CASE COVER SHEET

City of Rockwall
Planning and Zoning Department
385 S. Goliad Street
Rockwall, Texas 75087

PLANNING & ZONING CASE NO. SP2022-058

PLANNING & ZONING FEE $ 2,246.98

PLATTING APPLICATION
- ☐ MASTER PLAT
- ☐ PRELIMINARY PLAT
- ☐ FINAL PLAT
- ☐ REPLAT
- ☐ AMENDING OR MINOR PLAT
- ☐ PLAT REINSTATEMENT REQUEST

SITE PLAN APPLICATION
- ☑ SITE PLAN
- ☐ AMENDED SITE PLAN/ELEVATIONS/LANDSCAPING

ZONING APPLICATION
- ☐ ZONING CHANGE
- ☐ SPECIFIC USE PERMIT
- ☐ PD DEVELOPMENT PLAN

OTHER APPLICATION
- ☐ TREE REMOVAL
- ☐ VARIANCE REQUEST/SPECIAL EXCEPTIONS

RECORD OF RECOMMENDATIONS, VOTING RECORDS, AND CONDITIONS OF APPROVAL

ARCHITECTURE REVIEW BOARD

PLANNING AND ZONING COMMISSION

On November 15, 2022, the Planning and Zoning Commission approved a motion to approve the site plan by a vote of 5-0, with the condition that additional screening be provided from Sids Road and S. Goliad Street, with Commissioners Llewellyn and Conway absent.

CITY COUNCIL READING #1

CITY COUNCIL READING #2

CONDITIONS OF APPROVAL

(1) All staff comments provided by the Planning, Engineering and Fire Department must be addressed prior to the submittal of engineering plans.

(2) Any construction resulting from the approval of this Site Plan shall conform to the requirements set forth by the Unified Development Code (UDC), the International Building Code (IBC), the Rockwall Municipal Code of Ordinances, city adopted engineering and fire codes and with all other applicable regulatory requirements administered and/or enforced by the state and federal government.

(3) Additional screening be provided from Sids Road and S. Goliad Street.

NOTES

DEVELOPMENT APPLICATION

City of Rockwall
Planning and Zoning Department
385 S. Goliad Street
Rockwall, Texas 75087

STAFF USE ONLY

PLANNING & ZONING CASE NO.

NOTE: *THE APPLICATION IS NOT CONSIDERED ACCEPTED BY THE CITY UNTIL THE PLANNING DIRECTOR AND CITY ENGINEER HAVE SIGNED BELOW.*

DIRECTOR OF PLANNING:

CITY ENGINEER:

PLEASE CHECK THE APPROPRIATE BOX BELOW TO INDICATE THE TYPE OF DEVELOPMENT REQUEST [SELECT ONLY ONE BOX]:

PLATTING APPLICATION FEES:
- ☐ MASTER PLAT ($100.00 + $15.00 ACRE) [1]
- ☐ PRELIMINARY PLAT ($200.00 + $15.00 ACRE) [1]
- ☐ FINAL PLAT ($300.00 + $20.00 ACRE) [1]
- ☐ REPLAT ($300.00 + $20.00 ACRE) [1]
- ☐ AMENDING OR MINOR PLAT ($150.00)
- ☐ PLAT REINSTATEMENT REQUEST ($100.00)

SITE PLAN APPLICATION FEES:
- ☑ SITE PLAN ($250.00 + $20.00 ACRE) [1]
- ☐ AMENDED SITE PLAN/ELEVATIONS/LANDSCAPING PLAN ($100.00)

ZONING APPLICATION FEES:
- ☐ ZONING CHANGE ($200.00 + $15.00 ACRE) [1]
- ☐ SPECIFIC USE PERMIT ($200.00 + $15.00 ACRE) [1 & 2]
- ☐ PD DEVELOPMENT PLANS ($200.00 + $15.00 ACRE) [1]

