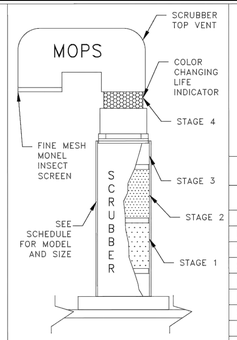
U.S.C. AND A.S.S.E. APPROVED N.T.S.

DETAIL C

(SUPPLIED BY MAINT. COMPANY)



CONTROL CENTER ASSEMBLY AND INSTALLATION N.T.S.

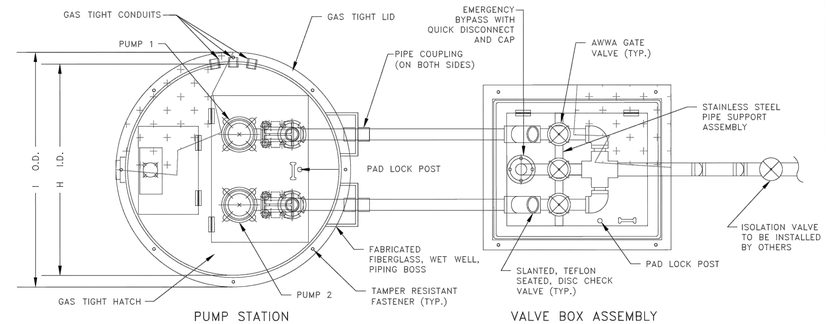


DETAIL A

MOPS ODOR/GAS SCRUBBER

NOTES:

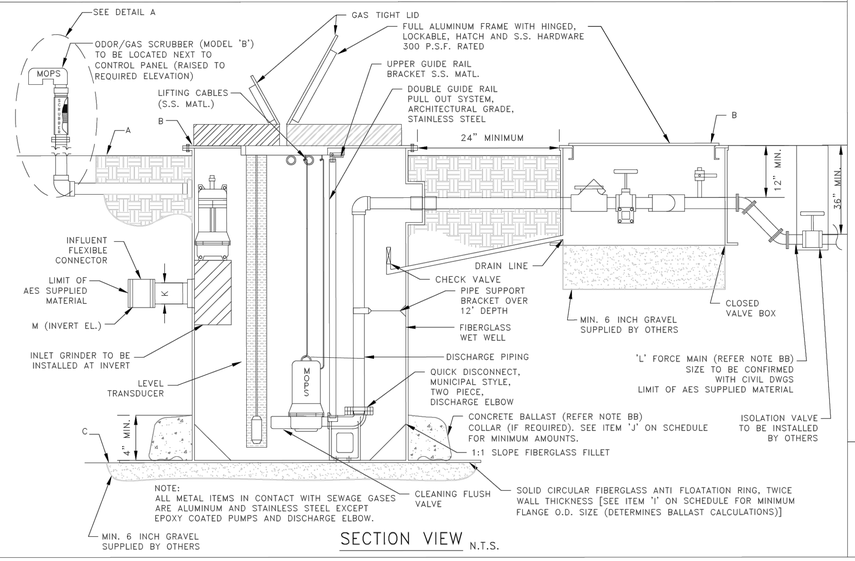
1. SCRUBBER DESIGNED TO REMOVE TOXIC SEWAGE GASES, H2S, AND OFFENSIVE ODORS SUCH AS SKATOLES AND MERCAPTANS.
2. SCRUBBER'S LIFE EXPECTANCY CALCULATIONS ARE INCLUDED IN SHOP DRAWING SUBMITTALS.
3. SCRUBBER UNIT CAN BE MOUNTED INSIDE WET WELL OR TOP MOUNTED.
4. MODEL 'B' SHOWN.



PUMP STATION

VALVE BOX ASSEMBLY

TOP VIEW N.T.S.



SECTION VIEW N.T.S.

MOPS

PRIVATE SERIES

MANUFACTURED ODORLESS PUMP STATION

ATLANTIC ENVIRONMENTAL SYSTEMS, INC.
LAKE WORTH, FL 33461
PH: (561) 547–8080 FAX: (561) 547–3999
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MOPS PRIVATE PUMP STATION SCHEDULE

MOPS SERIES		ITEM	DESCRIPTION	
INITIAL DESIGN FLOW (G.P.M.)	526		100 YEAR FLOOD ELEVATION	9.00'
INITIAL DESIGN HEAD (T.D.H.)	89'		25 YEAR FLOOD ELEVATION	8.60'
SECONDARY DESIGN FLOW (G.P.M.)	911	A	GRADE ELEVATION	10.75'
SECONDARY DESIGN HEAD (T.D.H.)	69'	B	TOP ELEVATION OF WET WELL	10.75'
RATED PERFORMANCE SPEED	1760	C	BOTTOM ELEVATION OF WET WELL	–6.25'
RATED MOTOR HORSEPOWER	25	D	ALL PUMPS OFF ELEVATION	–4.25'
SUBMERSIBLE PUMP TYPE (P–1,P–2)	NON–CLOG/CHOPPER	E	LEAD PUMP ON ELEVATION	–1.25'
PUMP MODEL NUMBER	MOPS	F	LAG PUMP ON ELEVATION	–0.75'
SERVICE ENTRANCE VOLTAGE	460	G	HIGH ALARM ELEVATION	–0.25'
SERVICE ENTRANCE PHASE	3	H	INSIDE DIAMETER OF WET–WELL	120"
CONTROL CENTER FULL LOAD AMPS	132	I	OUTSIDE DIAMETER OF ANTI–FLOATATION RING	144"
NEMA 3R PAINTED STEEL DISCONNECT SWITCH, RATED AMPS	200	J	MINIMUM CUBIC FEET OF CONCRETE BALLAST (CU YDS)	588 (22)
WET WELL SCOURER SYSTEM	N/A	K	INVERT PIPE DIAMETER	8"
REMOTE STATION MONITOR (TELEMETRY)	W/SA	L	FORCE MAIN DIAMETER	8"
ON–SITE GENERATOR SYSTEM	N/A	M	PRIMARY INVERT ELEVATION	0.78'
INLET GRINDER SYSTEM	AES	N	SECONDARY INVERT ELEVATION	N/A

MOPS EQUIPMENT IDENTIFICATION	QTY.	MODEL DESIGNATION
MOPS PUMP STATION	1	A24–84264–D–50.0–MEGA
MOPS VALVE BOX ASSEMBLY (VBA)	1	VBA–24
MOPS ODOR/GAS SCRUBBER (OGS)	1	OGS–B
MOPS R.P.Z. ASSEMBLY	1	75
MOPS CONTROL CENTER	1	PSC–232–50.0–T
MOPS DISCONNECT SWITCH	1	FDS–200–3–4–PS
MOPS CONTROL CENTER MOUNTING ASSEMBLY	1	CCMA–32AL
MOPS WET WELL INLET GRINDER	1	AES SERIES 250
MOPS REMOTE STATION MONITOR	1	PROVIDED WITH SERVICE AGREEMENT
1st YEAR SERVICE/MAINTENANCE CONTRACT	1	LEVEL 2 WITH REMOTE MONITOR
MOPS ON–SITE GENERATOR SYSTEM	0	N/A
MOPS FIELD SERVICE WORK	1	CONTROL INSTALLATION & START–UP

MOPS PUMP STATION COMPLIANCE NOTES:

THIS PUMP STATION DESIGN COMPLIES WITH THE FOLLOWING REQUIRED STANDARDS:

- STATE OF FLORIDA ENVIRONMENTAL PROTECTION STANDARDS
- FLORIDA ADMINISTRATIVE CODE (F.A.C.): 62 640.400 COLLECTION AND TRANSMISSION SYSTEMS
- NATIONAL ELECTRIC CODE (NEC) CLASS 1, DIVISION 1, GROUP D HAZARDOUS LOCATIONS
- UNDERWRITER'S LABORATORIES (U.L.) 508A MOTOR CONTROL CENTERS AND U.L. 698A INSTRINSICALLY SAFE CONTROL CENTERS
- RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES (2014 EDITION).

1. PUMPS ARE RATED BY FACTORY MUTUAL FOR CLASS 1, DIVISION 1, GROUP D ATMOSPHERES AS REQUIRED BY NEC.
2. THE CONTROL CENTER INCORPORATES INTRINSICALLY SAFE RELAYS AND IS LISTED TO UL 698A INTRINSICALLY SAFE FOR CLASS 1, DIVISION 1 ATMOSPHERES.
3. THE CONDUIT PROVIDED, ALONG WITH CONDUIT GAS SEAL OFFS, ARE RATED FOR CLASS 1, DIVISION 1 LOCATIONS.
4. THE WASTEWATER PUMPS AND THE CONTROL CENTER INCORPORATE A MECHANICAL SEAL FAILURE DETECTION AND NOTIFICATION SYSTEM.
5. THE CONTROL CENTER INCLUDES EITHER A REMOTE TELEMETRY UNIT (RTU) OR A SELF CHARGING, BACK UP ALARM SYSTEM TO OPERATE ON POWER FAILURE.
6. THE PUMP STATION INCORPORATES AN ODORLESS DESIGN WITH A SCRUBBER SYSTEM TO CONTROL TOXIC GASES AND ODORS FOR COMPLIANCE TO F.A.C. 62 604.400.
7. THE BOTTOM OF THE TOP RIM ELEVATION OF PUMP STATION MUST BE LOCATED AT A HIGHER ELEVATION THAN THE 25 YEAR FLOOD ELEVATION. THE LISTED 25 YEAR FLOOD ELEVATION PROVIDED BY SITE CIVIL ENGINEER.
8. THE BOTTOM ELEVATION OF THE MOPS CONTROL CENTER MUST BE LOCATED AT A HIGHER ELEVATION THAN THE 100 YEAR FLOOD ELEVATION. THE LISTED 100 YEAR FLOOD ELEVATION PROVIDED BY THE SITE CIVIL ENGINEER.

MOPS ENGINEERING NOTES:

AA. THE HORSEPOWER SHOWN ON THE SCHEDULE IS A MINIMUM HORSEPOWER REQUIREMENT BASED ON THE STATION'S DESIGN CRITERIA AND THE REQUIRE TORQUE. (LOWER RATED HORSEPOWER EQUIPMENT WILL NOT BE ACCEPTABLE.)
BB. THESE ITEMS ARE NOT SUPPLIED BY A.E.S. WITH THE MOPS STATION.
CC. INVERT ELEVATIONS BASED ON INSIDE BOTTOM OF PIPE.
DD. THE MOPS CONTROL ASSEMBLY CONSISTS OF THE FOLLOWING: CONTROL CENTER DISCONNECT SWITCH, MOUNTING ASSEMBLY, ELECTRICAL CONDUITS, AND SEAL OFF. THESE ITEMS MUST BE SUPPLIED AND INSTALLED BY THE MOPS PUMP STATION MANUFACTURER TO VALIDATE MOPS WARRANTY PROGRAM.
EE. FOR STATIONS IN MIAMI DADE COUNTY, THE MOPS PUMP STATION IS SUPPLIED WITH A REMOTE TELEMETRY MONITORING UNIT AND A.E.S. MAINTENANCE SERVICE. THE R.T.U. ALLOWS FOR MONITORING OF LAG ALARM, HIGH ALARM, AND POWER FAILURE PER CHAPTER 24.42.2(5). THE R.T.U. IS EQUIPPED WITH A BATTERY BACK UP AND IS INSTALLED ABOVE THE 100 YEAR FLOOD ELEVATION.

THE MOPS WASTEWATER PUMP STATION DESIGN AND EQUIPMENT SHOWN ON THIS DRAWING HAS BEEN REVIEWED, PERMITTED, AND CERTIFIED AS COMPLYING WITH ALL THE STATE OF FLORIDA D.E.P. AND LOCAL REQUIREMENTS. ANY SUBSTITUTION FROM THIS DESIGN MAY REQUIRE NEW PERMITS, APPLICATION FEES, AND ENGINEERING SERVICES FOR RE CERTIFICATION AND DESIGN REVIEW.

