

**20810 Highlands Ave.
ESTERO, FLORIDA
Christ Community
Ministries**

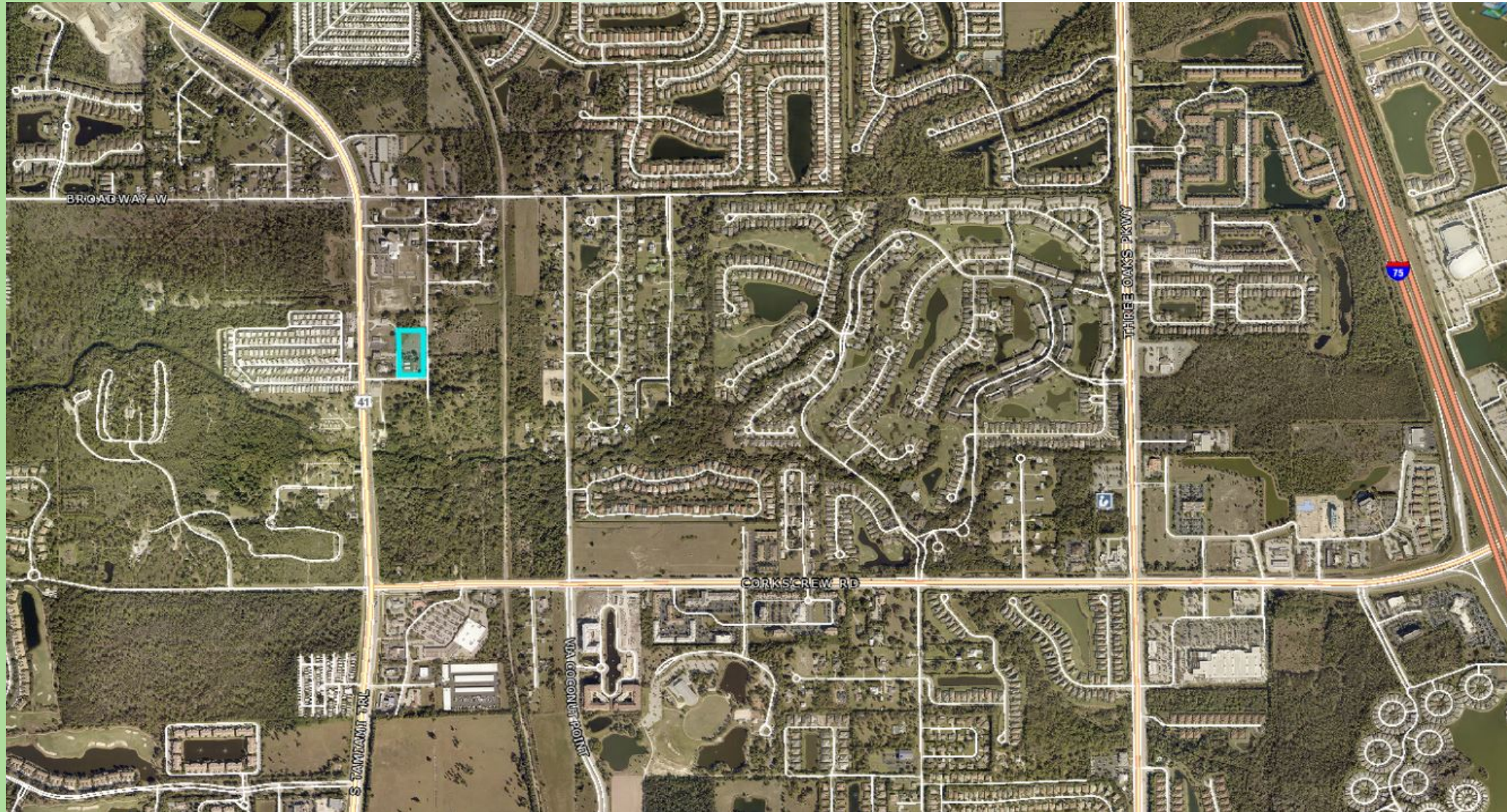
Design Review Board
for Final Approval

Civil Engineering Plans

TDM Consulting, Inc.



Vicinity Map



Area Location Map



East View of the Existing Church



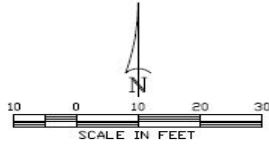
South View of the Existing Church



West View of the Existing Church



AS-BUILT SURVEY OF
**LOT 9 THROUGH 14,
MARSHALL'S
ESTERO RIVER GROVE,
UNIT 1
AND PORTION OF LAND
LYING IN SECTION 28-46-25**
(PLAT BOOK 12, PAGE 131)
INSTRUMENT No. 2020000157143
SECTION 28, TOWNSHIP 46 SOUTH, RANGE 25 EAST
ESTERO, LEE COUNTY, FLORIDA



DESCRIPTION: (PER TITLE COMMITMENT)

LOT 9 THROUGH 14, MARSHALL'S ESTERO RIVER GROVES, UNIT 1, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 12, PAGE 131, PUBLIC RECORDS OF LEE COUNTY, FLORIDA, AND THAT PARCEL SOUTH OF LOTS 11 AND 12, MARSHALL'S ESTERO RIVER GROVES, UNIT 1, AS RECORDED IN PLAT BOOK 12, PAGE 131, PUBLIC RECORDS OF LEE COUNTY, FLORIDA, WEST OF HIGHLAND AVENUE, NORTH OF COUNTY ROAD AND EAST OF ESTERO COURT, LEE COUNTY, FLORIDA.

ALSO DESCRIBED AS:

BEGINNING AT NORTHWEST CORNER OF LOT 9 AS SHOWN ON THE RECORD PLAT OF MARSHALL'S ESTERO RIVER GROVES, UNIT 1, AS RECORDED IN PLAT BOOK 12, PAGE 131, PUBLIC RECORDS OF LEE COUNTY, FLORIDA, RUN NORTH 89°22'51" EAST ALONG THE NORTHERLY LINE OF LOT 9 AND LOT 14 OF SAID RECORD PLAT FOR 240.00 FEET TO AN INTERSECTION WITH THE WESTERLY RIGHT OF WAY LINE OF HIGHLAND AVENUE; THENCE RUN SOUTH 00°37'09" EAST ALONG SAID WESTERLY RIGHT OF WAY LINE FOR 419.88 FEET TO AN INTERSECTION WITH THE NORTHERLY RIGHT OF WAY LINE OF COUNTY ROAD (50 FEET WIDE) AS SHOWN ON SAID RECORD PLAT; THENCE RUN SOUTH 88°12'14" WEST ALONG SAID RIGHT OF WAY LINE FOR 240.05 FEET TO AN INTERSECTION WITH THE EASTERLY RIGHT OF WAY LINE OF ESTERO COURT (50 FEET WIDE) AS SHOWN ON SAID RECORD PLAT; THENCE RUN NORTH 00°37'09" WEST ALONG SAID EASTERLY RIGHT OF WAY LINE FOR 424.82 FEET TO THE POINT OF BEGINNING.

MATTERS PERTAINING TO TITLE COMMITMENT

BY: FIRST AMERICAN TITLE INSURANCE COMPANY.
FILE NO. NCS-921555-LA2, DATED: AUGUST 03, 2018

ITEMS 1, 2, 4, 5, 6, 7, 9, 10, 11, 12, 13, ARE NOT SURVEY RELATED.

ITEM 3 REFERENCES THIS SURVEY, AS SHOWN HEREON.

ITEM 8 PLAT OF MARSHALL'S ESTERO RIVER GROVES, UNIT 1, AS RECORDED IN PLAT BOOK 12, PAGE 131, PUBLIC RECORDS OF LEE COUNTY, FLORIDA, AS SHOWN HEREON.

SURVEY NOTES:

1. BASIS OF BEARING SHOWN HEREON TAKEN FROM THE WEST RIGHT-OF-WAY LINE OF HIGHLAND AVENUE, AS BEING PER DEED S.00°37'09"E.
 2. FIELD NOTES IN MARSHALL'S ESTERO RIVER GROVES, UNIT 1.
 3. THIS CERTIFICATION IS ONLY FOR LANDS DESCRIBED HEREON. IT IS NOT A CERTIFICATION OF TITLE, ZONING OR FREEDOM OF ENCUMBRANCES.
 4. THIS SURVEY IS BASED ON OWNER'S POLICY, BY D.L.B. REPUBLIC NATIONAL TITLE INSURANCE COMPANY, POLICY NO. DF-6-BB15536, DATED JULY 13, 2020.
 5. UNDERGROUND STRUCTURES AND UTILITIES, IF ANY, ARE NOT INCLUDED.
 6. THIS MAP/PLAT IS CONSIDERED SIGNED USING A DIGITAL SEAL IN ACCORDANCE WITH THE APPLICABLE STATE LAWS AND STATUTES (FS 668.001-006) FS 668.001, FS 472.025, FS 472.026, FLORIDA ADMINISTRATIVE CODE, STATE OF FLORIDA.
 7. ALL BEARINGS AND DISTANCES ARE PLAT AND MEASURED, UNLESS OTHERWISE SHOWN.
 8. THIS SURVEY IS INTENDED TO BE VIEWED AS AN 24X36, 20 SCALE DRAWING.
 9. BENCHMARK DERIVED FROM GPS RTK NETWORK (PPN 003, ELEVATION 357.2 NAVD83).
 10. ELEVATIONS ARE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83).
- FLOOD ZONE: "A" LEE COUNTY UNINCORPORATED AREAS ELEVATION 115' NAVD83 AS SCALED COMMUNITY NO. 125124. PANEL NO. 0593. SUFFIX --- F REVISION DATE: 6/28/08. MAP NUMBER: 12071C0593F.