OTHER APPLICATION FEES:
- ☐ TREE REMOVAL ($75.00)
- ☐ VARIANCE REQUEST/SPECIAL EXCEPTIONS ($100.00) [2]

NOTES:
[1]: IN DETERMINING THE FEE, PLEASE USE THE EXACT ACREAGE WHEN MULTIPLYING BY THE PER ACRE AMOUNT. FOR REQUESTS ON LESS THAN ONE ACRE, ROUND UP TO ONE (1) ACRE.
[2]: A ***$1,000.00*** FEE WILL BE ADDED TO THE APPLICATION FEE FOR ANY REQUEST THAT INVOLVES CONSTRUCTION WITHOUT OR NOT IN COMPLIANCE TO AN APPROVED BUILDING PERMIT.

PROPERTY INFORMATION [PLEASE PRINT]

ADDRESS	950 Sids Road, Rockwall, Texas				
SUBDIVISION	Rayburn Country Addition	LOT		BLOCK	
GENERAL LOCATION					

ZONING, SITE PLAN AND PLATTING INFORMATION [PLEASE PRINT]

CURRENT ZONING	AG, C and HC	CURRENT USE	Rayburn Electric's Headquarters		
PROPOSED ZONING	AG, C and HC	PROPOSED USE	Rayburn Electric's Headquarters		
ACREAGE	99.849	LOTS [CURRENT]	Four (4)	LOTS [PROPOSED]	Four (4)

☑ ***SITE PLANS AND PLATS:*** *BY CHECKING THIS BOX YOU ACKNOWLEDGE THAT DUE TO THE PASSAGE OF HB3167 THE CITY NO LONGER HAS FLEXIBILITY WITH REGARD TO ITS APPROVAL PROCESS, AND FAILURE TO ADDRESS ANY OF STAFF'S COMMENTS BY THE DATE PROVIDED ON THE DEVELOPMENT CALENDAR WILL RESULT IN THE DENIAL OF YOUR CASE.*

OWNER/APPLICANT/AGENT INFORMATION [PLEASE PRINT/CHECK THE PRIMARY CONTACT/ORIGINAL SIGNATURES ARE REQUIRED]

☐ OWNER	Rayburn Country Electric Coop.	☐ APPLICANT	R-Delta Engineers, Inc.
CONTACT PERSON	Stephen Geiger	CONTACT PERSON	Frank A. Polma, P.E.
ADDRESS	950 Sids Road	ADDRESS	618 Main Street
CITY, STATE & ZIP	Rockwall, Texas, 75087	CITY, STATE & ZIP	Garland, Texas, 75040
PHONE	(469) 402-2112	PHONE	(972) 494-5031
E-MAIL	sgeiger@rayburnelectric.com	E-MAIL	fapolma@rdelta.com

NOTARY VERIFICATION [REQUIRED]

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED Stephen Geiger [*OWNER*] THE UNDERSIGNED, WHO STATED THE INFORMATION ON THIS APPLICATION TO BE TRUE AND CERTIFIED THE FOLLOWING:

"I HEREBY CERTIFY THAT I AM THE OWNER FOR THE PURPOSE OF THIS APPLICATION; ALL INFORMATION SUBMITTED HEREIN IS TRUE AND CORRECT; AND THE APPLICATION FEE OF $ 2,246.98 *, TO COVER THE COST OF THIS APPLICATION, HAS BEEN PAID TO THE CITY OF ROCKWALL ON THIS THE* 14th *DAY OF* October *, 2022. BY SIGNING THIS APPLICATION, I AGREE THAT THE CITY OF ROCKWALL (I.E. "CITY") IS AUTHORIZED AND PERMITTED TO PROVIDE INFORMATION CONTAINED WITHIN THIS APPLICATION TO THE PUBLIC. THE CITY IS ALSO AUTHORIZED AND PERMITTED TO REPRODUCE ANY COPYRIGHTED INFORMATION SUBMITTED IN CONJUNCTION WITH THIS APPLICATION, IF SUCH REPRODUCTION IS ASSOCIATED OR IN RESPONSE TO A REQUEST FOR PUBLIC INFORMATION."*