REVISION	DATE
–	–/–/–
–	–/–/–
–	–/–/–
–	–/–/–
–	–/–/–

Project: HOLLYWOOD OAKS
Prepared For: THOMAS ENGINEERING GROUP
6300 NW 31ST AVENUE, FT. LAUDERDALE, FL 33309

AES Project No: 24XX
Date: 11/08/2024

Page No. LS–1

THOMAS ENGINEERING GROUP
CIVIL ENGINEERS · PROJECT MANAGERS · LAND PLANNING · LANDSCAPE ARCHITECTS
1502 W. FLETCHER AVE. UNIT NO. 101 TAMPA, FL 33612 P: (813) 374-4100
125 W. INDIANTOWN RD. SUITE 206 JUPITER, FL 33458 P: 561-203-7503
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REVISIONS:

REV:	DATE:	COMMENT:	BY:

Sunshine 811

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TAC SUBMITTAL

PROJECT No.: F240042
DRAWN BY: CAD
CHECKED BY: MAT
DATE: 05/06/2025
CAD I.D.: F240042 UTILITY LS DETAIL

PROJECT:

HOLLYWOOD OAKS
4220 & 4231 N 58th Ave.
HOLLYWOOD, FL 33021

FOR

KUSHNER
188 BAL BAY DRIVE
BAL HARBOUR, FL 33154

THOMAS ENGINEERING GROUP
6300 NW 31ST AVENUE
FORT LAUDERDALE, FL 33309
PH: (954) 202-7000
FX: (954) 202-7070
www.ThomasEngineeringGroup.com

MICHAEL A. TROXELL LICENSE No. 50572 STATE OF FLORIDA PROFESSIONAL ENGINEER
June 30, 2025
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

PRIVATE LIFT STATION DETAIL

SHEET NUMBER:

U-3.0

Michael Troxell

Digitally signed by Michael Troxell
Date: 2025.06.30 15:50:54 -04'00'

Plotted on Monday, June 30, 2025, 12:57 PM by Corey Spicansky

Hollywood Oaks - By Kushner

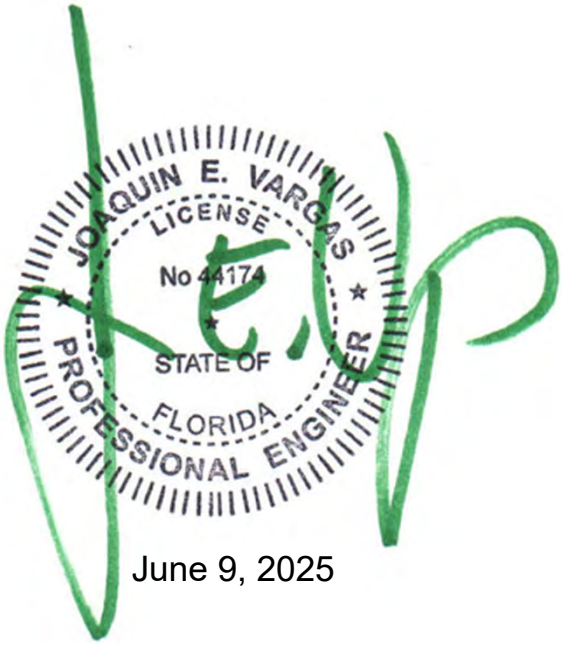
4220 & 4231 N 58th Avenue

Hollywood, Florida 33021

prepared for:

Kushner Realty Acquisition, LLC

traffic study



June 9, 2025

TRAFTECH ENGINEERING, INC.

June 2025

TRAFTECH
ENGINEERING, INC.

ENGINEER's CERTIFICATION

I, Hereby certify that I am a registered professional engineer in the State of Florida, practicing with Traf Tech Engineering, Inc., a Florida Corporation under Section 471.023, Florida Statutes, to offer engineering services to the public through a Professional Engineer, duly licensed under Chapter 471, Florida Statues, Professional License Number 44174, by the State of Florida, Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluation, findings, opinions, conclusions, or technical advice hereby reported for:

Project:	Hollywood Oaks
Location:	Hollywood, Florida
Client:	Kushner Realty Acquisition, LLC
Report Prepared by:	Traf Tech Engineering, Inc 8400 N. University Drive, Suite 309 Tamarac, FL 33321

I acknowledge that the procedures and references used to develop the results contained in this report are standards to the professional practice of transportation engineering as applied through professional judgement and experience.

Signature:
Name: Joaquin E. Vargas, P.E.
License No. FL 44174
Date: June 12, 2025

JOAQUIN E. VARGAS
LICENSE
No 44174
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

June 12, 2025

TRAFTECH
ENGINEERING, INC.

June 12, 2025

Mr. Raphael Schwartz
Senior Vice President
Development and Construction
KUSHNER
188 Bal Bay Drive
Bal Harbour, Florida 33154

Re: Hollywood Oaks by Kushner **- Traffic Study**

Dear Rafi:

Traf Tech Engineering, Inc. is pleased to provide you with the results of the updated traffic impact study associated with the proposed 8-story residential development to be located at 4220 & 4226 N 58th Avenue in the City of Hollywood, Florida. The traffic study documents the traffic impacts associated with the project.

Additionally, the signal warrant study conducted for the intersection of Stirling Road and N 58th Avenue is contained in Appendix F. FDOT reviewed the signal warrant study and recommended an updated study should be prepared once the project is built. The FDOT letter is include in Appendix G.

It has been a pleasure working with you on this project.

Sincerely,

TRAF TECH ENGINEERING, INC.

Joaquin E. Vargas, P.E.
Senior Transportation Engineer

8400 N. University Drive, Suite 309, Tamarac, FL 33321 T: 954-582-0988 F: 954-582-0989

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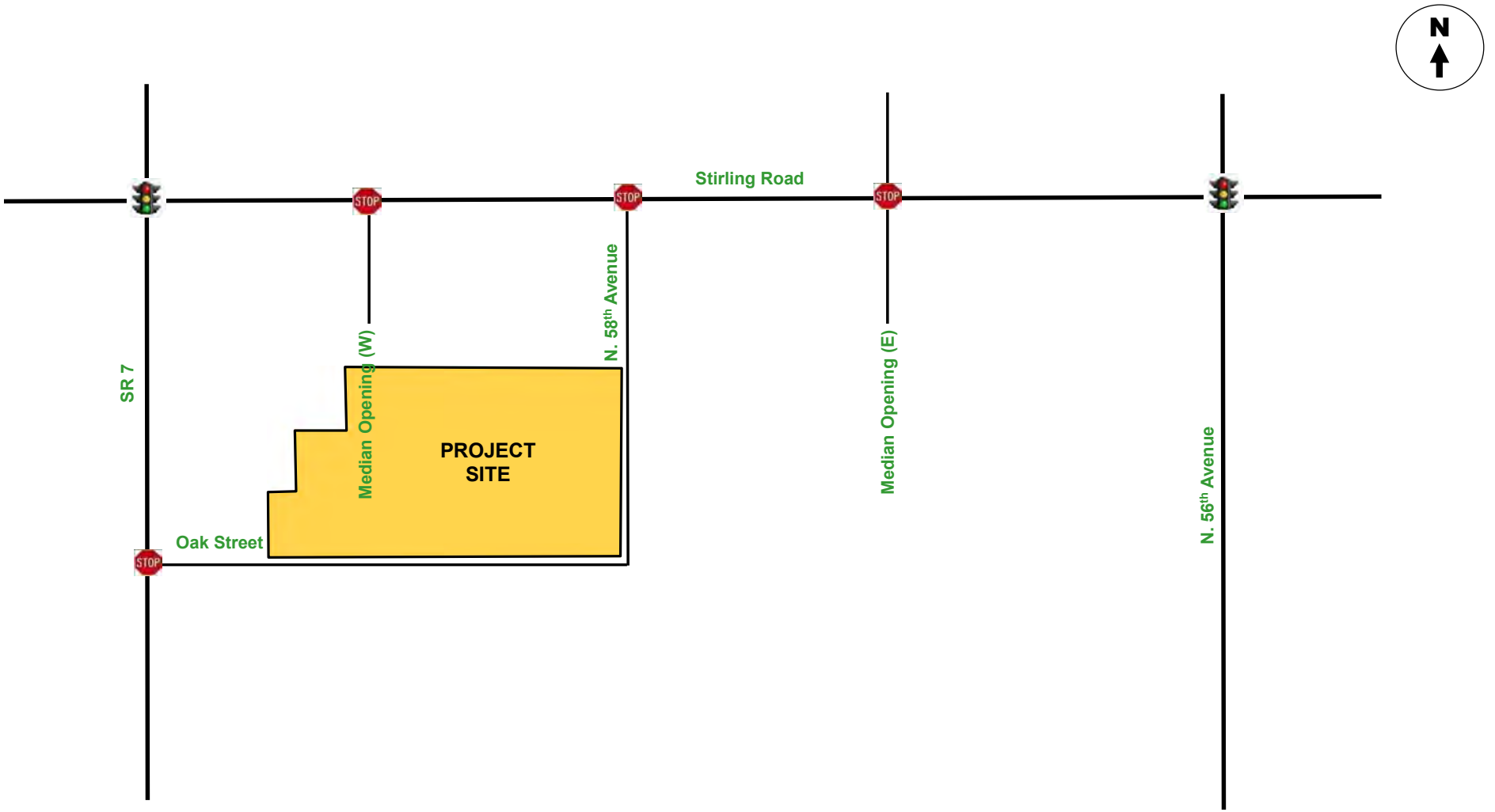
Appendix B: Traffic Counts
Appendix C: Signal Timing, PSCF, Historical Data, Growth Rate, and Committed Developments
Appendix D: Future Turning Movement Volumes
Appendix E: SYNCHRO Analyses

INTRODUCTION

Hollywood Oaks is a proposed 8-story residential development with 470 units planned to be located at 4220 & 4231 N 58th Avenue in the City of Hollywood, Broward County, Florida. The location of the project site is illustrated in Figure 1 on the following page.

Traf Tech Engineering, Inc. was retained by Kushner Realty Acquisition, LLC to conduct a traffic study in connection with the proposed residential development. The study addresses trip generation and the traffic impacts created by the proposed project on the nearby transportation network. This study is divided into seven (7) sections, as listed below:

1. Inventory
2. Existing Conditions
3. Traffic Counts
4. Trip Generation
5. Trip Distribution and Traffic Assignment
6. Traffic Impact Analysis
7. Conclusions and Recommendations



TRAFTECH ENGINEERING, INC.

PROJECT LOCATION MAP

FIGURE1
Hollywood Oaks
Hollywood, Florida

INVENTORY

Existing Land Use

The project site is primarily vacant.

Proposed Land Uses and Access

The proposed development consists of the following land uses and intensity:

- 470 residential units (mid-rise)
- 7-level parking garage
- A private one-story club house
- A community building (synagogue) for Orthodox Jews (no driving expected)

Access to the parking garage is provided via two full-access driveways, one on N 58th Avenue and another on Oak Street. The club house has two access driveways off of N 58th Avenue. Additionally, there are two drop-off areas with two driveways each, one on N 58th Avenue and another on Oak Street. N 58th Avenue connects with Stirling Road as a right-turn in/right-turn out driveway. Similarly, Oak Street connects with SR 7 as a right-turn in-right-turn out. The proposed residential development is anticipated to be built and occupied in 2028. Appendix A contains a copy of the proposed site plan for the project site.

EXISTING CONDITIONS

This section addresses the existing roadway system located in the vicinity of the project site and nearby intersections.