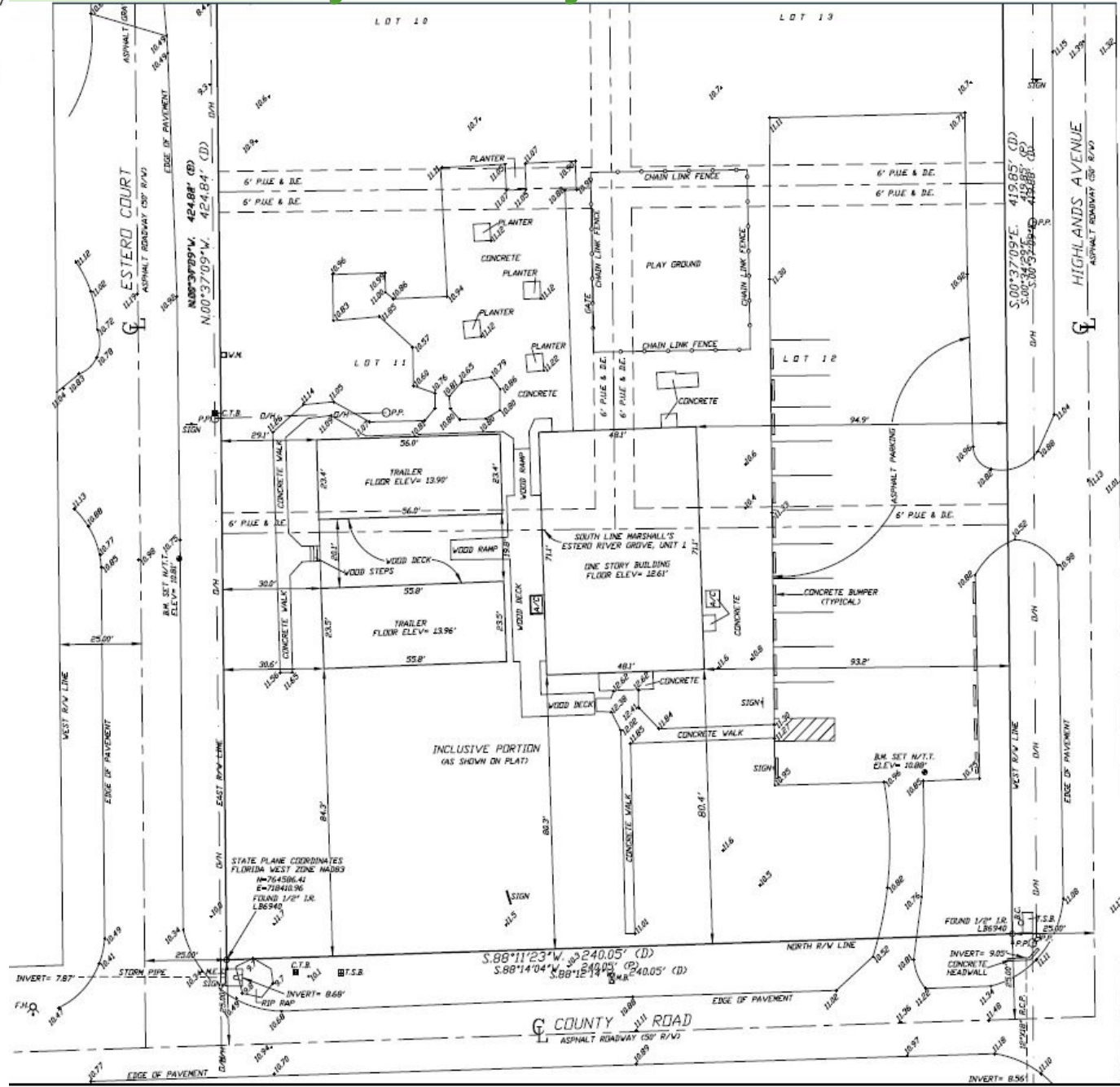
FLOOD ZONE: VILLAGE OF ESTERO. COMMUNITY No. 120260. PANEL No. 0591. SUFFIX --- G REVISION DATE: 12/77/18. MAP NUMBER: 12071C0591G.

THIS SURVEY IS CERTIFIED TO:
TDM CONSULTING, INC.

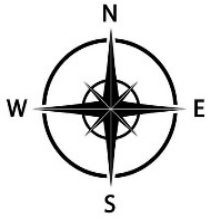
LEGEND:

- SET #4 IRON ROD (CAP LS #6515)
- FOUND IRON ROD (I.R.)
- CONCRETE MONUMENT (C.M.)
- ◻ PERMANENT REFERENCE MONUMENT
- ◻ PERMANENT CONTROL POINT
- ◻ PUBLIC UTILITY EASEMENT
- ◻ DRAINAGE EASEMENT
- ◻ LAKE MAINTENANCE EASEMENT
- ◻ POINT OF CURVATURE
- ◻ POINT OF TANGENCY
- ◻ OFFICIAL RECORDS BOOK
- (S) AS PER SURVEY
- (M) AS MEASURED
- (P) AS PER PLAT
- (D) AS PER DEED
- (C) CURVE NUMBER
- (L) LINE NUMBER
- R/W RIGHT-OF-WAY
- C CENTERLINE
- R.W.B. RECLAIM WATER BOX
- WM. WATER METER
- W.V. WATER VALVE
- F.H. FIRE HYDRANT
- O/H OVERHEAD POWER
- P.P. POWER POLE
- G.A.W. GUY ANCHOR & WIRE
- E.B. ELECTRIC BOX
- C.T.B. CABLE TELEVISION BOX
- T.S.B. TELEPHONE SERVICE BOX
- N/D NAIL & DISK
- N/T.T. NAIL & TINTAB
- ELEV. ELEVATION
- B.M. BENCHMARK
- TD TYPICAL ELEVATION
- A/C AIR CONDITIONER
- W.S. WATER SYSTEM
- P.E. POOL EQUIPMENT
- POB CONCRETE
- MB. POINT OF BEGINNING
- B.C. MAIL BOX
- M.E.S. BURIED CABLE
- M.E.S. MITERED END SECTION

Boundary Survey

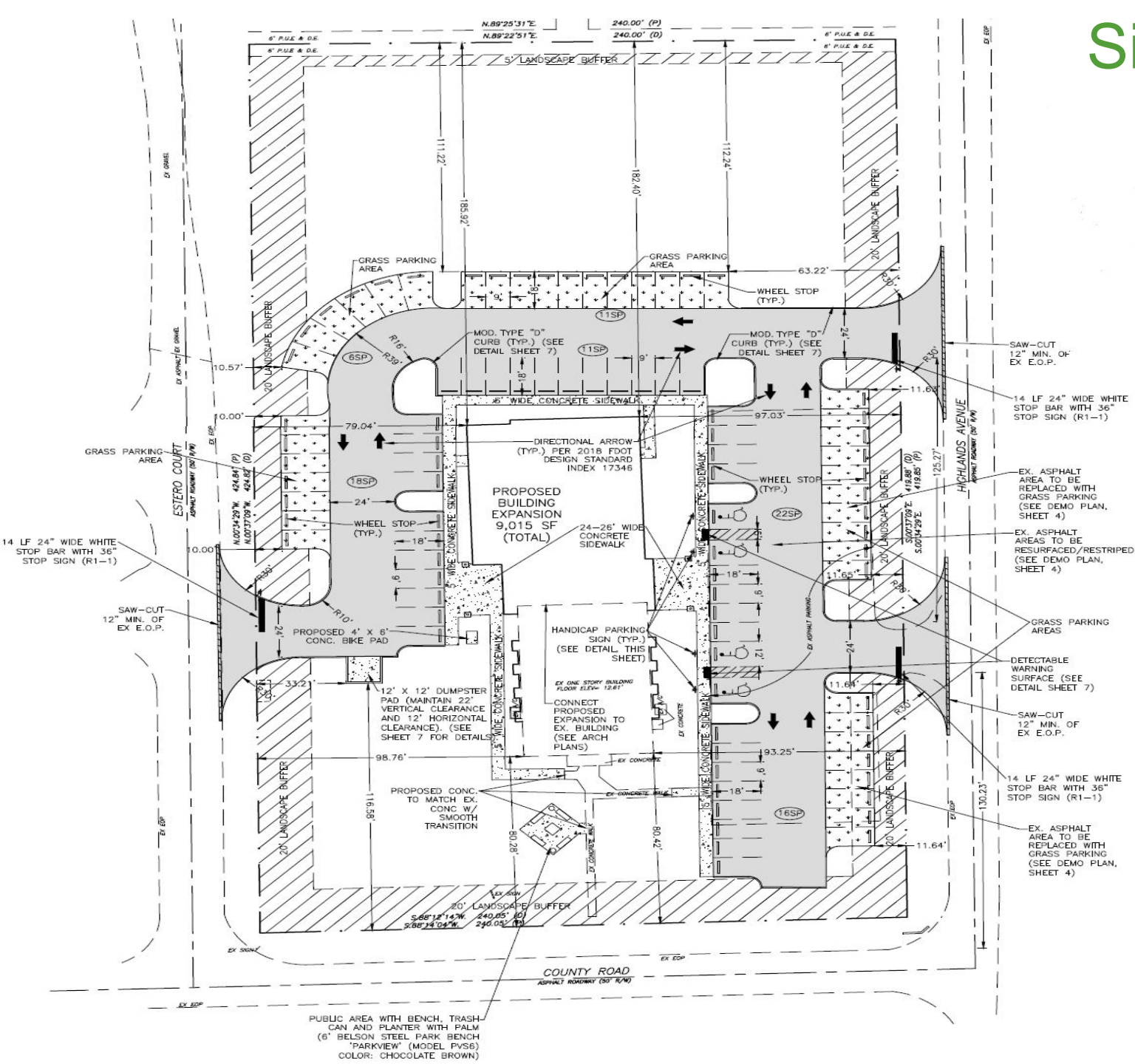


Site Dimension Plan



LEGEND

R	RADIUS (5' UNLESS OTHERWISE NOTED)
EX.	EXISTING
R/W	RIGHT-OF-WAY
E.O.P.	EDGE OF PAVEMENT
CONC.	CONCRETE
TYP.	TYPICAL
PROP.	PROPOSED
SF	SQUARE FEET
LF	LINEAR FEET
E.O.P.	EDGE OF PAVEMENT
P.U.E.	PUBLIC UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
L.P.	LIGHT POLE
CLF	EXISTING CHAIN LINK FENCE
10SP	NUMBER OF PARKING SPACES IN LOT
	PROPOSED PAVEMENT
	PROPOSED CONCRETE
LDC	LAND DEVELOPMENT CODE
N.T.S.	NOT TO SCALE
C.P.	CONCRETE PAD



TOTAL PARCEL AREA: (2.33 AC)	101,363 SF	
INDIGENOUS PRESERVE AREA:	5,348 SF	
TOTAL DEVELOPABLE AREA: (2.20 AC)	96,015 SF	100.00%