GIVEN UNDER MY HAND AND SEAL OF OFFICE ON THIS THE 12 *DAY OF* October *, 2022*

OWNER'S SIGNATURE Stephanie Hunt

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS Stephanie Hunt

STEPHANIE HUNT
Notary Public, State of Texas
Comm. Expires 09-01-2024
Notary ID 11508120

MY COMMISSION EXPIRES

r.delta ENGINEERS

October 14, 2022

City of Rockwall, Texas
385 S. Goliad Street
Rockwall, Texas 75087

ATTENTION: **Mr. Henry Lee, AICP**
Planner

SUBJECT: **REC Campus Expansion – Case #SP2022-041**
Variance Requests

Dear Mr. Lee,

Pursuant to submittal of the project Site Plan and supporting documents and on behalf of Rayburn Country Electric Cooperative (REC); we request consideration of the following requests for variances to the City's development requirements and Unified Development Code (UDC):

- Above Ground Fuel Tank Screening: Subsection 01.05 of the UDC requires screening utilizing walls matching the main structure. The proposed fuel storage tank is internal to the site and not visible from any public right-of-way. We request that this requirement be waived since walls would serve purpose screening the fuel storage tank from public view.
- Mims Road Reconstruction: City Engineering comments on the Preliminary Plat indicate that the Owner must reconstruct Mims Road as a 29-foot wide paving section. REC requests that this requirement be deferred until such time as development of Lot 3. Block A occurs. At this time REC proposes only to connect one access drive to Mims Road. The access drive will be private, gated, and used for property maintenance access purposes.
- Driveway Spacing Variance: A variance to the minimum spacing requirement is requested for the proposed Access Drive connection to State Highway 205. Preliminary discussions with the Texas Department of Transportation indicate they would permit the reduced driveway spacing if the driveway connection is constructed in the "right in" "right out" configuration shown on the Site Plan. The proposed access drive connection to State Highway 205 will be gated and is intended mainly for egress of the REC Mobile Substation.

- Outdoor Storage Area Screening Variance: A partial variance for screening of the proposed gravel laydown yard from SH 205 is requested due to its distance from the roadway. We request that only canopy trees along a portion of the proposed access drive be required to screen the outdoor storage area as shown in the Landscape Plans in lieu of a masonry wall or the full landscape screening.