Roadway System

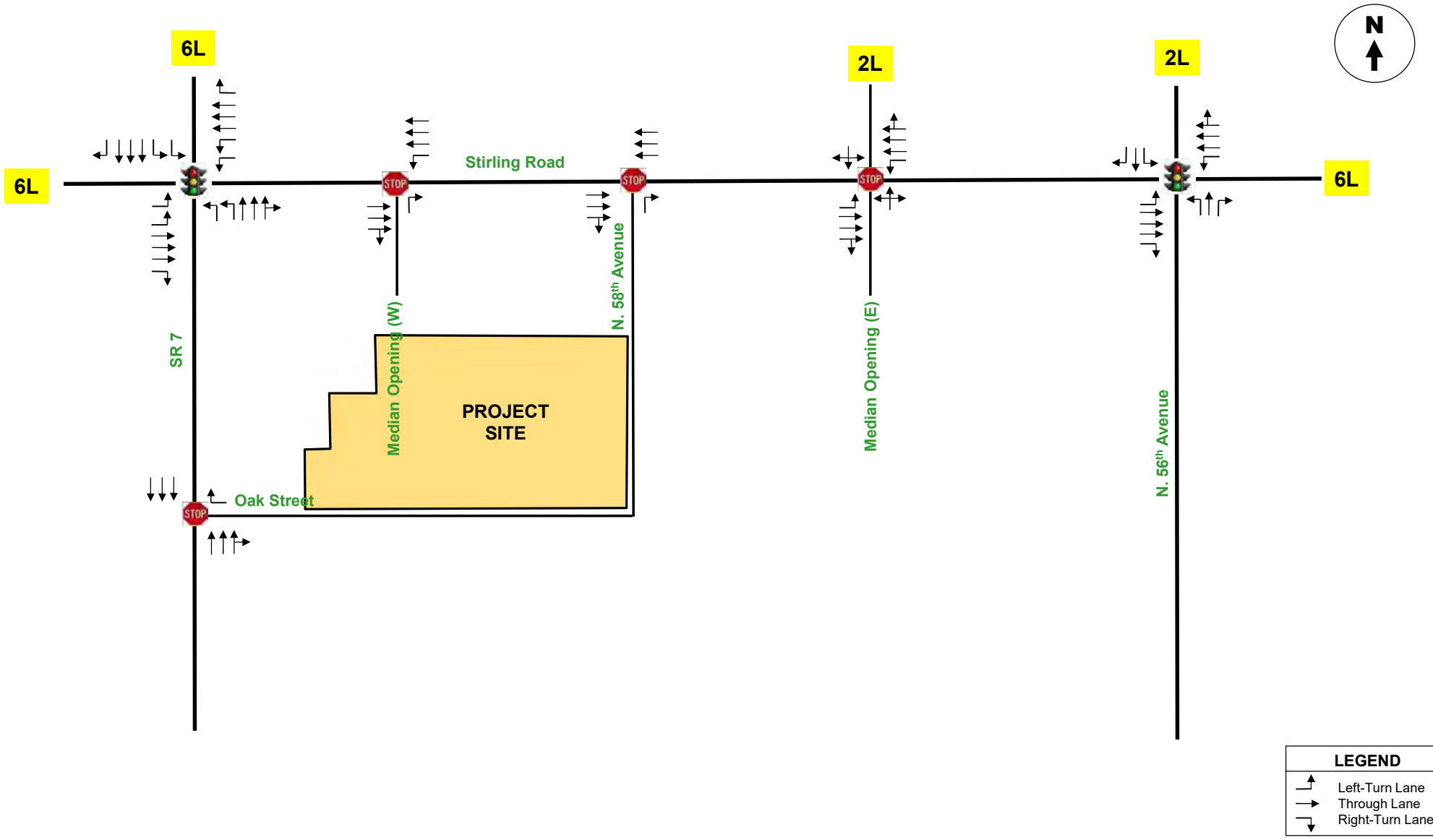
The roadway system located near the project site includes State Road 7, Stirling Road, Oak Street, N 58th Avenue, and N 56th Avenue. State Road 7 and Stirling Road are six-lane divided major arterials near the project site. N 56th Avenue is a two-lane undivided facility and N 58th Avenue and Oak Street are both two-lane local streets.

Nearby Intersections

Six intersections plus the access driveways were identified as the locations that will be impacted the most by the proposed project. These six intersections include:

1. State Road 7 and Stirling Road (signalized)
2. State Road 7 and Oak Street (stop control)
3. Stirling Rd and 1st Median Opening west of N 58th Ave (stop control)
4. Stirling Road and N 58th Avenue (stop control)
5. Stirling Rd and 1st Median Opening east of N 58th Ave (stop control)
6. Stirling Road and N 56th Avenue (signalized)

Figure 2 shows the existing lane geometry of the six intersections selected for analysis purposes. The number of lanes on the street system surrounding the project site is also depicted in the figure.



TRAFTECH ENGINEERING, INC.

EXISTING LANE GEOMETRY

FIGURE 2
Hollywood Oaks
Hollywood, Florida

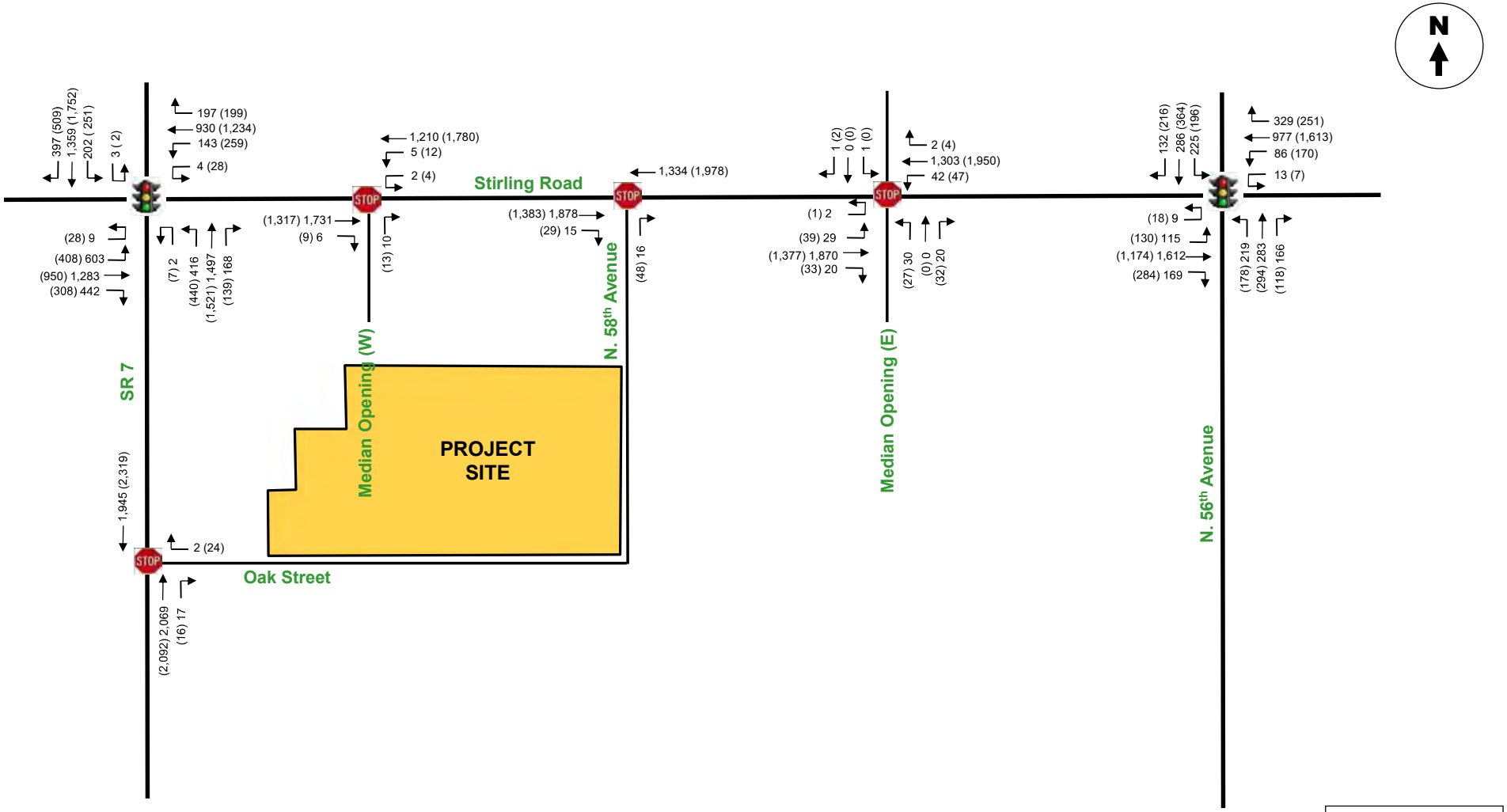
TRAFFIC COUNTS

Traf Tech Engineering, Inc., collected intersection turning movement counts at the six study intersections. The intersection turning movement counts were collected on Tuesday, November 19, 2024 from 7:00 AM and 9:00 AM and from 4:00 PM and 6:00 PM at the following six intersections located near the project site:

1. State Road 7 and Stirling Road
2. State Road 7 and Oak Street
3. Stirling Rd and 1st Median Opening west of N 58th Ave
4. Stirling Road and N 58th Avenue
5. Stirling Rd and 1st Median Opening east of N 58th Ave
6. Stirling Road and N 56th Avenue

Appendix B contains the intersection turning movement counts, as collected in the field. The latest signal timing plans for the signalized intersection were obtained from Broward County Traffic Engineering Division and are also included in Appendix B. The traffic counts were adjusted by utilizing a peak season factor based on FDOT peak season adjustment factors. The State-published adjustment factors are contained in Appendix C.

Figure 3 shows the 2025 peak season AM and PM peak hour traffic volumes.



LEGEND	
XX	AM Peak Hour
(YY)	PM Peak Hour

TRAFTECH ENGINEERING, INC.

2025 PEAK SEASON TRAFFIC – AM & (PM) Peak Hour

FIGURE 3
Hollywood Oaks
Hollywood, Florida

TRIP GENERATION

The trip generation for the project was based on information contained in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual* (11th Edition). According to the subject ITE manual, the most appropriate "land use" categories for the proposed uses include ITE's Land Use 221 – Multifamily Housing (Mid-Rise) and ITE's Land Use 561 – Synagogue. The private one-story club-house and the community building (synagogue) for Orthodox Jews. Table 1 summarizes the project trips associated with the proposed residential development.

TABLE 1
Trip Generation Summary
Hollywood Oaks - by Kushner

Land Use	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total Trips	Inbound	Outbound	Total Trips	Inbound	Outbound
Residential Mid-Rise (LUC 221)	470 units	**2,195**	**195**	**45**	**150**	**184**	**112**	**72**
Synagogue (LUC 561)								
- Based on Size	4,070 sf	120	10	6	4	12	7	5
- Based on Member Families *	70 families	**190**	**15**	**9**	**6**	**19**	**11**	**8**
Proposed External Trips		**2,385**	**210**	**54**	**156**	**203**	**123**	**80**

*Source: ITE Trip Generation Manual (11th Edition). *Synagogue has 137 seats, assumed 2 seats per family = 69 families, say 70 families*

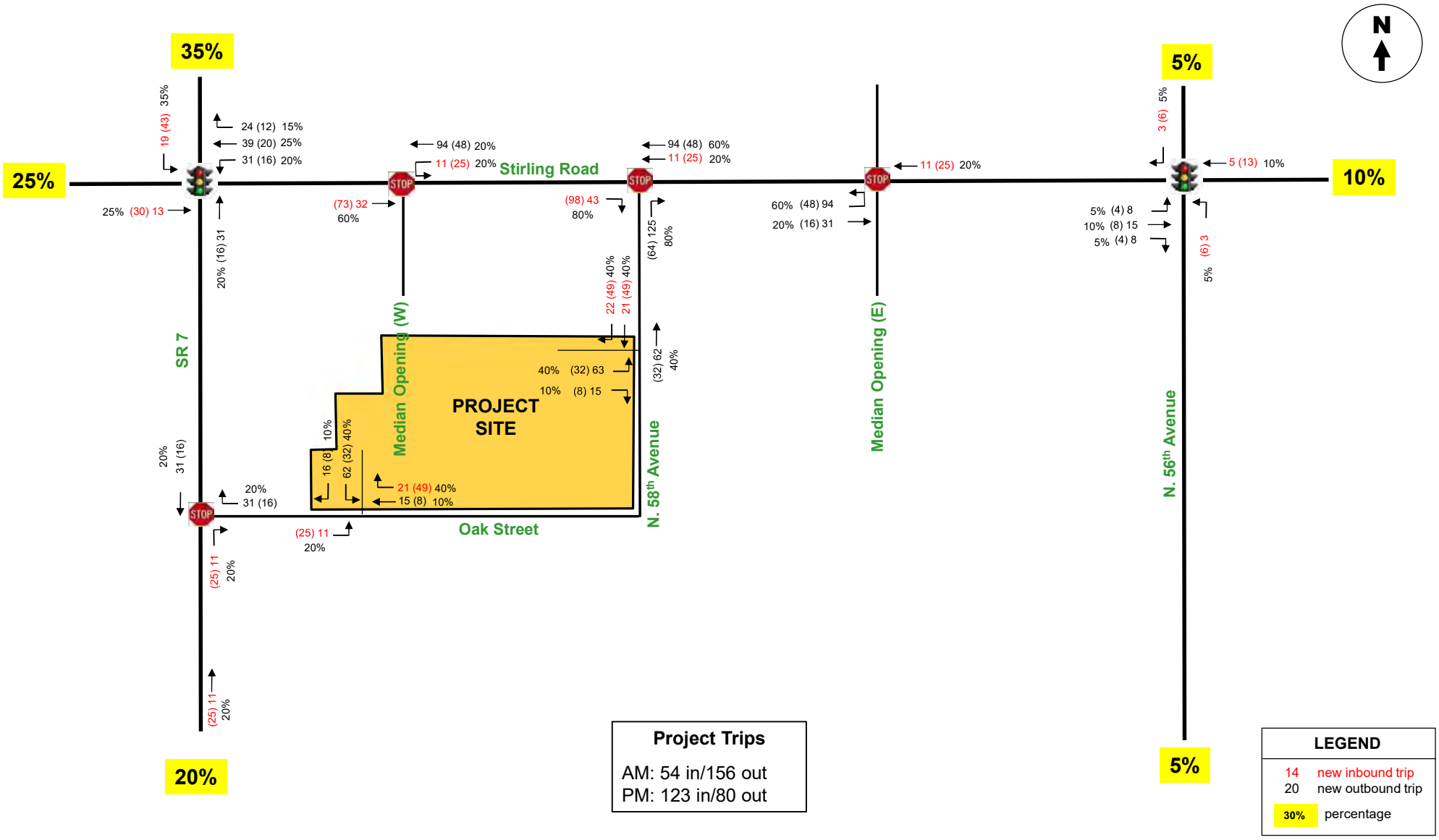
As indicated in Table 1, the trips generated by the proposed residential development consists of approximately 210 trips during the AM peak hour (54 inbound and 156 outbound) and approximately 203 trips during the PM peak hour (123 inbound and 80 outbound).