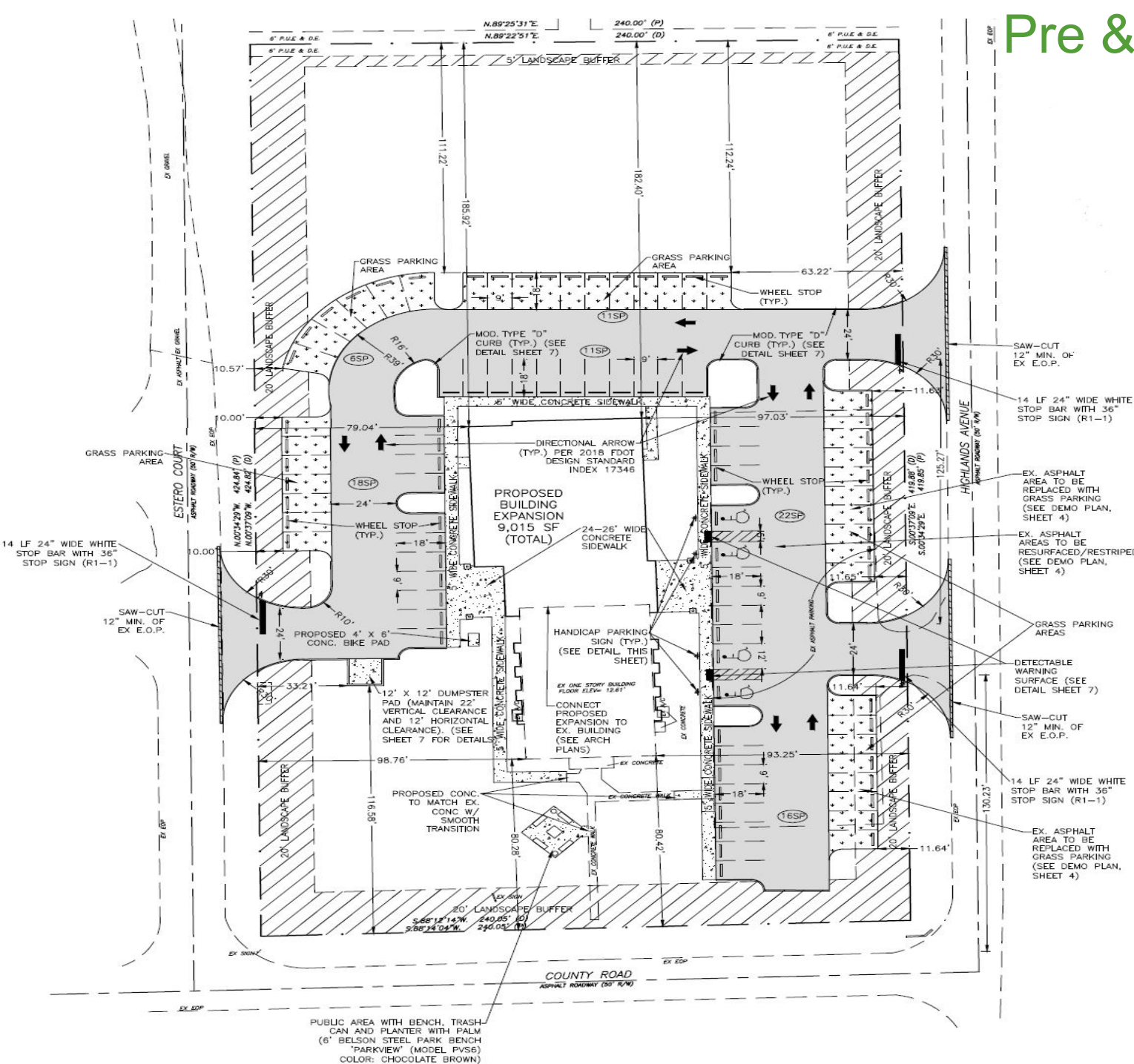
EXISTING PAVEMENT AREA:	12,730 SF	13.26%
EXISTING GRASS PARKING AREA:	0 SF	0.00%
EXISTING CONCRETE & WOOD DECK AREA:	6,349 SF	6.61%
EXISTING TRAILER & BUILDING (ROOF) AREA:	<u>6,043 SF</u>	<u>6.29%</u>
EXISTING TOTAL IMPERVIOUS AREA:	25,122 SF	26.16%

EXISTING OPEN GREEN AREA:	70,893 SF	73.84%
EXISTING DRY DETENTION AREAS:	0 SF	0.00%
EXISTING TOTAL PERVIOUS AREA:	70,893 SF	73.84%

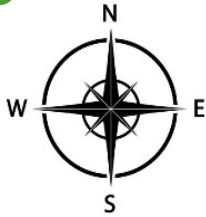
TOTAL PARCEL AREA: (2.33 AC)	101,363 SF	100.00%
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PROPOSED PAVEMENT AREA:	23,033 SF	22.72%
PROPOSED GRASS PARKING AREA:	7,079 SF	6.98%
PROPOSED CONCRETE AREA:	4,106 SF	4.05%
PROPOSED BUILDING (ROOF) AREA:	9,015 SF	8.90%
PROPOSED TOTAL IMPERVIOUS AREA:	43,233 SF	42.65%

PROPOSED OPEN GREEN AREA:	35,380 SF	34.91%
PROPOSED DRY DETENTION AREAS:	22,750 SF	22.44%
PROPOSED TOTAL PERVIOUS AREA:	58,130 SF	57.35%



Parking Requirements



PARKING REQUIREMENTS

PER SECTION 34-2020(B) VILLAGE OF ESTERO LAND DEVELOPMENT CODE.

9,015 SF CHURCH (247 SEATS)

= 1.0 SPACES PER 3 SEATS

= 247 TOTAL SEATS/3 SEATS PER SPACE = 82.33 SPACES

REQUIRED PARKING = 83 SPACES (INCLUDING 4 SPACE FOR HC)

PROVIDED PARKING = 84 SPACES (INCLUDING 4 SPACES FOR HC AND 42 GRASS PARKING)

BICYCLE PARKING REQUIREMENTS

PER SECTION 10-610(D)3 VILLAGE OF ESTERO LAND DEVELOPMENT CODE.

THE NUMBER OF SAFE AND SECURE BICYCLE PARKING SPACES MUST BE FIVE PERCENT OF THE NUMBER OF REQUIRED VEHICLE PARKING SPACES.

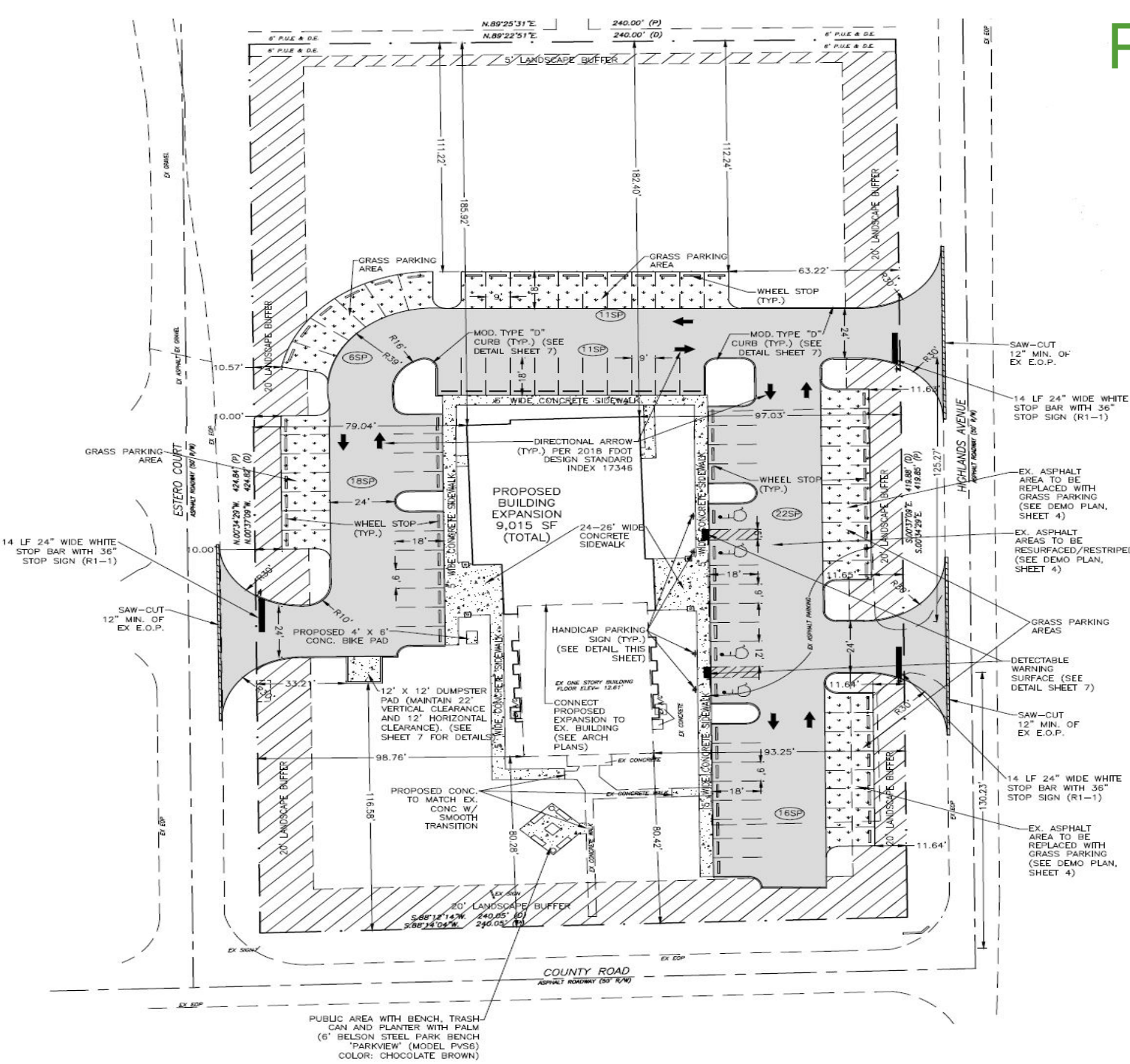
REQUIRED AUTOMOBILE PARKING SPACES = 83

= 83 AUTOMOBILE PARKING SPACES * 0.05 = 4.15

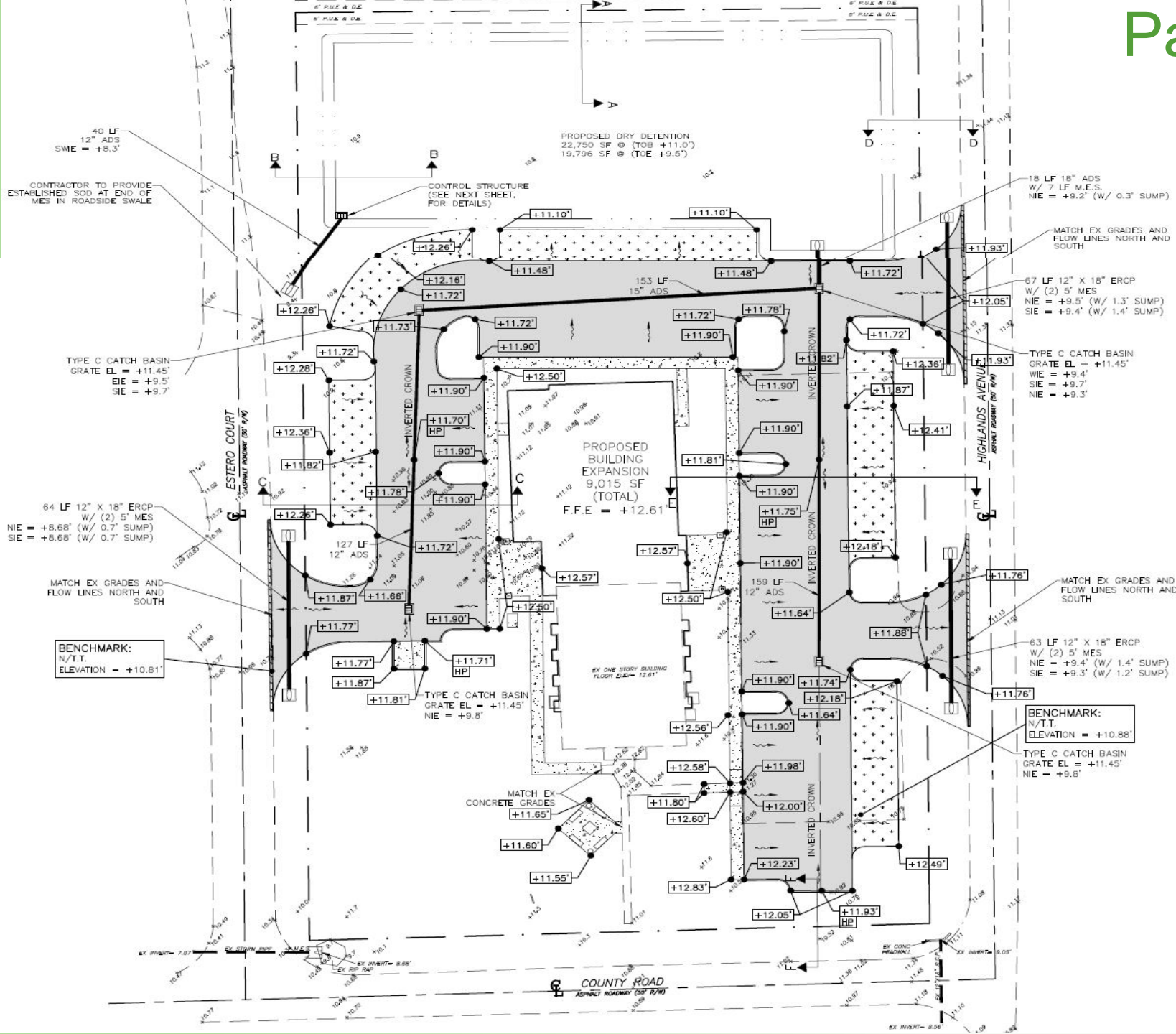
= MIN. 5 BICYCLE SPACES REQUIRED

= 1 BICYCLE RACK REQUIRED (ASSUME 5 BICYCLES PER RACK)