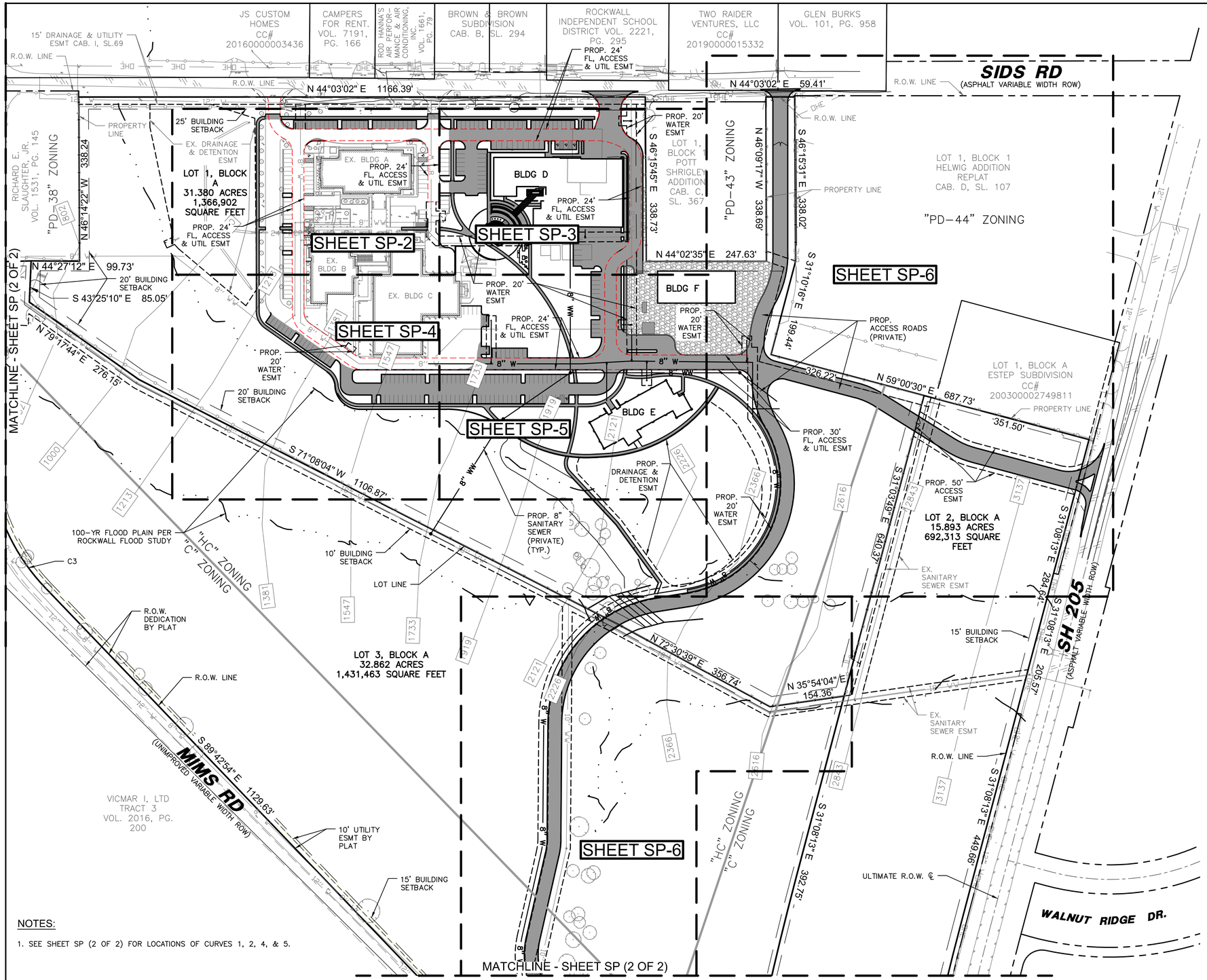
We greatly appreciate your consideration of these variance requests.

Best Regards,

R-DELTA ENGINEERS, INC.
TBPE Firm No. F-001515

Frank A. Polma, P.E.
President

Cc: Mr. Stephen Geiger, P.E. – Rayburn Electric Cooperative



LEGEND

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ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
TPED	EX. TELEPHONE PEDESTAL
WV	EX. WATER VALVE
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CMP	EX. CORRUGATED METAL PIPE
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OHE	EXISTING OVERHEAD ELECTRIC
	EXISTING GUY WIRE
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	EDGE OF ASPHALT
	PROPOSED WROUGHT IRON FENCE
	100-YR FLOOD PLAIN-ROCKWALL
	BFR - CONSTRUCT BARRIER FREE RAMP WITH TRUNCATED DOMED PANELS PER CITY DETAILS. NO EXTRA PAY ITEM FOR MONOLITHIC CURBS.
	ACCESSIBLE AISLE STRIPING
1000	CROSS-SECTION LOCATION- CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT
	PROPOSED GRAVEL SURFACING

GRAPHIC SCALE IN FEET
SCALE: 1" = 100'

EXISTING SITE PARKING DATA

PUBLIC SPACES	ACCESSIBLE SPACES	TOTAL
125	5	130

PROPOSED SITE PARKING DATA

PUBLIC SPACES	ACCESSIBLE SPACES	TOTAL
262	9	271

SITE INFORMATION:

EXISTING ZONING: HEAVY COMMERCIAL (HC), COMMERCIAL (C), & AGRICULTURAL (AG)