TRIP DISTRUBUTION AND TRAFFIC ASSIGNMENT

The trip distribution and traffic assignment for the project was based on knowledge of the study area, examination of the surrounding roadway network characteristics, review of current traffic volumes, and existing land use patterns. Based on the above, the following traffic assignment was assumed for the proposed development:

- 35% to and from the north via SR 7
- 20% to and from the south via SR 7
- 25% to and from the west via Stirling Road
- 5% to and from the north via N. 56th Avenue
- 5% to and from the south via N. 56th Avenue
- 10% to and from the east via Stirling Road

The peak hour traffic generated by the project was assigned to the nearby transportation network using the traffic assignment documented above. The new project traffic assignment is summarized in Figure 4.



Project Trips

AM: 54 in/156 out
PM: 123 in/80 out

LEGEND	
14	new inbound trip
20	new outbound trip
30%	percentage

TRAFTECH ENGINEERING, INC.

NEW PROJECT TRAFFIC ASSIGNMENT
Weekday New Peak Hour Trips AM & (PM)

FIGURE 4
Hollywood Oaks
Hollywood, Florida

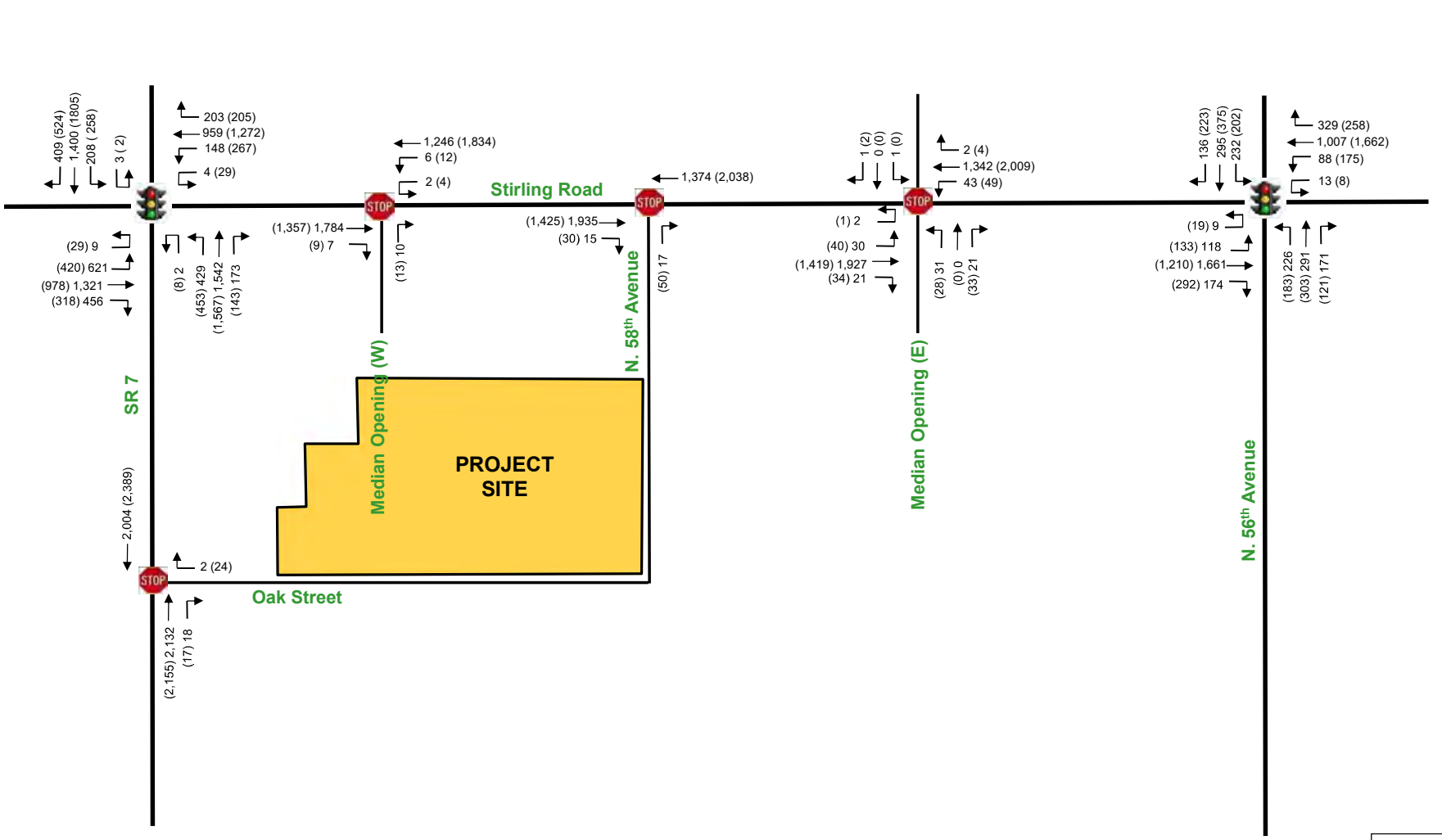
TRAFFIC ANALYSIS

This section of the study includes six (6) parts. The first part consists of developing the future conditions traffic volumes for the study area. The second part includes level-of-service analyses for existing and future conditions. The last four sections address turn laner analysis, access management, maneuverability analysis, and transit services.

Future Conditions Traffic Volumes

Two sets of future traffic volumes were developed. The first set includes project buildout conditions without the proposed project and the second set adds the new trips anticipated to be generated by the project.

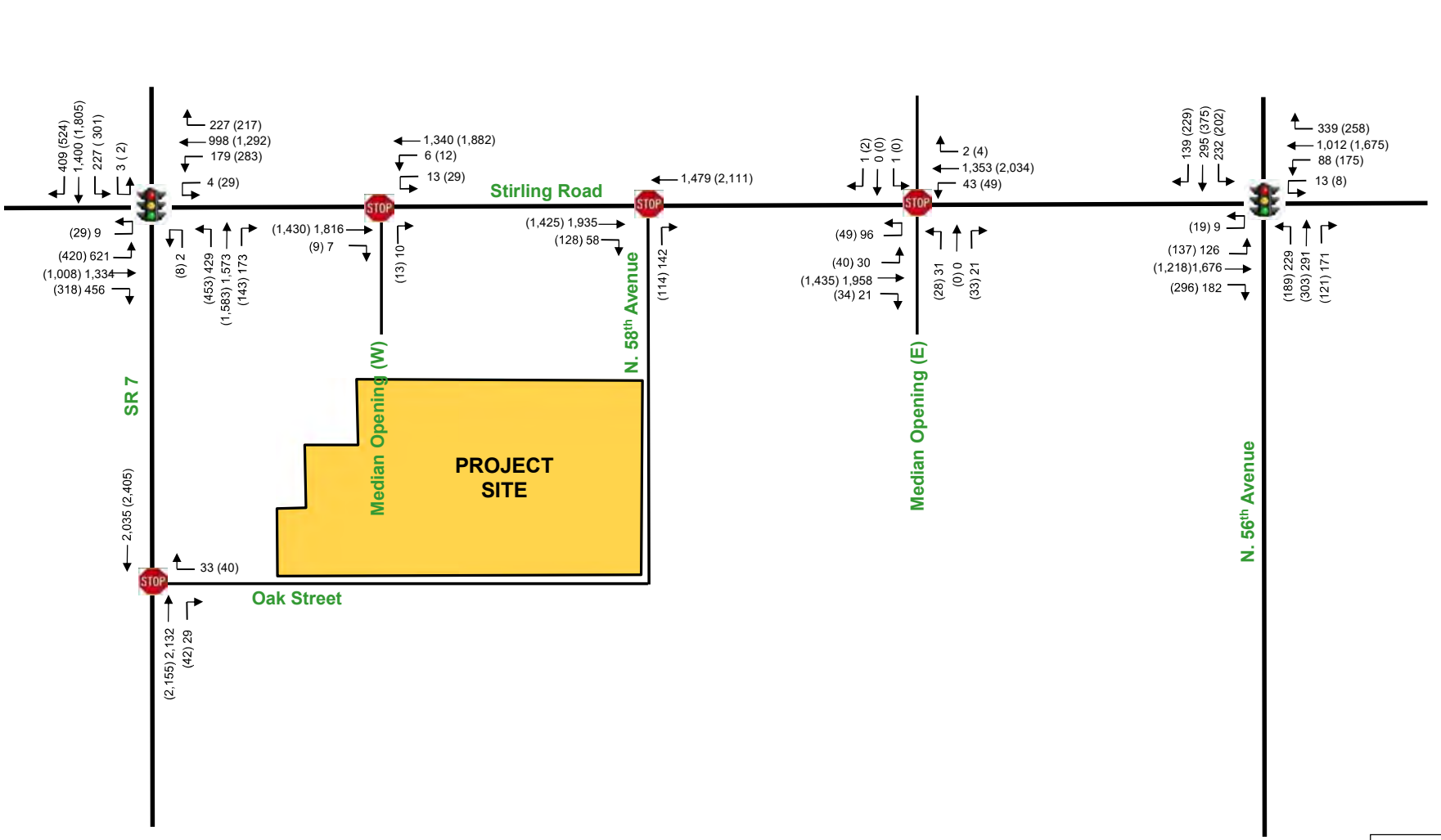
In order to develop year 2028 traffic volumes (project anticipated to be built and occupied by the year 2028), without the proposed project, two separate analyses were undertaken. The first analysis converts the existing peak hour traffic counts collected in the field during the month of November to average peak season conditions. Based on FDOT's Peak Season Factor Category report, a factor of 1.06 is required to convert traffic counts to average peak season conditions (refer to Appendix C). The second analysis includes a growth factor to project 2025 peak season traffic volumes to the year 2028. Based on traffic growth data published by the FDOT for a nearby traffic count stations, traffic growth has not occurred during the past five and ten years (refer to Appendix C). Based on the historical traffic count analysis, a 1.0% growth rate was used for purposes of this study. The future traffic projections for the study intersections (peak season adjustments, and growth rate) are presented in tabular format in Appendix D. Figures 5 and 6 present the year 2028 future traffic volumes for the study area. Figure 5 includes background traffic only (without the proposed project) and Figure 6 includes the additional traffic anticipated to be generated by the subject residential project.



LEGEND	
XX	AM Peak Hour
(YY)	PM Peak Hour

BACKGROUND TRAFFIC – Year 2028
AM & (PM) Peak Hour

FIGURE 5
Hollywood Oaks
Hollywood, Florida



LEGEND	
XX	AM Peak Hour
(YY)	PM Peak Hour

TOTAL TRAFFIC VOLUMES with Project Trips
(Year 2028 Peak Season)

FIGURE 6
Hollywood Oaks
Hollywood, Florida

Level of Service Analyses

Intersection capacity/level of service analyses were conducted for the six study intersections and access driveways. The analyses were undertaken following the capacity/level of service procedures outlined in the Highway Capacity Manual (HCS) using the SYNCHRO software. The results of the capacity analyses are summarized in Tables 2A and 2B.