PROVIDED = 1 (4' X 6') BICYCLE RACK AREA



Paving, Grading, and Drainage Plan



LEGEND

	PROPOSED GRADE - SPOT (SPOT SHOWN IS PAVEMENT GRADE)
	EXISTING GRADE - SPOT
	PROPOSED STORMWATER CATCH BASIN
	PROPOSED PAVEMENT
	PROPOSED MITERED-END SECTION
	NEW REINFORCED CONCRETE PIPE
	DRAINAGE PIPE NUMBER
	DRAINAGE INLET NUMBER
	INTENDED DIRECTION OF STORMWATER FLOW
	EXISTING CATCH BASIN
	EXISTING CULVERT
	R/W, ROW
	P.U.E.
	D.E.
	(TYP.)
	EX.
	SF
	LF
	CF
	I.E.
	EL. OR ELEV.
	N.A.V.D.
	WPP
	T.O.B.
	T.O.S.
	CONC.
	R.C.P.
	E.R.C.P.
	ADS
	M.E.S.
	EOP
	D.D.A.
	SW



Stormwater Calculations



STORMWATER CALCULATIONS

TOTAL DETENTION REQUIRED:

$$= 1" \times \text{TOTAL PARCEL AREA} \times 1'/12"$$

$$= 1" \times 101,363 \text{ SF} \times 1'/12"$$

$$= 8,447 \text{ CF}$$

OR $2.5" \times (\text{TOTAL IMPERVIOUS AREA} - \text{ROOF AREA}) /$

$$(\text{TOTAL PARCEL AREA} - \text{ROOF AREA}) \times \text{TOTAL PARCEL AREA} \times 1'/12"$$

$$= 2.5" \times (43,233 \text{ SF} - 9,015 \text{ SF}) / (101,363 \text{ SF} - 9,015 \text{ SF})$$

$$\times 101,363 \text{ SF} \times 1'/12" = 7,825 \text{ CF}$$

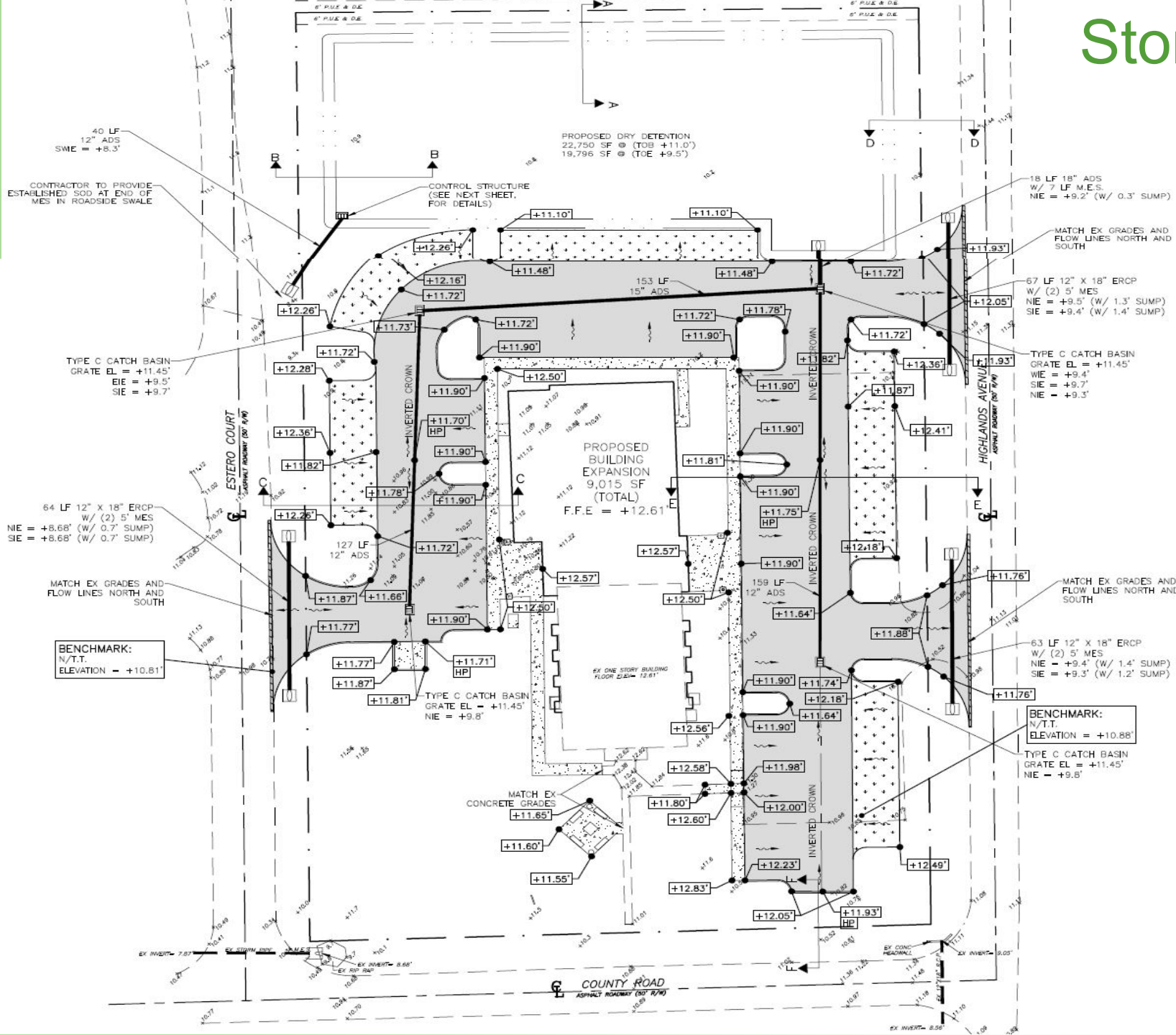
$$= 8,447 \text{ CF} \times 0.75 \text{ (DRY DETENTION)} = 6,335 \text{ CF}$$

TOTAL DETENTION PROVIDED:

$$= \text{VOLUME IN DDA \#1}$$

$$= 1.5' (19,796 \text{ SF}) + 1.5' [(22,750 \text{ SF} - 19,796 \text{ SF})/2]$$

$$= 31,909 \text{ CF}$$



Fire Flow Calculations



FIRE FLOW CALCULATIONS

BASED ON NFPA 1, TABLE 18.5.4.3

9,015 SF PROPOSED BUILDING, CONSTRUCTION TYPE (II-B)

MINIMUM FIRE FLOW REQUIRED IN ALL CASES IS 1,500 GPM.

FF = 1,500 GPM @ 20 PSI REQUIRED

FIRE FLOW PROVIDED @ 20 PSI = 2,201 GPM DATED 10/29/2020

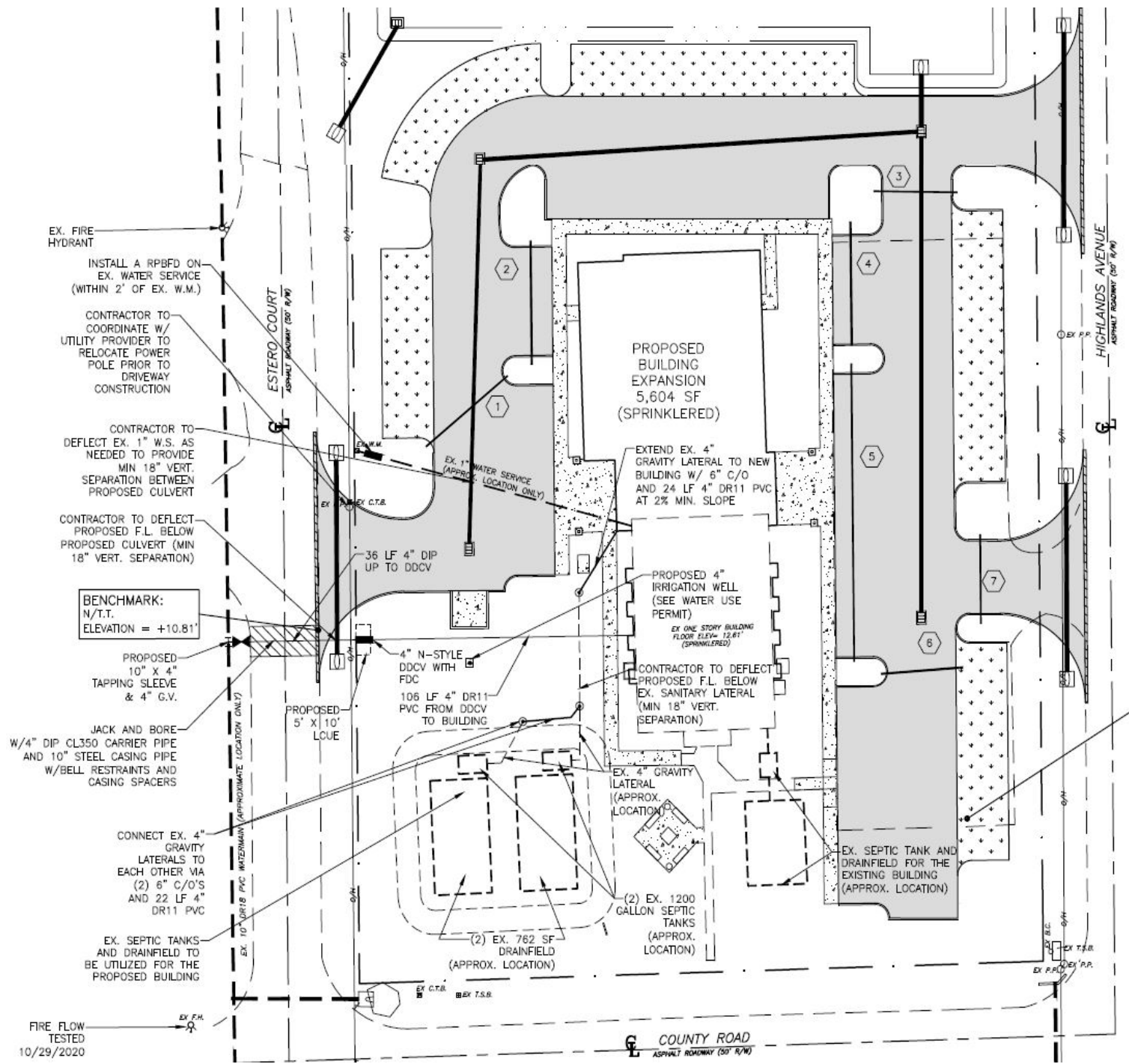
BUILDING TO BE SPRINKLED.

THEREFORE, FIRE PROTECTION IS ASSUMED ADEQUATE.

TEST LOCATION: 8631 COUNTY ROAD AND TAMiami TRAIL

FIRE FLOW CONDUCTED BY:

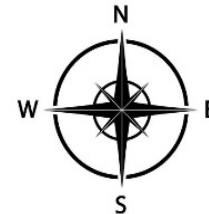
ESTERO FIRE RESCUE



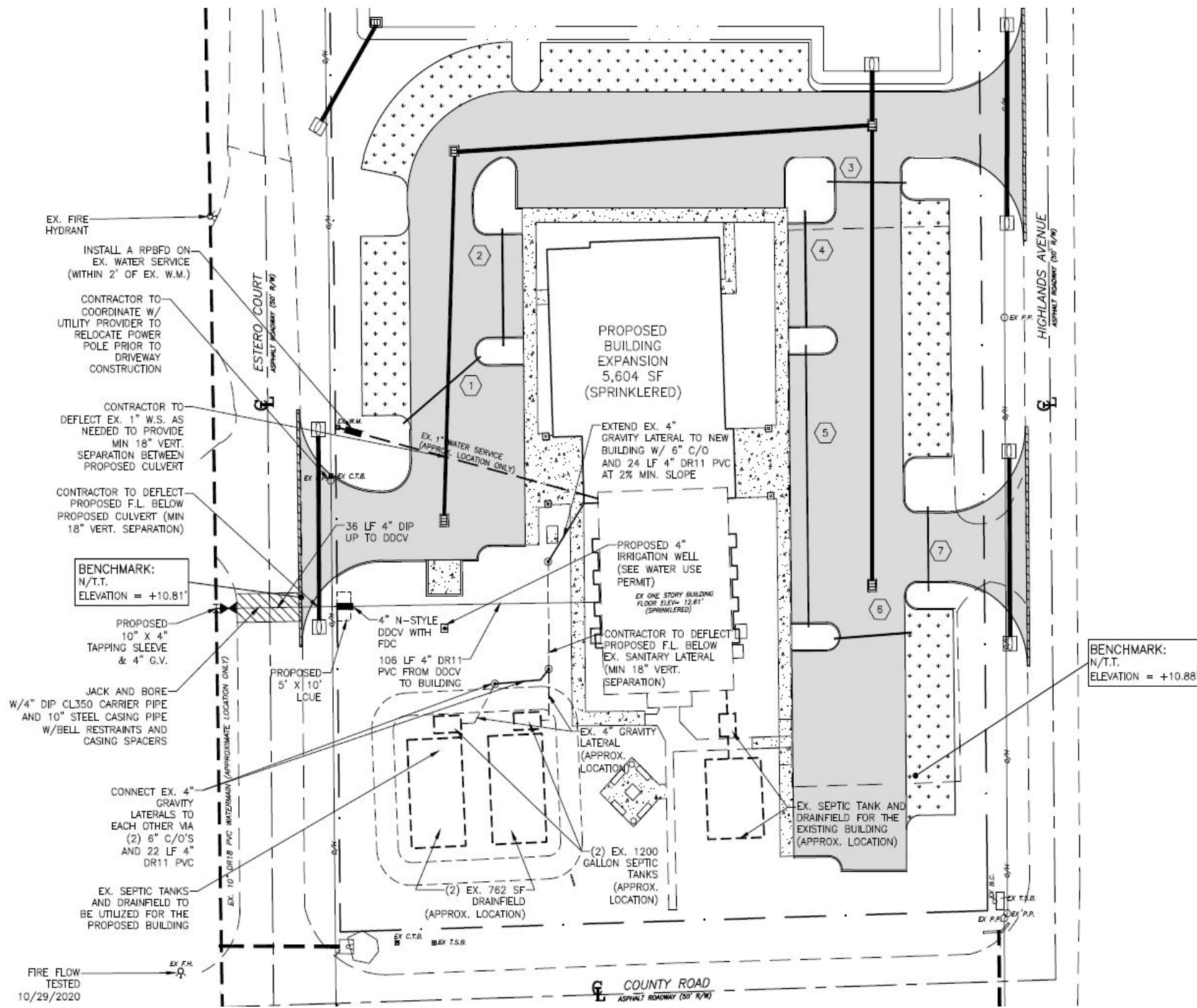
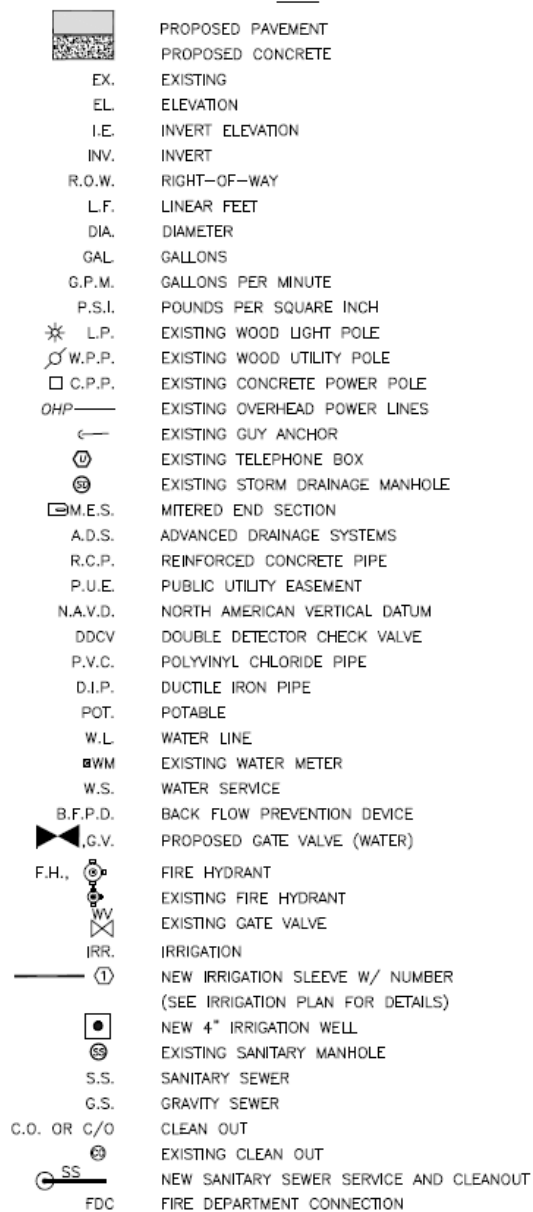
BENCHMARK:
N/T.T.
ELEVATION = +10.88'



Utility Plan



LEGEND



Lighting Plan

STATISTICS (FOR ENTIRE SITE)

Description	Symbol	Avg	Max	Min
Boundary	+	0.0 fc	0.2 fc	0.0 fc
Parking Area	+	0.8 fc	1.5 fc	0.0 fc

LUMINAIRE SCHEDULE (FOR GENERAL SITE AND PARKING AREAS)

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
	L-1	9	DSX1 LED 30C 530 30K T3M MVOLT MA	DSX1 LED WITH (1) 30 LED LIGHT ENGINES, TYPE T3S OPTIC, 3000K, @ 530mA FOR MAST ARM MOUNTING	LED	DSX1_LED_ 30C_530_30K_ T3M_MVOLT_MA.ies	ABSOLUTE	1.00	52.4

HLWPC2

Wallpack® Full Cutoff LED



ORDERING INFORMATION

Example: HLWPC2 P70 40K AS T3M R2SDP

Status	Lumen Package	Color Temperature	Voltage	Optics	Color	Block	CB
HLWPC2	Wallpack Full Cutoff LED	ANSI Two Amber 30K 3,000 lm 40K 4,000 K CCT 50K 5,000 K CCT	AS Auto-Sensing Voltage (C0W-27V) 36VDC AR Auto-Sensing Voltage C0W-180V 90VDC 12 120V 20 200V 24 240V 27 277V 34 347V 48 480V	T25 Type 2 Short T26 Type 2 Medium T27 Type 2 Short T28 Type 2 Medium T29 Type 2 Medium T30 Forward Throw Medium AST01 Asymmetric Diffuse STMD1 Symmetric Diffuse	R2SDP R2SEP G7SDP W4SDP	Black Bronze Grey White	Blank 29 CB (STD) 50 CB 68 CB

Options:

Adjustable/Programmable Options

A0 Field Adjustable Output

Circuit Options

20 2 Independent Circuits

Control - Motion Sensor Options

MASL Motion / Ambient Sensor, 8-35' Mounting

Height: Ambient Sensor Enabled at 1 FC

MASH Motion / Ambient Sensor, 15-30' Mounting

Height: Ambient Sensor Enabled at 1 FC

Control - Photocentral Options

PE Button Style Photocentral

P3 N.E.M.A. Twistlock Receptacle Mount - 3 P/B

P7 N.E.M.A. Twistlock Receptacle Mount - 7 P/B

PCL DTL Long Life Twistlock Photocentral for Solid State

6-10K Full-spectrum Dimming, Includes BLU & N.E.M.A.

Twistlock Photocentral Receptacle

PSC Shorting Cap

Focus Option

SF Single Focus

DF Double Focus

Safety Option

EM Integral Emergency Battery

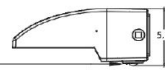
TP Tamper Resistant Hardware

Surge Protection Option - 20KV/10KA is Standard

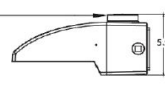
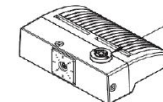
10KV 10KA Surge Protection, in place of 20KV/10KA

Options Location

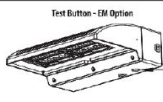
Motion/Ambient Sensor mount options for Low (8-15') (MASL) and Height (15-30') (MASH) applications



N.E.M.A. Twistlock Receptacle P3 and P7 Options, P7 Shown



Internal Emergency Battery Test Button - EM Option



Lighting



D-Series Size 1

LED Area Luminaire



Specifications

BPA:	1.01 in. (25.65 mm)
Length:	33" (838 mm)
Width:	13" (330 mm)
Height H1:	7-1/2" (190 mm)
Height H2:	3-1/2" (91 mm)
Weight (max):	27 lbs (12 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distils the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.



Is Capable option indicated by this color background.