As indicated in Table 2A and 2B, all study intersections are currently operating adequately and will continue to operate at a good level of service in the year 2028 with the proposed project in place, except for two intersections. The exceptions are the intersections of SR 7 & Stirling Road, during AM and PM periods and Stirling Road & N. 56th Avenue, during the PM peak period. These intersections are projected to operate deficiently without the project in place. However, with the implementation of minor signal optimization the delay is expected to decrease.

The northbound and southbound approaches of the unsignalized intersection of Stirling Road & Median Opening (East) are expected to operate deficiently with and without the project in place. Note that the proposed project does not add trips to these approaches, instead project trips are added as eastbound U-turns. A review of eastbound left-turn queues with the proposed project in place, revealed that the existing turn lane has sufficient capacity to accommodate the additional trips added by the proposed development. Therefore, no improvements are recommended for this median opening. The 95th Percentile queue of turning lanes affected by the project trips are also summarized in Tables 2A and 2B.

Turn bays impacted by the project trips are highlighted in yellow. As shown in the table, none of the queues exceed beyond the length of the existing turn bays, except for the northbound left-turn (NBL) queue at the intersection of Stirling Road and N.56th Street.

However, both existing and background queues already extend beyond the length of the existing turn bay, indicating background failures.

With the proposed project in place, future queues are projected to increase by zero (0) feet during the AM peak hour and by 13 feet during the PM peak hour. These queues are considered to have minimal impact, as the maximum number of trips added by the proposed development are two (2) AM and six (6) PM peak hour trips. Note that the NBL bay could be extended if necessary.

The computer printouts of the intersection capacity analyses are contained in Appendix E.

Table 2A
Level of Servcice and 95th Percentile Queues - AM Peak Hour

101: Stirling Rd & SR 7*	Existing	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
		LnGrp Delay(d), s/veh	131.4	59.9	36.5	96.4	129.5	43.6	210.8	99.9		80.1	62.1	25.1
		LnGrp LOS	F	E	D	F	F	D	F	F		F	E	C
		Approach Delay, s/veh		74.2			112.4			122.2			56.2	
		Approach LOS		E			F			F			E	
		Intersection Summary												
		HCM 7th Control Delay, s/veh	89.1											
		HCM 7th LOS	F											
		Queue Length 95th (ft)	#532	584	444	#152	#541	122	#424	#902		166	619	309
		Turn Bay Length (ft)	430		225	370		220	575			510		765
	Background	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
		LnGrp Delay(d), s/veh	143.6	63.4	37.4	99.4	143.2	44.8	227.3	115.4		80.4	66.1	25.4
		LnGrp LOS	F	E	D	F	F	D	F	F		F	E	C
		Approach Delay, s/veh		79.5			122.9			137.9			59.3	
		Approach LOS		E			F			F			E	
		Intersection Summary												
		HCM 7th Control Delay, s/veh	97.5											
		HCM 7th LOS	F											
		Queue Length 95th (ft)	#555	607	466	m#157	#565	128	#441	#946		171	#647	323
		Turn Bay Length (ft)	430		225	370		220	575			510		765
	Future	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
		LnGrp Delay(d), s/veh	143.6	65.2	37.4	139	163.1	46.1	227.3	129.4		82.6	66.1	25.4
		LnGrp LOS	F	E	D	F	F	D	F	F		F	E	C
		Approach Delay, s/veh		80.4			141.1			148.8			59.8	
		Approach LOS		F			F			F			E	
		Intersection Summary												
		HCM 7th Control Delay, s/veh	104.3											
		HCM 7th LOS	F											
		Queue Length 95th (ft)	#555	615	466	m#201	m#600	m149	#441	#975		185	#647	323
		Turn Bay Length (ft)	430		225	370		220	575			510		765
		Is Turning Bay OK?				Yes		Yes				Yes		
	Future+ Optimization	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
		LnGrp Delay(d), s/veh	159.6	74.4	37.4	113.4	152.5	47.4	170.4	82.9		184.7	70.2	26.1
		LnGrp LOS	F	E	D	F	F	D	F	F		F	E	C
		Approach Delay, s/veh		89.6			130.5			100.2			74.2	
		Approach LOS		F			F			F			E	
		Intersection Summary												
		HCM 7th Control Delay, s/veh	95.7											
		HCM 7th LOS	F											
		Queue Length 95th (ft)	#568	#660	466	#189	#590	133	#417	#873		#255	#679	294
		Turn Bay Length (ft)	430		225	370		220	575			510		765
102: Median Opening (West) & Stirling Rd	Existing	Approach	EB		WB			NB						
		HCM Control Delay, s/v	0		0.15			10.81						
		HCM LOS						B						
		Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBL	WBT						
		HCM Control Delay (s/veh)		10.8	-	-	25.3	-						
		HCM Lane LOS		B	-	-	D	-						
		HCM 95th %tile Q(veh)		0	-	-	0.1	-						
		Turn Bay Length (ft)					115							
	Background	Approach	EB		WB			NB						
		HCM Control Delay, s/v	0		0.17			10.94						
		HCM LOS						B						
		Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBL	WBT						
		HCM Control Delay (s/veh)		10.9	-	-	27.4	-						
		HCM Lane LOS		B	-	-	D	-						
		HCM 95th %tile Q(veh)		0.1	-	-	0.2	-						
		Turn Bay Length (ft)					115							
	Future	Approach	EB		WB			NB						
		HCM Control Delay, s/v	0		0.33			11.01						
		HCM LOS						B						
		Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBL	WBT						
		HCM Control Delay (s/veh)		11	-	-	23.8	-						
		HCM Lane LOS		B	-	-	C	-						
		HCM 95th %tile Q(veh)		0.1	-	-	0.3	-						
		Turn Bay Length (ft)					115							
		Is Turning Bay OK?					Yes							
103: N 58 Ave & Stirling Rd	Existing	Approach	EB		WB		NB							
		HCM Control Delay, s/v	0		0		11.25							
		HCM LOS					B							
		Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBT							
		HCM Control Delay (s/veh)		11.2	-	-	-							
		HCM Lane LOS		B	-	-	-							
		HCM 95th %tile Q(veh)		0.1	-	-	-							
	Background	Approach	EB		WB		NB							
		HCM Control Delay, s/v	0		0		11.4							
		HCM LOS					B							
		Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBT							
		HCM Control Delay (s/veh)		11.4	-	-	-							
		HCM Lane LOS		B	-	-	-							
		HCM 95th %tile Q(veh)		0.1	-	-	-							
	Future	Approach	EB		WB		NB							
		HCM Control Delay, s/v	0		0		13.48							
		HCM LOS					B							
		Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBT							
		HCM Control Delay (s/veh)		13.5	-	-	-							
		HCM Lane LOS		B	-	-	-							
		HCM 95th %tile Q(veh)		1	-	-	-							
104: Median Opening (East) & Stirling Rd	Existing	Approach	EB				WB			NB			SB	
		HCM Control Delay, s/v	0.33				1.44			77.5			28.58	
		HCM LOS								F			D	
		Minor Lane/Major Mvmt		NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
		HCM Control Delay (s/veh)		77.5	20.2	-	-	46.3	-	-	28.6			
		HCM Lane LOS		F	C	-	-	E	-	-	D			
		HCM 95th %tile Q(veh)		2.4	0.4	-	-	1.4	-	-	0			
	Background	Approach	EB				WB			NB			SB	
		HCM Control Delay, s/v	0.34				1.59			100.46			31.63	
		HCM LOS								F			D	
		Minor Lane/Major Mvmt		NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
		HCM Control Delay (s/veh)		100.5	21.1	-	-	51.4	-	-	31.6			
		HCM Lane LOS		F	C	-	-	F	-	-	D			
		HCM 95th %tile Q(veh)		2.9	0.4	-	-	1.5	-	-	0			
	Future	Approach	EB				WB			NB			SB	
		HCM Control Delay, s/v	0.34				1.59			100.46			31.63	
		HCM LOS								F			D	
		Minor Lane/Major Mvmt		NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
		HCM Control Delay (s/veh)		100.5	21.1	-	-	51.4	-	-	31.6			
		HCM Lane LOS		F	C	-	-	F	-	-	D			
		HCM 95th %tile Q(veh)		2.9	0.4	-	-	1.5	-	-	0			
		Turn Bay Length (ft)			240									
		Is Turning Bay OK?			Yes									
105: N. 56th Avenue & Stirling Rd	Existing	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
		LnGrp Delay(d), s/veh	51.3	42.0	42.4	43.0	36.8		60.9	79.2	54.7	60.0	75.6	52.1
		LnGrp LOS	D	D	D	D	D		E	E	D	E	E	D
		Approach Delay, s/veh		42.6			37.2			67.1			65.3	
		Approach LOS		D			D			E			E	
		Intersection Summary												
		HCM 7th Control Delay, s/veh	47.7											
		HCM 7th LOS	D											
		Queue Length 95th (ft)	m132	m#741	m80	137	556		232	414	110	247	412	58
		Turn Bay Length (ft)	230		230	290			175		175	210		
	Background	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
		LnGrp Delay(d), s/veh	52.7	44.2	43.7	44.3	38		64.0	80.9	54.7	63.0	77.3	51.9
		LnGrp LOS	D	D	D	D	D		E	F	D	E	E	D
		Approach Delay, s/veh		44.7			38.4			68.8			67.1	
		Approach LOS		D			D			E			E	
		Intersection Summary												
		HCM 7th Control Delay, s/veh	49.4											
		HCM 7th LOS	D											
		Queue Length 95th (ft)	m131	m#783	m80	141	579	252	427	116	264	426		59
		Turn Bay Length (ft)	230		230	290			175		175	210		0
	Future	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
		LnGrp Delay(d), s/veh	52.1	44.7	42.8	44.2	38.7		65	80.5	54.4	62.4	77.9	52
		LnGrp LOS	D	D	D	D	D		E	F	D	E	E	D
		Approach Delay, s/veh		45.1			39.1			69.0			67.1	
		Approach LOS		D			D			E			E	
		Intersection Summary												
		HCM 7th Control Delay, s/veh	49.8											
		HCM 7th LOS	D											
		Queue Length 95th (ft)	m145	m#791	m84	140	582	259	**427**	116	262	426		59
		Turn Bay Length (ft)	230		230	290			175		175	210		0
		Is Turning Bay OK?	Yes		Yes				No (1)					
106: SR 7 & Oak St	Existing	Approach	WB		NB		SB							
		HCM Control Delay, s/v	12.38		0		0							
		HCM LOS	B											
		Minor Lane/Major Mvmt		NBT	NBR	WBLn1	SBT							
		HCM Control Delay (s/veh)		-	-	12.4	-							
		HCM Lane LOS		-	-	B	-							
		HCM 95th %tile Q(veh)		-	-	0	-							
	Background	Approach	WB		NB		SB							
		HCM Control Delay, s/v	12.6		0		0							
		HCM LOS	B											
		Minor Lane/Major Mvmt		NBT	NBR	WBLn1	SBT							
		HCM Control Delay (s/veh)		-	-	12.6	-							
		HCM Lane LOS		-	-	B	-							
		HCM 95th %tile Q(veh)		-	-	0	-							
	Future	Approach	WB		NB		SB							
		HCM Control Delay, s/v	13.27											
		HCM LOS	B											
		Minor Lane/Major Mvmt		NBT	NBR	WBLn1	SBT							
		HCM Control Delay (s/veh)		-	-	13.3	-							
		HCM Lane LOS		-	-	B	-							
		HCM 95th %tile Q(veh)		-	-	0.3	-							

*U-turn volumes were added to LT volumes due to conflicts with overlaps, however, signage requires the U-turn to Yield to the Right Turn