Ordering Information

EXAMPLE: DSK1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DOBXD

DSX1 LED							
Series	LEDs	Color temperature	Distribution		Output	Mounting	
DSX1 LED	Forward optics	3000 3000 K	T15	Type II short	T9V5	Type IV very short	MAX10 ¹
	P6 P4 P7	4000 4000 K	T25	Type II short	T25	Type II short ¹	120 ¹
	P2 P3 P8	5000 5000 K	T24	Type II medium	T24	Type II medium	200 ¹
	P5 P6 P9		T35	Type II short	T35W	Type IV wide	240 ¹
	Rotated optics		T34	Type II medium	RVC	Refrillight candle ²	277 ¹
	P10 ¹ P12 ¹		T44	Type II medium	LC02	Left corner candle ³	347 ¹
	P10 ¹ P13 ¹		T11M	Forward, down recessed	RGBD	Right corner candle ³	488 ¹
							Shipped included
							SP6 Square pole mounting
							RP6 Round pole mounting
						W4 Wall bracket	
						SP1000A Square pole universal mount by adapter ¹	
						RP1000A Round pole universal mounting adapter ²	
						Shipped separately	
						W48A W48W43 Most any mounting bracket, adapter typically W48M ³	

Common options		Other options		Select accessory			
Shipped/installed HLR42 i-Light 4.0 generation 2 enabled ¹ PR40 Network, high view angle/indirect view ² PR18 PEMA, near back-scatter only (patent pending/separate) ^{3,4} PR18 Five-pin connector only (patent pending/separate) ^{3,4} PR17 Seven-pin connector only (patent pending/separate) ^{3,4} DMS 0-30° dimming (only built-in default (for use without external control), indirect separate) ⁵ DS Dual switching ^{6,7,8,9}		PR HighView, medium/indirect view; 15-19° mounting height, ambient sensor enabled at 15-19° PR4 HighView, medium/indirect view; 15-30° mounting height, ambient sensor enabled at 15-30° PR17FCV HighView, medium/indirect view; 15-19° mounting height, ambient sensor enabled at 15-19° PR17FCV 4-in., medium/indirect view; 15-30° mounting height, ambient sensor enabled at 15-30° SAB Field adjustable output ¹⁰		Shipped/installed 15 Nine-tilt-tilt ¹¹ SF Single line [133,277,345] ¹² DF Double line [238,243,480] ¹ L90 Left tilted only ¹³ R90 Right tilted only ¹³ Shipped separately S5 5-in. pole ¹⁴ D55 External glass shield ¹⁵		DR60 Dark bronze DR30 Black DR30 Glass/diamond DR30 Glass/diamond DR30 White DR30 Textured dark bronze DR30 Textured black DR30 Textured silver DR30 Textured white	



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DISK-LSD
Rev. 08/12/11
Page 1 of 6



Anchor Base Poles

SSA

SQUARE STRAIGHT ALUMINUM



Traffic Impact Statement

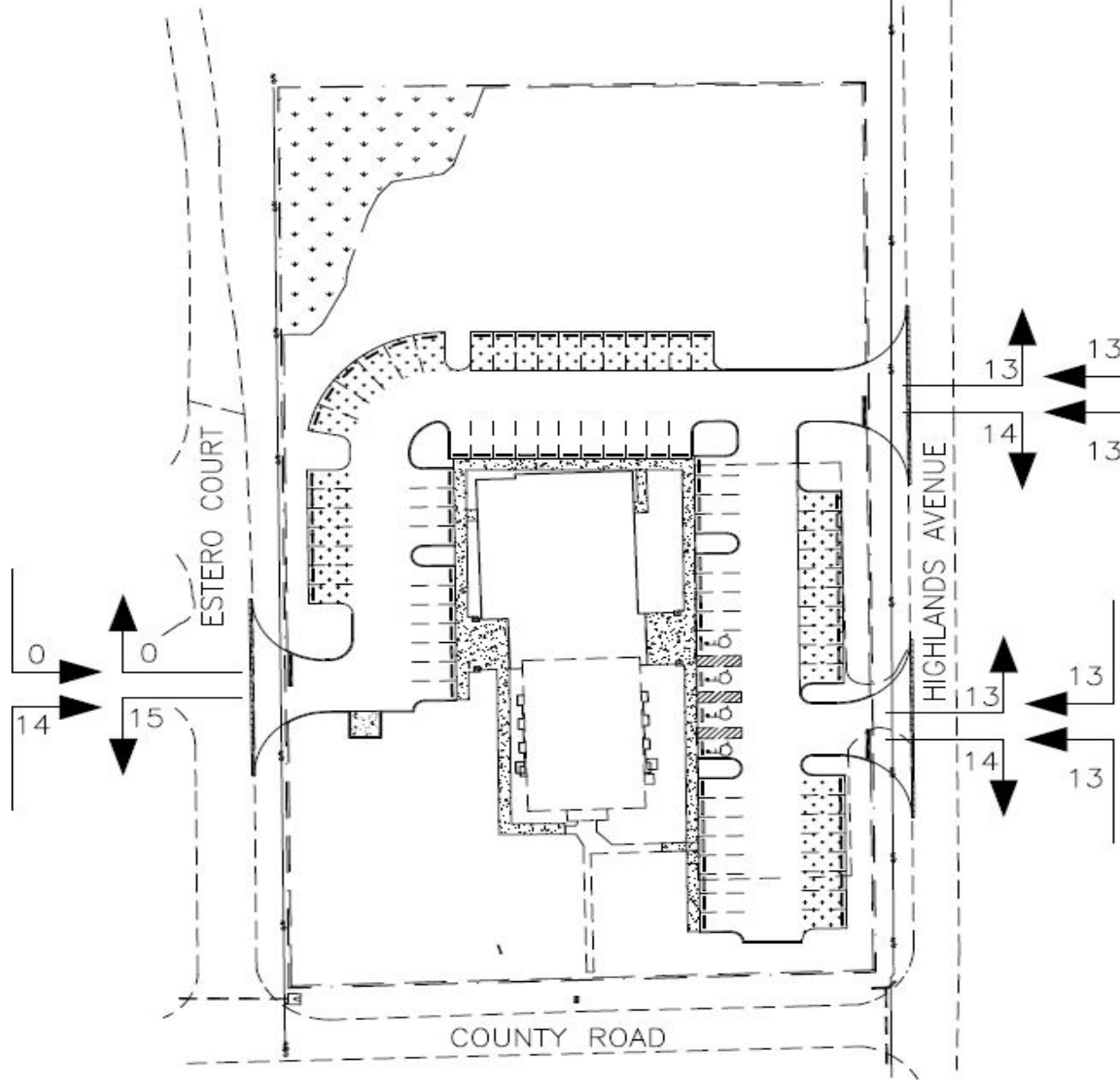


Table 5. Raw Trip Generation – Proposed Church (LUC 560)