Turning Bays impacted by project trips

(1) Turning Bays could be extended

Table 2B
Level of Servcice and 95th Percentile Queues - PM Peak Hour

101: Stirling Rd & SR 7*	Existing	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
		LnGrp Delay(d), s/veh	102.5	60.2	39.9	94.6	118.3	43.7	200.1	78.0		92.3	110.7	35.3
		LnGrp LOS	F	E	D	F	F	D	F	E		F	F	D
		Approach Delay, s/veh		67.4			105.7			103.9			93.6	
		Approach LOS		E			F			F			F	
		Intersection Summary												
		HCM 7th Control Delay, s/veh	93.4											
		HCM 7th LOS	F											
		Queue Length 95th (ft)	#387	462	313	240	#735	184	#475	#913		#552	#993	522
		Turn Bay Length (ft)	430		225	370		220	575			510		765
	Background	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
		LnGrp Delay(d), s/veh	105.7	61.4	40.5	95.2	133.7	43.9	214.5	87.5		92.9	123.6	35.7
		LnGrp LOS	F	E	D	F	F	D	F	F		F	F	D
		Approach Delay, s/veh		69			116.9			114.4			102.8	
		Approach LOS		E			F			F			F	
		Intersection Summary												
		HCM 7th Control Delay, s/veh	101.7											
		HCM 7th LOS	F											
		Queue Length 95th (ft)	#406	495	326	#269	#792	m207	#494	#974		#269	#1042	548
		Turn Bay Length (ft)	430		225	370		220	575			510		765
	Future	Lane Group	EBL	EBL	EBL	EBL	EBL	EBL	EBL	EBL	EBL	EBL	EBL	EBL
		LnGrp Delay(d), s/veh	105.7	63.1	40.9	97.5	141.4	43.9	214.5	99.9		98.6	123.6	35.7
		LnGrp LOS	F	E	D	F	F	D	F	F		F	F	D
		Approach Delay, s/veh		69.9			122.2			124.1			103.3	
		Approach LOS		E			F			F			F	
		Intersection Summary												
		HCM 7th Control Delay, s/veh	105.7											
		HCM 7th LOS	F											
		Queue Length 95th (ft)	#406	495	326	#269	#792	m207	#494	#974		#269	#1042	548
		Turn Bay Length (ft)	430		225	370		220	575			510		765
		Is Turning Bay OK?				Yes		Yes				Yes		
	Future + Optimization	Lane Group	EBL	EBL	EBL	EBL	EBL	EBL	EBL	EBL	EBL	EBL	EBL	EBL
		LnGrp Delay(d), s/veh	139.8	67.5	41.6	97.3	144.2	45.4	167.1	70.4		139.2	115.8	37.1
		LnGrp LOS	F	E	D	F	F	D	F	e		F	F	D
		Approach Delay, s/veh		81.2			124.4			90.8			102.8	
		Approach LOS		F			F			F			E	
		Intersection Summary												
		HCM 7th Control Delay, s/veh	99.8											
		HCM 7th LOS	F											
		Queue Length 95th (ft)	#442	507	329	#269	#789	215	#470	#885		#317	#1029	562
		Turn Bay Length (ft)	430		225	370		220	575			510		765
102: Median Opening (West) & Stirling Rd	Existing	Approach	EB		WB			NB						
		HCM Control Delay, s/v	0		0.05			10.22						
		HCM LOS						B						
		Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBL	WBT						
		HCM Control Delay (s/veh)		10.2	-	-	21.3	-						
		HCM Lane LOS		B	-	-	C	-						
		HCM 95th %tile Q(veh)		0.1	-	-	0.2	-						
	Background	Approach	EB		WB			NB						
		HCM Control Delay, s/v	0		0.18			10.31						
		HCM LOS						B						
		Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBL	WBT						
		HCM Control Delay (s/veh)		10.3	-	-	21.3	-						
		HCM Lane LOS		B	-	-	C	-						
		HCM 95th %tile Q(veh)		0.1	-	-	0.2	-						
	Future	Approach	EB		WB			NB						
		HCM Control Delay, s/v	0		0.43			10.48						
		HCM LOS						B						
		Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBL	WBT						
		HCM Control Delay (s/veh)		10.5	-	-	20.4	-						
		HCM Lane LOS		B	-	-	C	-						
		HCM 95th %tile Q(veh)		0.1	-	-	0.6	-						
		Turn Bay Length (ft)					115							
		Is Turning Bay OK?					Yes							
103: N 58 Ave & Stirling Rd	Existing	Approach	EB		WB		NB							
		HCM Control Delay, s/v	0		0		10.36							
		HCM LOS					B							
		Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBT							
		HCM Control Delay (s/veh)		10.4	-	-	-							
		HCM Lane LOS		B	-	-	-							
		HCM 95th %tile Q(veh)		0.2	-	-	-							
	Background	Approach	EB		WB		NB							
		HCM Control Delay, s/v	0		0		10.46							
		HCM LOS					B							
		Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBT							
		HCM Control Delay (s/veh)		10.5	-	-	-							
		HCM Lane LOS		B	-	-	-							
		HCM 95th %tile Q(veh)		0.2	-	-	-							
	Future	Approach	EB		WB		NB							
		HCM Control Delay, s/v	0		0		11.33							
		HCM LOS					B							
		Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBT							
		HCM Control Delay (s/veh)		11.3	-	-	-							
		HCM Lane LOS		B	-	-	-							
		HCM 95th %tile Q(veh)		0.6	-	-	-							
104: Median Opening (East) & Stirling Rd	Existing	Approach	EB				WB			NB			SB	
		HCM Control Delay, s/v	1.27				0.56			45.91			11.19	
		HCM LOS								E			B	
		Minor Lane/Major Mvmt		NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
		HCM Control Delay (s/veh)		45.9	46	-	-	23.8	-	-	11.2			
		HCM Lane LOS		E	E	-	-	C	-	-	B			
		HCM 95th %tile Q(veh)		1.8	1.3	-	-	0.7	-	-	0			
	Background	Approach	EB				WB			NB			SB	
		HCM Control Delay, s/v	1.4				0.6			57.3			11.33	
		HCM LOS								F			B	
		Minor Lane/Major Mvmt		NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
		HCM Control Delay (s/veh)		57.3	50.9	-	-	25.3	-	-	11.3			
		HCM Lane LOS		F	F	-	-	D	-	-	B			
		HCM 95th %tile Q(veh)		2.2	1.4	-	-	0.8	-	-	0			
	Future	Approach	EB				WB			NB			SB	
		HCM Control Delay, s/v	3.19				0.6			149.35			11.39	
		HCM LOS								F			B	
		Minor Lane/Major Mvmt		NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
		HCM Control Delay (s/veh)		149.3	55.8	-	-	25.7	-	-	11.4			
		HCM Lane LOS		F	F	-	-	D	-	-	B			
		HCM 95th %tile Q(veh)		4	3	-	-	0.8	-	-	0			
		Turn Bay Length (ft)			240									
		Is Turning Bay OK?			Yes									
105: N. 56th Avenue & Stirling Rd	Existing	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
		LnGrp Delay(d), s/veh	31.6	30.2	25.9	24.1	44.8		52.1	59.5	46.8	44.2	73.3	48.3
		LnGrp LOS	C	C	C	D	D		D	E	D	D	E	D
		Approach Delay, s/veh		29.4			44.7			54.8			59	
		Approach LOS		C			D			D			E	
		Intersection Summary												
		HCM 7th Control Delay, s/veh	43.5											
		HCM 7th LOS	D											
		Queue Length 95th (ft)	#261	502	158	#265	#1045		196	411	65	202	524	113
		Turn Bay Length (ft)	230		230	290			175		175	210		0
	Background	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
		LnGrp Delay(d), s/veh	76.6	44.9	37.1		55.2	95.3	51	58.7	46	43.7	73.9	48
		LnGrp LOS	E	D	D		E	F	D	E	D	D	E	D
		Approach Delay, s/veh		46.4			91.8			53.9			59.0	
		Approach LOS		D			F			D			E	
		Intersection Summary												
		HCM 7th Control Delay, s/veh	67.7											
		HCM 7th LOS	E											
		Queue Length 95th (ft)	#265	523	169	#305	#1093		210	429	70	209	#578	123
		Turn Bay Length (ft)	230		230	290			175		175	210		0
	Future	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
		LnGrp Delay(d), s/veh	77.5	45.6	38.4		57.7	104.3	51.6	58.1	45.8	43.6	75.4	48.3
		LnGrp LOS	E	D	D		E	F	D	E	D	D	E	D
		Approach Delay, s/veh		47.3			100.3			53.7		59.7		
		Approach LOS		D			F			D			E	
		Intersection Summary												
		HCM 7th Control Delay, s/veh	71.5											
		HCM 7th LOS	E											
		Queue Length 95th (ft)	m#275	m526	m170	#306	#1105		223	431	70	209	#588	127
		Turn Bay Length (ft)	230		230	290			175		175	210		0
		Is Turning Bay OK?	Yes		Yes				No (1)					
	Future + Optimization	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
		LnGrp Delay(d), s/veh	102.3	36.7	30.7		36.7	52.3	139.9	68.2	49.1	80.2	93.1	51.9
		LnGrp LOS	F	D	C		D	D	F	E	D	F	F	D
		Approach Delay, s/veh		41.8			51			86.6			78.2	
		Approach LOS		D			F			D			E	
		Intersection Summary												
		HCM 7th Control Delay, s/veh	56.4											
		HCM 7th LOS	E											
		Queue Length 95th (ft)	m#303	485	139	190	#866		#368	451	31	#287	#632	170
		Turn Bay Length (ft)	230		230	290			175		175	210		0
106: SR 7 & Oak St	Existing	Approach	WB		NB		SB							
		HCM Control Delay, s/v	11.91		0		0							
		HCM LOS	B											
		Minor Lane/Major Mvmt		NBT	NBR	WBLn1	SBT							
		HCM Control Delay (s/veh)		-	-	11.9	-							
		HCM Lane LOS		-	-	B	-							
		HCM 95th %tile Q(veh)		-	-	0.1	-							
	Background	Approach	WB		NB		SB							
		HCM Control Delay, s/v	12.1		0		0							
		HCM LOS												
		Minor Lane/Major Mvmt		NBT	NBR	WBLn1	SBT							
		HCM Control Delay (s/veh)		-	-	12.1	-							
		HCM Lane LOS				B								
		HCM 95th %tile Q(veh)				0.1								
	Future	Approach	WB		NB		SB							
		HCM Control Delay, s/v	12.4		0		0							
		HCM LOS												
		Minor Lane/Major Mvmt		NBT	NBR	WBLn1	SBT							
		HCM Control Delay (s/veh)		-	-	12.4	-							
		HCM Lane LOS				B								
		HCM 95th %tile Q(veh)				0.3								

*U-turn volumes were added to LT volumes due to conflicts with overlaps, however, signage requires the U-turn to Yield to the Right Turn

Turning Bays impacted by project trips

(1) Turning Bays could be extended

Turn Lane Evaluation

A turn lane analysis was performed using the FDOT 2019 Access Management Guidebook and AASHTO 7th edition for the proposed access driveways.

A Right Turn Deceleration Lane based on FDOT Access Management Guidebook (2019), for roadways with posted speed limit of 45 mph or less, right-turn lane is recommended if the development generates 80-125 trips in the peak hour.

Following AASHTO 7th edition, left turn lane in compliance with the Florida's Green Book shall be provided at each access point if the traffic volumes summarized in Table 3 are met.

Table 3
Left-turn Lane Criteria

Left-turn Volume	Through Volume *
25	200
30	150
35	150
40	150
45	150
50 or more	100

Source: AASHTO 7th edition

* Three-legged intersection

- Major road volume

Based on the anticipated peak hour trips for the driveways at build-out conditions (refer to Figure 4), the following can be concluded as shown in Table 4, a dedicated right-turn turn lane is warranted at the intersection of Stirling Road and N.58th Avenue.

Table 4 Hollywood Oaks Need for Turning Lanes								
Location	**Jurisdiction**	**RT Volume Requirement (vph)***	**RT Volume (vph)****	**RT Lane Required ?**	**LT and TH Volume Requirements (vph)***	**LT Volume (vph)****	**TH Volume (vph)****	**LT Lane Required ?**
N.58th Avenue & Stirling Road	FDOT	80	58/128	Yes				
N.58th Avenue & Driveway	City	80	18/45	No				
Oak Street & Driveway	City	80	18/45	No	See Table 3	9/22	17/31	No

* Source: AASHTO 7th edition and FDOT 2019 Access Management Guidebook
** Volumes extracted from Figure 4 and Synchro outputs

Maneuverability Analysis

The maneuverability analysis was undertaken using the AutoTURN software. Software runs for parking and unparking maneuvers of automobiles at the ground level of the parking structure were undertaken and are included in the civil engineering plan set submitted for the project. The ground floor plan included in Appendix A shows the T-turn maneuver for the fire trucks.

Access Management

The roadway segment of Stirling Road (SR 848), from SR 7 to N. 56th Avenue is classified by FDOT as an Access Class 5 facility. As such, the spacing for traffic signals and full median openings should be no less than 1,320 feet. Directional median openings should have a spacing of 660 feet, or more. As shown in Figure 7, there is a partial (does not physically prohibit southbound lefts) directional median opening located approximately 680 feet east of SR 7 (meets access management standards). The two full median openings located between N 58th Avenue and N 56th Avenue are in violation with

FDOT's access management standards. A traffic signal (with a new full median opening) located at N 58th Avenue would be in compliance with FDOT spacing standards (1,330 feet from existing traffic signals located east and west).

TRAFTECH ENGINEERING, INC.

Access Management

FIGURE 7
Hollywood Oaks
Hollywood, Florida

Based on the above, it is recommended that a signal warrant analysis be conducted at the Stirling Road/N 58th Avenue intersection prior to meeting with FDOT for a pre-app meeting. Recommendations regarding a fully operational traffic signal at the N 58th Avenue location, and closures/modifications of nearby median openings will be documented as part of the signal warrant analysis for review with FDOT.

It is important to note that the proposed project does not adds many westbound U-turn trips (9 AM/23PM) to the median opening located west of N 58th Avenue and eastbound U-turn trips of 30 AM/14 PM at the median opening located immediately east of N 58th Avenue. Moreover, a review of vehicle queues with the proposed project in place (see Table 2), revealed that the existing turn lanes have sufficient capacity to accommodate the additional trips added by the proposed development. Therefore, additional lengthening of these turn lanes is not required as a result of the Hollywood Oaks project.

Transit Services

Currently, Broward County Transit (BCT) routes 15, 18, and 16 serve the study area. BCT Routes 15 and 18 travel north and south along SR 7. For northbound traffic, there is a bus stop on the east side of SR 7, just south of Oak Street. For southbound traffic, there is a bus stop on the west side of SR 7, north of Stirling Road.

BCT Routes 15 and 16 travel east and west along Stirling Road. For eastbound traffic, there are two bus stops on the south side of Stirling Road, one east of SR 7 and the other one east of N. 56th Avenue. For westbound traffic, there are two bus stops on the north side of Stirling, one west of N. 56th Avenue and the other one, east of State Road 7.

Pedestrian features are provided at the signalized intersections of SR 7 & Stirling Road and Stirling Road & N. 56th Avenue.

Traffic Control Plan (CTP)

CONCLUSIONS AND RECOMMENDATIONS

Hollywood Oaks is a proposed 8-story residential development planned to be located at 4220 & 4231 N 58th Avenue in the City of Hollywood, Broward County, Florida. The site will be developed with the following land uses and intensities:

- 470 residential units (mid-rise)
- 7-level parking garage
- A private one-story club house
- A community building (synagogue) for Orthodox Jews (no driving expected)

Access to the parking garage is provided via two full-access driveways, one on N 58th Avenue and another on Oak Street. The club house has two access driveways off of N 58th Avenue. Additionally, there are two drop-off areas with two driveways each, one on N 58th Avenue and another on Oak Street. N 58th Avenue connects with Stirling Road as a right-turn in/right-turn out driveway. Similarly, Oak Street connects with SR 7 as a right-turn in-right-turn out.

The conclusions of the traffic study are presented below:

- The project trips anticipated to be generated by the proposed residential development consist of approximately 210 trips during the AM peak hour (54 inbound and 156 outbound) and approximately 203 trips during the PM peak hour (123 inbound and 80 outbound).

- All study intersections are currently operating adequately and will continue to operate at a good level of service in the year 2028 with the proposed project in place, except for two intersections. The exceptions are the intersections of SR 7 & Stirling Road and Stirling Road & N. 56th Avenue, during AM and PM peak periods. These intersections are projected to operate deficiently without the project in place. However, with the implementation of minor signal optimization the delay is expected to decrease.

- The northbound and southbound approaches of the unsignalized intersection of Stirling Road & Median Opening (East) are expected to operate deficiently with and without the project in place. Note that the proposed project does not add trips to these approaches, instead project trips are added as eastbound U-turns. A review of eastbound left-turn queues with the proposed project in place, revealed that the existing turn lane has sufficient capacity to accommodate the additional trips added by the proposed development.

- The segment of Stirling Road (SR 848), from SR 7 and N 56th Avenue has two traffic signals and three median openings. Furthermore, this section of SR 848 does not meet current FDOT access management standards.

- A meeting should be held with FDOT to discuss the future trips impacting Stirling Road via N 58th Avenue and SR 7 via Oak Street. The potential for installing a traffic signal at the intersection of Stirling Road and N 58th Avenue should be explored with the state.

Based on the above, it is recommended that a signal warrant analysis be conducted at the Stirling Road/N 58th Avenue intersection prior to meeting with FDOT for a pre-app meeting. Recommendations regarding a fully operational traffic signal at the N 58th Avenue location, and closures/modifications of nearby median openings will be documented as part of the signal warrant analysis for review with FDOT.

APPENDIX A

Traffic Methodology

Hollywood Oaks - By Kushner

4220 & 4231 N 58th Avenue
Hollywood, Florida 33021

prepared for:
Kushner Realty Acquisition, LLC

traffic methodology

TRAFTECH ENGINEERING, INC.

November 2024

TRAFTECH
ENGINEERING, INC.

November 13, 2024

Mr. Raphael Schwartz
Senior Vice President
Development and Construction
KUSHNER
188 Bal Bay Drive
Bal Harbour, Florida 33154

Re: Hollywood Oaks by Kushner **- Traffic Statement and Traffic Methodology**

Dear Rafi:

Traf Tech Engineering, Inc. has prepared this traffic memorandum and proposed traffic methodology in connection with a proposed 8-story residential development to be located at 4220 & 4226 N 58th Avenue in the City of Hollywood, Florida. The project will consist of up to 470 mid-rise residential units and a 7-level parking garage. The proposed site plan for the project is contained in Attachment A. This traffic memorandum addresses the following topics:

- Trip Generation
- Proposed Traffic Methodology

Trip Generation

A trip generation analysis was performed for the site using the trip generation equations published in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual (11th Edition)*. The trip generation analyses were undertaken for daily, AM peak hour, and PM peak hour conditions. According to ITE's *Trip Generation Manual (11th Edition)*, the trip generation equations used for the analyses are presented below:

Multifamily Mid Rise (ITE Land Use 221)
Daily Trips

T = 4.77 (X) – 46.46
Where T = average daily vehicle trip ends and X = number of units

AM Peak Hour

T = 0.44 (X) – 11.61 with 23% inbound and 77% outbound
Where T = AM peak hour trip ends and X = number of units

PM Peak Hour

T = 0.39 (X) + 0.34 with 61% inbound and 39% outbound

Where T = PM peak hour trip ends and X = number of units

Using the above-listed trip generation equations from the ITE document, a trip generation analysis was undertaken for the Hollywood Oaks project. The results of this effort are documented in Table 1. As shown in the table, the residential development is projected to generate approximately 2,195 daily trips, approximately 195 AM peak hour trips (45 inbound and 150 outbound) and approximately 184 trips during the typical afternoon peak hour (112 inbound and 72 outbound).

TABLE 1
Trip Generation Summary
Hollywood Oaks - by Kushner

Land Use	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total Trips	Inbound	Outbound	Total Trips	Inbound	Outbound
Residential Mid-Rise (LUC 221)	470 units	2,195	195	45	150	184	112	72
Proposed External Trips		**2,195**	**195**	**45**	**150**	**184**	**112**	**72**

Source: ITE Trip Generation Manual (11th Edition)

Please give me a call if you have any questions.

Sincerely,

TRAF TECH ENGINEERING, INC.

Joaquin E. Vargas, P.E.
Senior Transportation Engineer

PROPOSED TRAFFIC METHODOLOGY

- The trip generation analysis will be based upon the Institute of Transportation Engineers (ITE) *Trip Generation Manual (11th Edition)*. Table 1 on the previous page documents the trip generation associated with the proposed residential development. The residential building is planned to have up to eight (8) stories.

- The trip distribution and assignment of project traffic will be based upon the roadway system near the project site and current traffic volumes on State Road 7 and Stirling Road. The trip distribution will be provided to the City for review and acceptance prior to completing the traffic study.

- The subject traffic study will evaluate the following intersections during the typical AM and PM peak periods:

  - State Road 7 and Stirling Road (signalized)
  - State Road 7 and Oak Street (stop control)
  - Stirling Rd and 1st Median Opening west of N 58th Ave (stop control)
  - Stirling Road and N 58th Avenue (stop control)
  - Stirling Rd and 1st Median Opening east of N 58th Ave (stop control)
  - Stirling Road and N 56th Avenue (signalized)

- Traffic counts will be performed at the study intersections on a typical weekday during the AM peak period (7:00 AM – 9:00 AM) and the PM peak period (4:00 PM – 6:00 PM). These counts will include bicyclists and pedestrians. The traffic counts will be collected when school is in session.

- Traffic counts will be adjusted to reflect average peak season conditions based upon the most recent available FDOT adjustment factors.

- A growth factor will be applied to the traffic counts to reflect future traffic conditions at project build-out. The growth factor will be based upon historical traffic data available for the area near the project site.

- Traffic associated with the committed developments will be provided by the City of Hollywood:

- Existing traffic signal timing data for the study intersections will be obtained from Broward County Traffic Engineering Division and will be included in the Appendix of the traffic study.

- Traffic analysis will be prepared for each of the study intersections and project driveways for the following scenarios:

    - Existing (2024) traffic conditions
    - Background traffic conditions for buildout year (2028)
    - Future conditions with growth rate, committed development and project traffic for the buildout year (2028)

- The level of service and delay for the study intersections and project driveways will be summarized by movement and approach as well as for the overall intersection. If necessary, mitigation of impacts will be recommended. A turn lane analysis will also be performed.

- Intersection and driveway analyses will be conducted using the Synchro software for existing conditions, future conditions without the project, and future conditions with the proposed project in place. The Highway Capacity Manual (HCM) 6th or 2000 Edition will be used, as applicable. Synchro files will be provided as part of the traffic study. The level of service, delay, and queue will be provided for all movements, approaches, and overall intersection for all study locations and driveways. The pedestrian volumes and pedestrian calls will be coded into the SYNCHRO software for each study locations.

- Queuing at entry gates, if applicable, will be addressed in the traffic study.

- The traffic study will address loading areas (description, locations and maneuverability analysis using the AutoTURN software).

- The traffic report will have an access management section for Stirling Road from SR 7 to N 56th Avenue. An evaluation of a traffic signal at N 58th Avenue, potential median clsures, queueing at EB and WB turn lanes, and an FDOT Pre-App meeting letter from the State.

- The traffic study will include a multimodal section addressing non-automobile modes of transportation.

- A Traffic Control Plan (TCP) depicting proposed signing and markings within the parking areas and access driveways will be included in the traffic study.

- If valet service is proposed for the project, a valet operations plan will be prepared addressing valet station(s), parking and retrieval routes, valet parking and number of valet attendants required to prevent traffic queues from interfering with on-site circulation or from spilling onto public streets. Ridesharing will be documented.

- The traffic report will include a traffic mitigation section addressing intersection/roadway improvements, signal timing modifications, turn lane storage needs, pedestrian facility improvements, lighting, etc.

- The results of the traffic impact analysis will be documented in a technical report with an executive summary. All traffic data obtained for this project will be included in the Appendix of the traffic study.

APPENDIX G

FDOT Pre-App Letter

Florida Department of Transportation

RON DESANTIS
GOVERNOR

3400 West Commercial Boulevard
Fort Lauderdale, FL 33309

JARED W. PERDUE, P.E.
SECRETARY

June 5, 2025

THIS PRE-APPLICATION LETTER IS VALID UNTIL – June 5, 2026
THIS LETTER IS NOT A PERMIT APPROVAL

Michael Troxell, P.E.
Thomas Engineering Group, LLC
6300 NW 31st Avenue, Fort Lauderdale, FL 33309

Dear Michael Troxell, P.E.:
RE: Pre-Application Review for **Category D Driveway,** Pre-Application Meeting Date: **4/17/2025, 4:15 PM**
Broward County - Hollywood; SR 848; Sec. # 86016000; MP: 3; Access Class - 05;
Posted Speed - 45; SIS – N/A; FDOT Ref. Project: 446370.1 (Thuc Le)

Request: Driveway connections along N 58th Avenue (not FDOT jurisdiction).

SITE SPECIFIC INFORMATION
Project Name & Address: **Hollywood Oaks – 4220 N 58th Ave, Hollywood, FL, 33021, USA**
Property Owner: **4220 N 58th Avenue Partners LLC**; Parcel Size: **4.2 Acres**
Development Size: **470 Multifamily (Mid-Rise) Dwelling Units**

NO OBJECTION

This decision is based on your presentation of the facts, site plan and survey - please see the conditions and comments below. You may choose to review this concept further with the District Access Management Review Committee (AMRC).