247 Seats:

A. Daily Average Vehicle Trip Ends (Sunday)

$$T = 1.21 (247) = \mathbf{298 (149 \text{ entering, } 149 \text{ exiting})}$$

B. Sunday Peak Hour Average Vehicle Trip Ends (Generator)

$$T = 0.54 (247) = \mathbf{133 (65 \text{ entering, } 68 \text{ exiting})}$$

Source: TDM, 2020

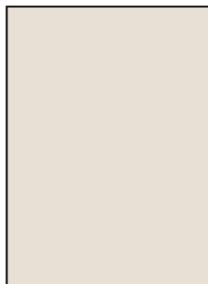
Architectural Plans

Robert L. Massengale

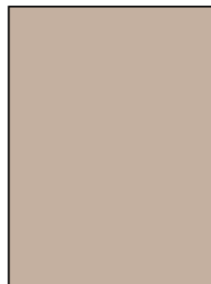




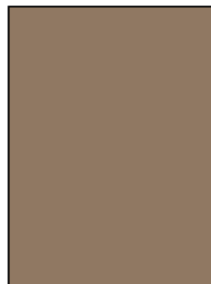
Sherwin Williams Colors



SW6091
Reliable White



SW6086
Sand Dune

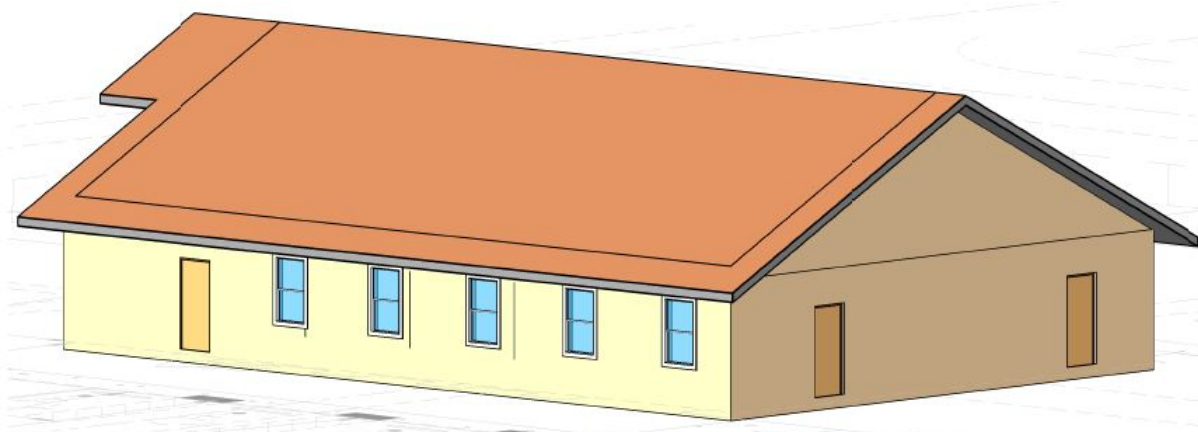


SW7705
Nuthatch



Galvalume Metal Roofing

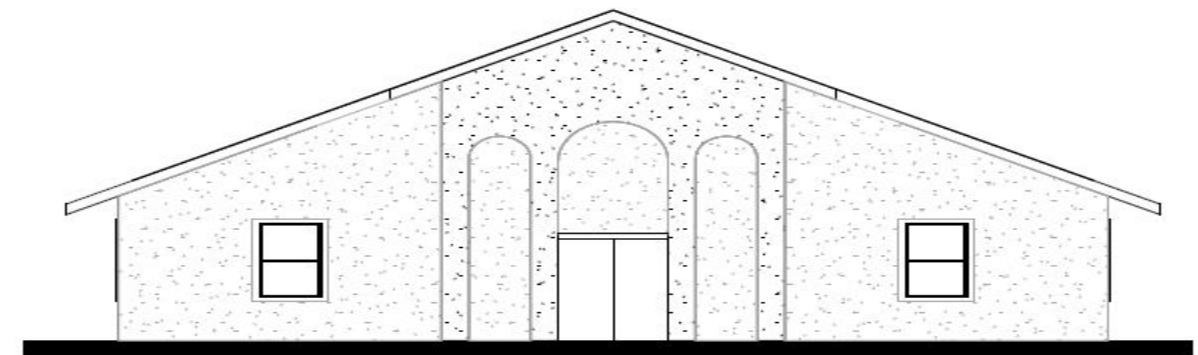




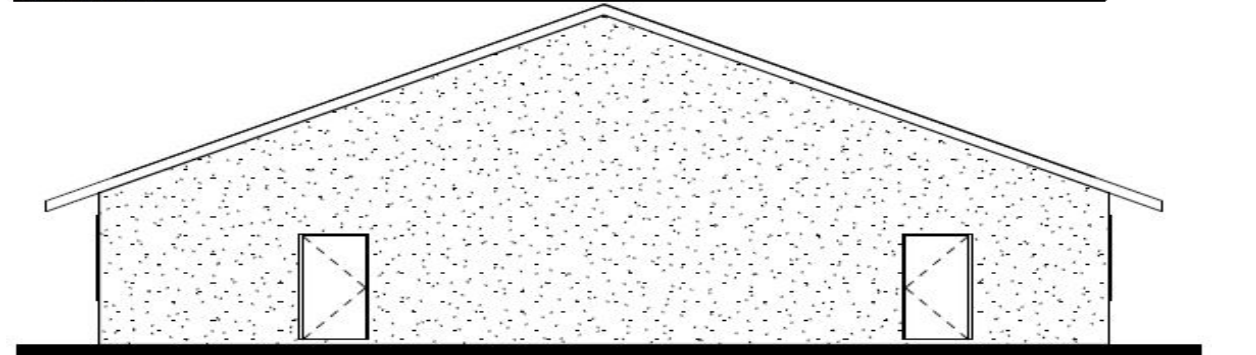
Cover 1 existing



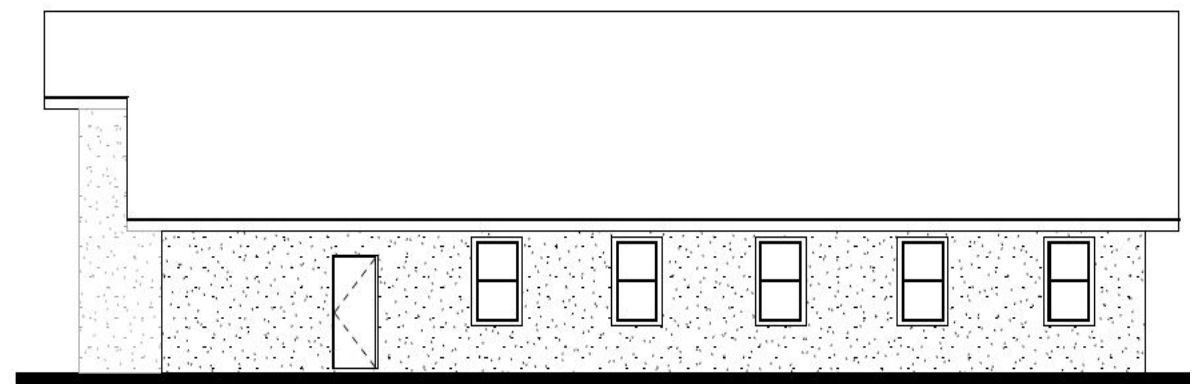
Cover 2 existing



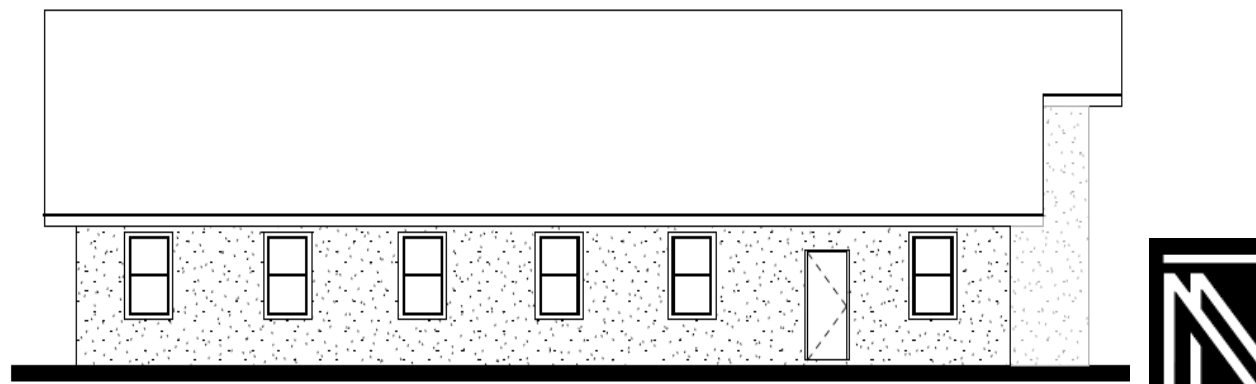
4 1/8" = 1'-0" South Elevation



5 1/8" = 1'-0" North Elevation

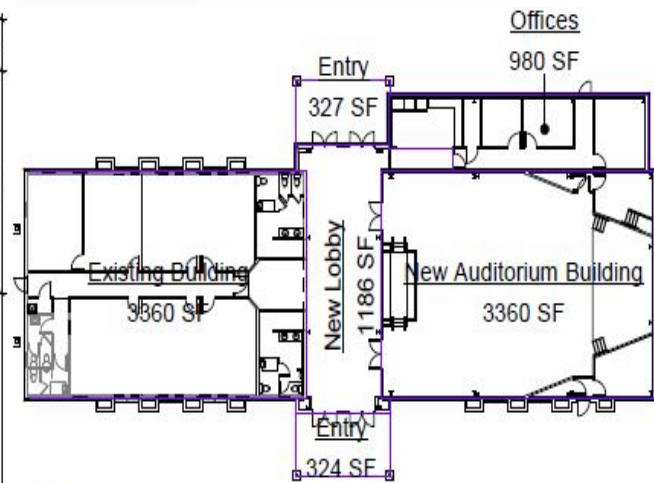
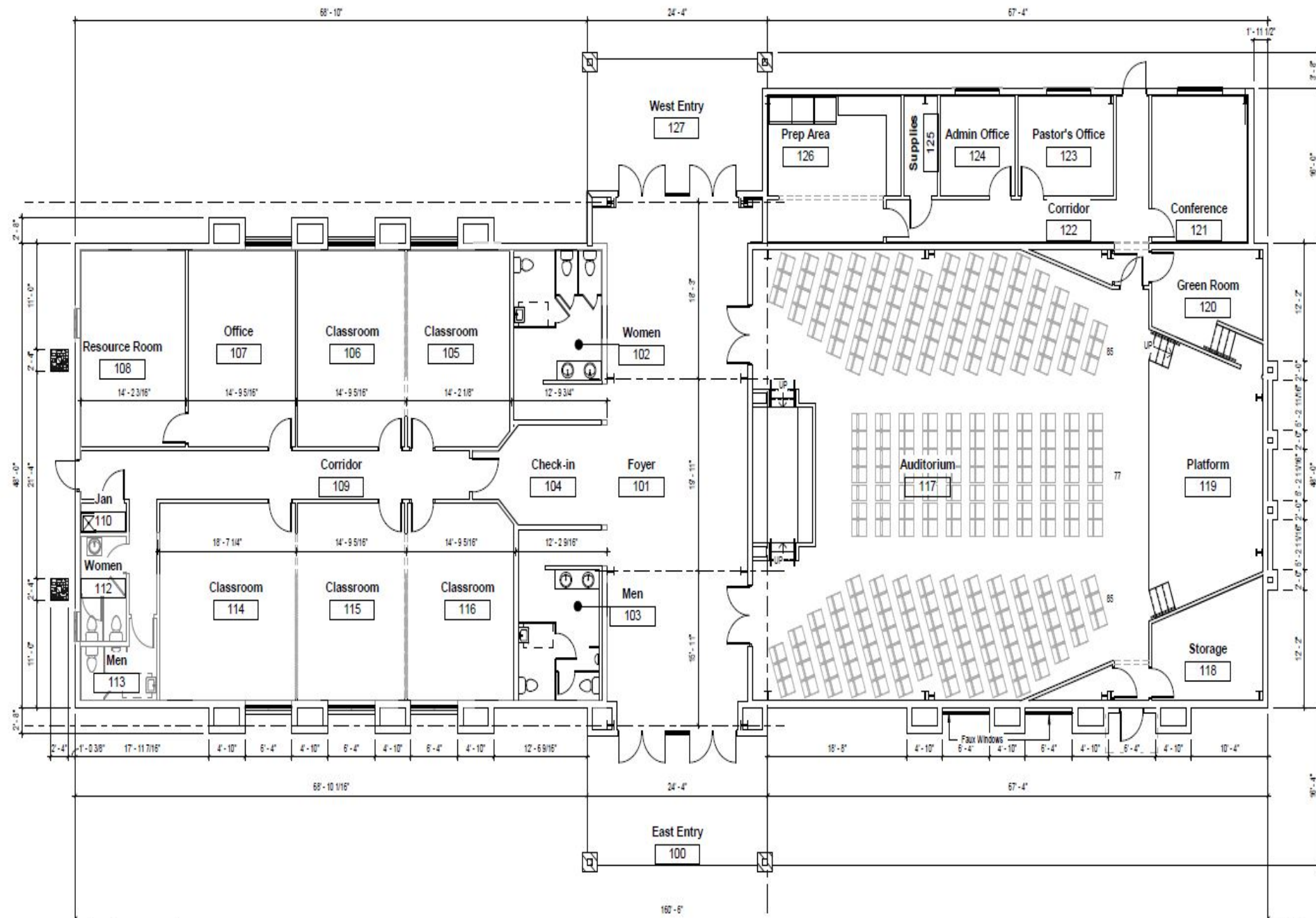


6 1/8" = 1'-0" East Elevation



7 1/8" = 1'-0" West Elevation





Area Plan

Area Tabulations

Existing Building	3,360 sf
New Construction	6,177sf
Total Area	9,537 sf
Seating Capacity	247 seats



Exterior Finish Materials

- | | | |
|----|--------------------------------|---------------------|
| 1 | Smooth Stucco Finish | (Old Florida Style) |
| 2 | Textured Stucco Finish | (Old Florida Style) |
| 3 | HardiPlank Horizontal Siding | (Old Florida Style) |
| 4 | Standing Seam Metal Roofing | (Old Florida Style) |
| 5 | Rough-sawn Timber Truss | (Old Florida Style) |
| 6 | Rough-sawn Timber Column | (Old Florida Style) |
| 7 | Manufactured Stone Column Base | |
| 8 | 4"x2" Stucco Banding | |
| 9 | Faux Window | |
| 10 | 8"x2" Stucco Banding | |
| 11 | 12"x2" Stucco Banding | |
| 12 | 1-1/2" Stucco Reveal | |
| 13 | Decorative Bracket | (Old Florida Style) |
| 14 | Decorative Rafter Tail | (Old Florida Style) |
| 15 | Storefront Door/Window System | |
| 16 | Metal Canopy | |