Conditions:
- **Driveway connections along N 58th Street (not FDOT jurisdiction) shall be located a minimum of 25 feet from Department right-of-way.**

Comments:
- **If a signal is proposed at the intersection of N 58th Street and SR 848, a signal warrant analysis shall be conducted using actual traffic volumes post construction of the subject development to determine the need for a traffic signal. Sufficient right-of-way along the north and south side of SR 848 must be available or donated to the Department to install the traffic signal. If a signal is warranted, a surety bond with the County shall be posted. Bond funds will be used to design and construct the traffic signal and subsequent median modifications via Department Construction Agreement (permit).**
- All driveways not approved in this letter must be fully removed and the area restored.
- Drainage mitigation is required for any stormwater impacts within FDOT right-of-way (i.e. increased runoff or reduction of existing storage.). The drainage mitigation shall meet all FDOT Drainage Manual criteria and will be reviewed/approved as part of an access permit.
- The applicant shall donate property to the Department if right-of-way dedication is required to implement the improvements.
- Dimensions between driveways are measured from the near edge of pavement to near edge of pavement and for median openings are measured from centerline to centerline unless otherwise indicated.

The purpose of this Pre-Application letter is to document the conceptual review of the approximate location of driveway(s) to the State Highway System and to note required improvements, if any. This letter shall be submitted with any further reviews and for permitting. The Department's personnel shall review permit plans for compliance with this letter as well as current Department standards and/or specifications. Final design must consider the existing roadway profile and any impacts to the existing drainage system. **Note, this letter does not guarantee permit approval**. The permit may be denied based on the review of the submitted engineering plans. Be aware that any approved median openings may be modified (or closed) in the future, at the sole discretion of the Department. For right-of-way dedication requirements go to: https://osp.fdot.gov; click on Statewide Permit News; Scroll down to District 4; Scroll down to Additional Information and Examples and choose Right-of-way Donations/Dedications.
Please contact the District Traffic Operations Access Manager - Tel. # 954-777-4363 or e-mail: D4AccessManagement@dot.state.fl.us with any questions regarding the Pre-Approval Letter.

Sincerely,

Roya Edwards, AICP
District Traffic Operations Access Manager

cc: Anthony Beecher
File: S:\Transportation Operations\Traffic Operations\Access Management\1. Pre-Apps and Variance\2025-04-17\Pre-App 08 86016000 MP 3.00 SR 848 Hollywood Oaks\86016000 MP 3.00 SR 848 Hollywood Oaks.docx

TRAFTECH
ENGINEERING, INC.

February 19, 2025

Mr. Raphael Schwartz
Senior Vice President
Development and Construction
KUSHNER
188 Bal Bay Drive
Bal Harbour, Florida 33154

Re: Hollywood Oaks by Kushner **- Parking Needs Study**

Dear Rafi:

Per the City's request, Traf Tech Engineering, Inc. has determined the parking needs associated with the proposed 470-unit Hollywood Oaks residential development planned to be located at 4220 & 4231 N 58th Avenue in the City of Hollywood in Broward County, Florida. As shown in the site plan contained in Attachment A, the project consists of the following mix of residential units and amenities:

470 residential units

- 80 studios
- 132 one-bedroom units
- 122 one-bedroom units with den
- 52 two-bedroom units
- 76 two-bedroom units with den
- 8 three-bedroom units

  470 units total (614 bedrooms)

812 parking spaces

- 785 parking spaces in the parking garage
- 27 surface parking spaces

Additionally, the project includes a clubhouse, an existing historic building and a community building (4,071 square-foot synagogue).

Parking Needs Based on City of Hollywood Code

According to the City of Hollywood Land Development Regulations, the following parking requirements apply to the Hollywood Oaks project:

Parking Requirements

o 470 residential units x 1.5 spaces per unit	= 705 parking spaces
o Residential guests (1/5 units)	= 94 parking spaces
o Synagogue (1/60 sf of floor area + 1/4seats)	= 69 parking spaces
	= 868 parking spaces

Parking Provided

- o 812 parking spaces

It is important to note that the synagogue is for Orthodox Jews and therefore, very little to no automobile traffic is expected. Additionally, many members of the synagogue will live in the residential building located within the same complex. Hence, only residents + guests will require parking spaces, or 799 parking spaces. **Therefore, parking is expected to be adequate for this development based on City Code by recognizing the low vehicular use of the Synagogue.**

Parking Needs Based on Traffic Engineering and Planning Industry Standards

The parking needs for this development using parking rates published by the Institute of Transportation Engineers (ITE) in their *Parking Generation Manual (6th Edition)* and by the Urban Land Institute in their *Shared Parking (Third Edition)* were developed.

Based on ITE's *Parking Generation Manual (6th Edition)*, mid-rise multi-family developments (ITE's LUC 221) has the following conservative requirement[1] to determine the amount of parking spaces required for this type of residential development:

Parking Needs = 1.00 (X), where X = number of bedrooms

Using the above formula, the 614 bedrooms require 614 parking spaces. Adding the 94 parking stalls for guests + 69 parking spaces for the Synagogue (ultra conservative), the total parking needs are = 777 parking spaces. Since 812 parking stalls are proposed, **parking is projected to be adequate for the Hollywood Oaks development based on ITE.**

[1] Refer to Attachment B (used highest parking needs of 1.0 per bedroom)

Based on ULI's *Shared Parking (Third Edition)*, residential developments with a mix of bedroom sizes have the following requirements to determine the number of parking spaces:

Parking Needs	0.85 x 80 studios	= 68 parking spaces
	0.9 x 254 one-bedroom units	= 229 parking spaces
	1.65 x 128 two-bedroom units	= 212 parking spaces
	2.5 x 8 three-bedroom units	= 20 parking spaces
		= 529 parking spaces

Using the above formula, the 470 residential units require 529 parking spaces. Adding the 94 parking stalls for guests + 69 parking spaces for the Synagogue (ultra conservative), the total parking needs are = 692 parking spaces (529 + 94 + 69). Since 812 parking stalls are proposed, **parking is projected to be adequate for the Hollywood Oaks development based on ULI.**

Shared Parking Analysis

Shared parking principles were applied to Hollywood Oaks residential development. Shared parking is defined as parking spaces that are shared between different land uses, especially when the land uses have parking peaks that occur at different times of the day. Using the percent parking distribution (shared parking principles), by time of day, as published in the Urban Land Institute's (ULI) *Shared Parking* document, the maximum number of shared parking spaces required to serve the residential use (residents and guests) were determined.

Additional parking reductions to account for internal trips, and trips occurring via non-automobile modes of transportation (e.g. multimodal trips such as transit, walking and bicycle trips) were not considered for a conservative analysis.

Table 1 presents the results of the shared parking analysis using City of Hollywood parking requirements and ULI's time of day usage for residents and guests. For the Synagogue, the following assumptions were used based on parking analysis conducted by Traf Tech Engineering, Inc.

- Friday Evening Service (6:00 PM to 10:00 PM at 100% parking usage). All other times assumed 50% parking usage (conservative approach).

- Saturday morning Service (9:00 AM to 1:00 PM at 100 parking usage). All other times assumed 50% parking usage (conservative approach).

As indicated in Table 1, the Hollywood Oaks residential development requires 798 parking spaces on weekdays and 787 parking stalls on weekends. **Hence, a parking surplus of 14 parking spaces will be available using very conservative assumptions based on the shared parking analysis.**

Summary

In summary, the proposed 470-unit residential development and synagogue with 812 parking spaces provide sufficient parking spaces to accommodate the peak parking demand of the Hollywood Oaks development.

Please give me a call if you have any questions.

Sincerely,

TRAF TECH ENGINEERING, INC.

Joaquin E. Vargas, P.E.
Senior Transportation Engineer

TABLE 1
Hollywood Oaks (Weekday)
Shared Parking Analysis (Using CityParking Requirements and ULI Shared Parking by Time of Day)

	Spaces = **705** Residential (Residents)		Spaces = **94** Residential (Guests)		Spaces = **69** Synagogue (Attendee)		Spaces = **0** Synagogue (Other)		**868**
Hour of Day	Utilization	Spaces	Utilization	Spaces	Utilization	Spaces	Utilization	Spaces	**Total**
6:00 AM	95%	670	0%	0	50%	35	0%	0	704
7:00 AM	85%	599	10%	9	50%	35	0%	0	643
8:00 AM	75%	529	20%	19	50%	35	0%	0	582
9:00 AM	65%	458	20%	19	50%	35	0%	0	512
10:00 AM	60%	423	20%	19	50%	35	0%	0	476
11:00 AM	55%	388	20%	19	50%	35	0%	0	441
12:00 PM	50%	353	20%	19	50%	35	0%	0	406
1:00 PM	50%	353	20%	19	50%	35	0%	0	406
2:00 PM	50%	353	20%	19	50%	35	0%	0	406
3:00 PM	55%	388	20%	19	50%	35	0%	0	441
4:00 PM	60%	423	20%	19	50%	35	0%	0	476
5:00 PM	65%	458	40%	38	50%	35	0%	0	530
6:00 PM	70%	494	60%	56	100%	69	0%	0	619
7:00 PM	75%	529	100%	94	100%	69	0%	0	692
8:00 PM	80%	564	100%	94	100%	69	0%	0	727
9:00 PM	85%	599	100%	94	100%	69	0%	0	762
10:00 PM	95%	670	100%	94	50%	35	0%	0	798
11:00 PM	97%	684	80%	75	50%	35	0%	0	794
12:00 AM	100%	705	50%	47	50%	35	0%	0	787

Source: City of Hollywood and Urban Land Institute (ULI) Shared Parking (Third Edition)

Max Parking =	**798**
Available Parking =	812
Surplus Parking =	**14**

Land Use	**Size**	**Pkg Rate**	**Total Parking Spaces**
Residential	**470 units**		**799 Spaces**
- Tenant	470 units	1.50 /unit	705 Spaces
- Guest	470 units	1.00 /5 units	94 Spaces
Synagugue			69 Spaces
Total			**868.00** Spaces

TRAFTECH ENGINEERING, INC.

TABLE 2
Hollywood Oaks (Saturday)
Shared Parking Analysis (Using CityParking Requirements and ULI Shared Parking by Time of Day)

	Spaces = **705** Residential (Residents)		Spaces = **94** Residential (Guests)		Spaces = **69** Synagogue (Attendee)		Spaces = **0** Synagogue (Other)		**868**
Hour of Day	Utilization	Spaces	Utilization	Spaces	Utilization	Spaces	Utilization	Spaces	**Total**
6:00 AM	90%	635	0%	0	50%	35	0%	0	669
7:00 AM	85%	599	20%	19	50%	35	0%	0	653
8:00 AM	80%	564	20%	19	50%	35	0%	0	617
9:00 AM	75%	529	20%	19	100%	69	0%	0	617
10:00 AM	70%	494	20%	19	100%	69	0%	0	581
11:00 AM	69%	486	20%	19	100%	69	0%	0	574
12:00 PM	68%	479	20%	19	100%	69	0%	0	567
1:00 PM	67%	472	20%	19	50%	35	0%	0	526
2:00 PM	66%	465	20%	19	50%	35	0%	0	519
3:00 PM	55%	388	20%	19	50%	35	0%	0	441
4:00 PM	60%	423	20%	19	50%	35	0%	0	476
5:00 PM	55%	388	40%	38	50%	35	0%	0	460
6:00 PM	50%	353	60%	56	50%	35	0%	0	443
7:00 PM	55%	388	100%	94	50%	35	0%	0	516
8:00 PM	65%	458	100%	94	50%	35	0%	0	587
9:00 PM	75%	529	100%	94	50%	35	0%	0	657
10:00 PM	85%	599	100%	94	50%	35	0%	0	728
11:00 PM	90%	635	80%	75	50%	35	0%	0	744
12:00 AM	100%	705	50%	47	50%	35	0%	0	787

Source: City of Hollywood and Urban Land Institute (ULI) Shared Parking (Third Edition)

Max Parking =	**787**
Available Parking =	812
Surplus Parking =	**26**

Land Use	**Size**	**Pkg Rate**	**Total Parking Spaces**
Residential	**470 units**		**799 Spaces**
- Tenant	470 units	1.50 /unit	705 Spaces
- Guest	470 units	1.00 /5 units	94 Spaces
Synagugue			69 Spaces
Total			**868.00** Spaces

TRAFTECH ENGINEERING, INC.