1 1/8" = 1'-0" East Elevation



2 1/8" = 1'-0" West Elevation



3 1/8" = 1'-0" North Elevation



4 1/8" = 1'-0" South Elevation

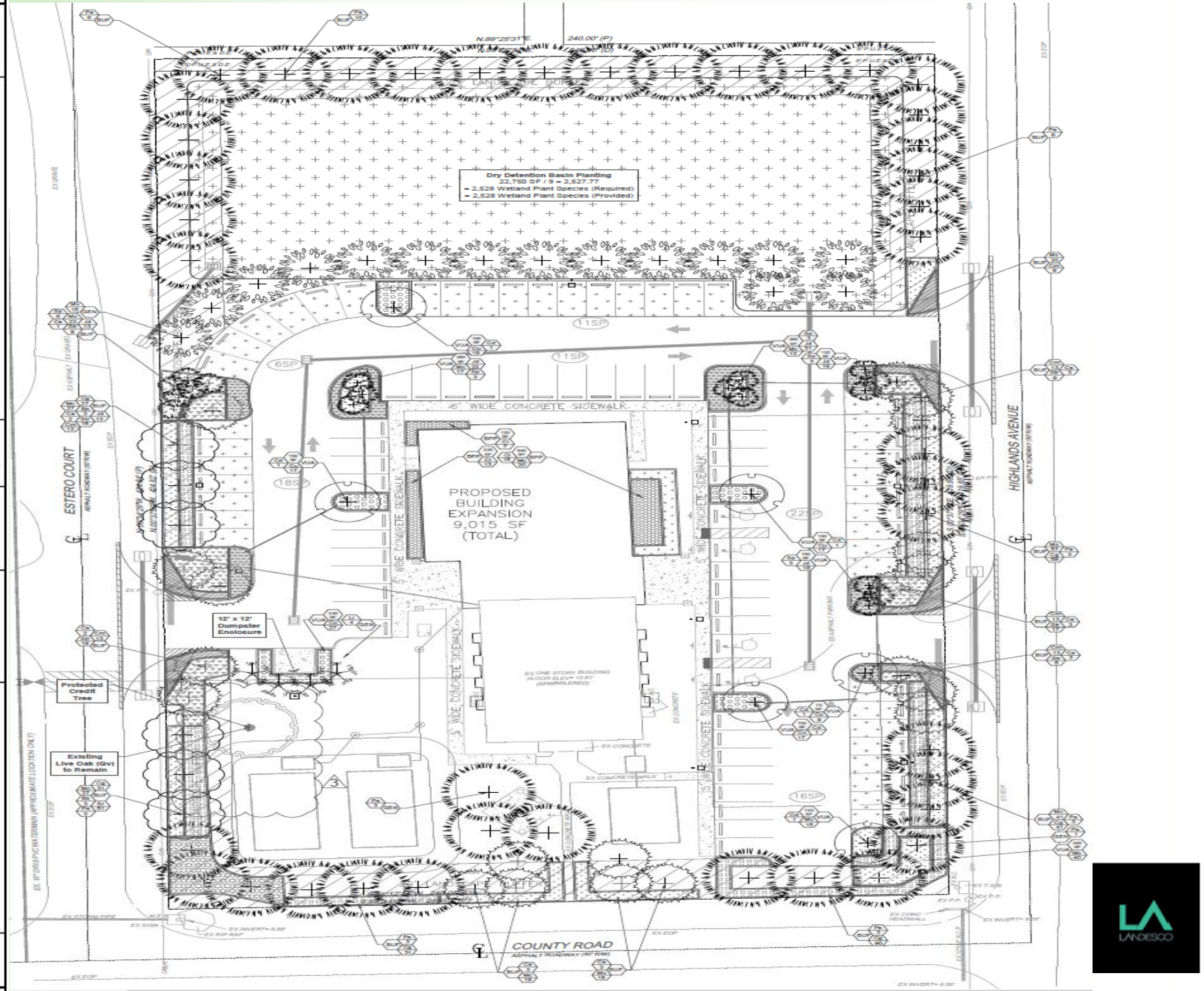


Landscape Architectural Plans

Landesco, PLLC

VILLAGE OF ESTERO
LANDSCAPE REQUIREMENTS

	Required:	Provided:
Commercial Development abutting the following uses:		
North Property Boundary: MPD <---> AG-2 Type 'A' Buffer (5' min. width; 4 Trees / 100 LF) ▶ 240.00 LF = 10 Trees 240 / 100 = 2.40 x 4 = 9.60 Trees	10	10
East Property Boundary: WOR <---> ROW (HIGHLANDS AVE) Type 'D' Buffer (20' min. width; 5 Trees + 66 Shrubs / 100 LF) ▶ 419.85 LF = 21 Trees + 297 Shrubs 420 / 100 = 4.20 x 5 = 21.00 Trees 420 / 100 = 4.20 x 30 = 297.00 Trees	21 297	21 297
South Property Boundary: WOR <---> ROW (COUNTY RD) Type 'D' Buffer (20' min. width; 5 Trees + 66 Shrubs / 100 LF) ▶ 240.00 LF = 12 Trees + 159 Shrubs 240 / 100 = 2.40 x 5 = 12.00 Trees 240 / 100 = 2.40 x 66 = 158.40 Trees	12 159	12 159
West Property Boundary: WOR <---> ROW (ESTERO CT) Type 'D' Buffer (20' min. width; 5 Trees + 66 Shrubs / 100 LF) ▶ 424.82 LF = 22 Trees + 281 Shrubs 425 / 100 = 4.25 x 5 = 21.25 Trees 425 / 100 = 4.25 x 66 = 280.50 Shrubs	22 281	22 281
Open Space Calculations: Commercial 20% of development area must be provided as open space ▶ Open Space: 96,015 SF x 0.20 = 19,203.00 SF	19,203 SF	35,943 SF
General Trees. (GEN) All other developments. One tree must be provided per each 3,500 square feet of development area. ▶ GEN: 96,015 SF / 3,500 = 27.43 Trees	28	28
Building perimeter plantings. (BPP) Building Perimeter Plantings equal to ten percent of the proposed building gross ground level floor area must be provided. ▶ BPP: 9,015 SF x 0.10 = 901.50 SF ▶ BPP: (902 SF / 2) / 9 = 50.11 Shrubs	902 SF 51	990 SF 55
Landscaping of parking and vehicle use areas. (VUA) Internal landscaping. At least one canopy tree or a cluster of three sabal palms must be planted or retained for every 250 square feet of required internal planting area, and no parking space may be more than 200 feet from a tree planted in a permeable island, peninsula or median. ▶ VUA: 2,304 SF / 250 = 9.22 Trees Landscaped areas on the parking area perimeter or internal islands must equal or exceed a minimum of ten percent of the total paved surface area. ▶ VUA: 23,033 SF x 0.10 = 2,303.30 SF ▶ VUA: 2,304 SF / 9 = 256.00 Shrubs	10 2,304 SF 256	10 2,395 SF 282
TOTALS	TREES SHRUBS LANDSCAPE AREA	103 1,044 3,206 SF
		103 1,074 3,385 SF



Trees



Orange Geiger
Cordia Sebestena



Pigeon Plum
Coccoloba Diversifolia



Cabbage Palm
Sabal Palmetto



Crape Myrtle
Lagerstroemia Indica



Shady Lady Black Olive
Ilex Bucida Buceras 'Shady Lady'



Sweetbay Magnolia
Magnolia Virginiana



Southern Slash Pine
Pinus Elliottii Var. Densa



Southern Live Oak
Quercus Virginiana

PLANT SCHEDULE

KEY	SYMBOL	QTY	SPECIES	PLANT TYPE	CATEGORY	NATIVE STATUS
PROPOSED TREES						
Bb		6	SHADY LADY BLACK OLIVE, <i>Bucida buceras 'Shady Lady'</i>	CANOPY	BUF	NO
Cd		6	PIGEON PLUM, <i>Coccoloba diversifolia</i>	CANOPY	VUA	YES
Cs		20	ORANGE GEIGER TREE, <i>Cordia sebestena</i>	CANOPY	BUF	YES
Li		4	CRAPEMYRTLE, <i>Lagerstroemia indica</i>	CANOPY	GEN	NO
Mv		15	SWEETBAY MAGNOLIA, <i>Magnolia virginiana</i>	CANOPY	GEN	YES
Pe		37 4	Southern Slash Pine, <i>Pinus elliottii var. densa</i>	CANOPY	BUF GEN	YES
Sp		6 12	Cabbage Palm, <i>Sabal palmetto</i> (3:1)	PALM	BUF VUA	YES
EXISTING TREES						
Qv		1	SOUTHERN LIVE OAK, <i>Quercus virginiana</i> (1:5)	CANOPY	EX	YES
TOTAL TREES		111	REVIEW: 92 + 18 @ 3:1 + 1 @ 1:5 = 103			

Shrubs



Red Tip Cocoplum
Chrysobalanus Icaco



Clusia
Clusia Guttifera



Emerald Blanket
Carissa Marcocarpa



Orange Bird
Strelitzia Reginae



Seagrape
Coccoloba Uvifera



Parson's Juniper
Juniperus Davurica



Muhly Grass
Muhlenbergia Capillaris



Silver Saw Palmetto
Serenoa Repens



Floratam Grass
Stenotaphrum Secundatum

PLANT SCHEDULE						
PROPOSED SHRUBS						
Ci		35	Red Tip Cocoplum, <i>Chrysobalanus icaco</i> 'Red Tip'	SHRUB	BPP	YES
Cg		279	CLUSIA (AUTOGRAPH PLANT), <i>Clusia guttifera</i>	SHRUB	BUF	YES
Cm		74	EMERALD BLANKET NATAL PLUM, <i>Carissa macrocarpa</i> 'Emerald Blanket'	SHRUB	BUF	YES
Cu		97	SEAGRAPE, <i>Coccoloba uvifera</i>	SHRUB	VUA	YES
Jd		26	Parson's Juniper, <i>Juniperus davurica</i> 'Parsonii'	SHRUB	BUF	YES
		100			GEN	
Mc		20	Muhly Grass, <i>Muhlenbergia capillaris</i>	GRASS	BPP	YES
		233			BUF	
		85			VUA	
Sr		51	Silver Saw Palmetto, <i>Serenoa repens</i>	SHRUB	BUF	YES
Str		74	ORANGE BIRD OF PARADISE, <i>Strelitzia reginae</i>	SHRUB	GEN	YES
TOTAL SHRUBS		1,074				
DRY DETENTION PLANTING						
Sb		2,528	Sandcord Grass, <i>Spartina bakerii</i>	SHRUB	VUA	YES
SOD						
---		---	Floratam Grass, <i>Stenotaphrum secundatum</i> 'Floratam'	LAWN	THROUGHOUT	YES

Existing Tree Survey



DRAWING INFO:	PROJECT:	IN CONJUNCTION WITH:	ESCAL:	PREPARED BY:
DATE: 06-26-2021				
SUBMITTED: DKN				
DRAWN BY: DKN				
CHECKED BY: DKN				
EXISTING TREE SURVEY 20810 HIGHLANDS AVENUE ESTERO, FL 33928		TDM CONSULTING, INC. 43 BARKLEY CIR. SUITE 200 FORT MYERS, FL 33907 DEAN@TDMCONSULTING.COM TDMCIVILENGINEERING.COM (239) 433-4231		LANDESCO PLLC 18117 SANDY PINES CIR N FORT MYERS, FL 33917 INFO@LANDESCO.COM LANDESCO.COM (239) 691-7790