PROPOSED ZONING: NO CHANGE

PROPOSED USE: EXPANSION OF EXISTING SITE TO INCLUDE 2 NEW OFFICE BUILDINGS, TRUCK WAREHOUSE, AND LAYDOWN STORAGE WAREHOUSE

TOTAL AREA LOT 1: 1,366,902 SQ FT 31.38 AC
TOTAL AREA LOTS 1-4: 4,146,392 SQ FT 95.19 AC

LOT 1 "HC" ZONING

MAXIMUM BUILDING HEIGHT: 60 FT
MAXIMUM LOT COVERAGE: 60%
MAXIMUM FLOOR AREA RATIO: 4:1
MAXIMUM IMPERVIOUS PARKING: 90-95%

PROPOSED MAX. BUILDING D HEIGHT: 40'
PROPOSED MAX. BUILDING E HEIGHT: 46'-4"
PROPOSED MAX. BUILDING F HEIGHT: 26'-8"
PROPOSED LOT COVERAGE: 106,281/1,366,902 = 7.8%
PROPOSED FLOOR AREA RATIO: 113,260/1,366,902 = 0.08:1
PROPOSED IMPERVIOUS PARKING: 67,476/1,366,902 = 4.9%

EXISTING PARKING:
EXISTING WAREHOUSE 23,520 SQ FT (1:1000) = 24 SPACES
EXISTING OFFICE 31,530 SQ FT (1:300) = 106 SPACES
REMOVED OFFICE 7,700 SQ FT (1:300) = -26 SPACES

EXISTING REQUIRED PARKING = 104 SPACES

REQUIRED PARKING:
PROPOSED WAREHOUSE D 12,750 SQ FT (1:1000) = 13 SPACES
PROPOSED OFFICE D 19,600 SQ FT (1:300) = 66 SPACES
PROPOSED OFFICE E 23,000 SQ FT (1:300) = 77 SPACES
PROPOSED WAREHOUSE F 10,560 SQ FT (1:1000) = 11 SPACES

TOTAL REQUIRED PARKING = 271 SPACES
TOTAL PROVIDED PARKING = 271 SPACES

NOTES:

1. SEE SHEET SP (2 OF 2) FOR LOCATIONS OF CURVES 1, 2, 4, & 5.

BOUNDARY CURVE DATA					
CURVE	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	11°11'01"	5,779.71'	1,128.15'	S 36°43'43" E	1,126.36'
C2	46°17'44"	450.00'	363.60'	N 66°34'02" W	353.79'
C3	36°44'03"	482.50'	309.35'	S 61°47'11" E	304.08'
C4	129°16'42"	40.00'	90.25'	S 23°55'53" W	72.29'
C5	7°41'42"	6,142.03'	824.89'	N 34°59'04" W	824.27'

APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ___ day of _____, 202_.

WITNESS OUR HANDS, this ___ day of _____, 202_.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

PAVEMENT INFORMATION:

ALL PAVEMENTS BELOW HAVE #3 BARS 24" O.C.E.W.

PAVEMENT TYPE	THICKNESS (INCHES)	28-DAY (PSI)	MIN. CEMENT (SACKS/CY) MACHINE	HAND
FIRE LANE	6"	3,600	6.0	6.5
DRIVEWAYS	6"	3,600	6.0	6.5
BARRIER FREE RAMPS	6"	3,600	6.0	6.5
DUMPSTER PADS	7"	3,600	6.0	6.5
SIDEWALKS	4"	3,000	N/A	5.5
PARKING LOT/ DRIVE AISLES	5"	3,000	5.0	5.5

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1-4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

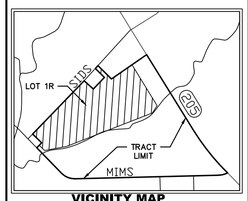
OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
TBPE No. F-1515

Rayburn Electric COOPERATIVE

STATE OF TEXAS
BRIAN PAUL PATRICK
80844
REGISTERED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BRIAN PAUL PATRICK, P.E. 80844 ON 10/14/2022. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.



VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21

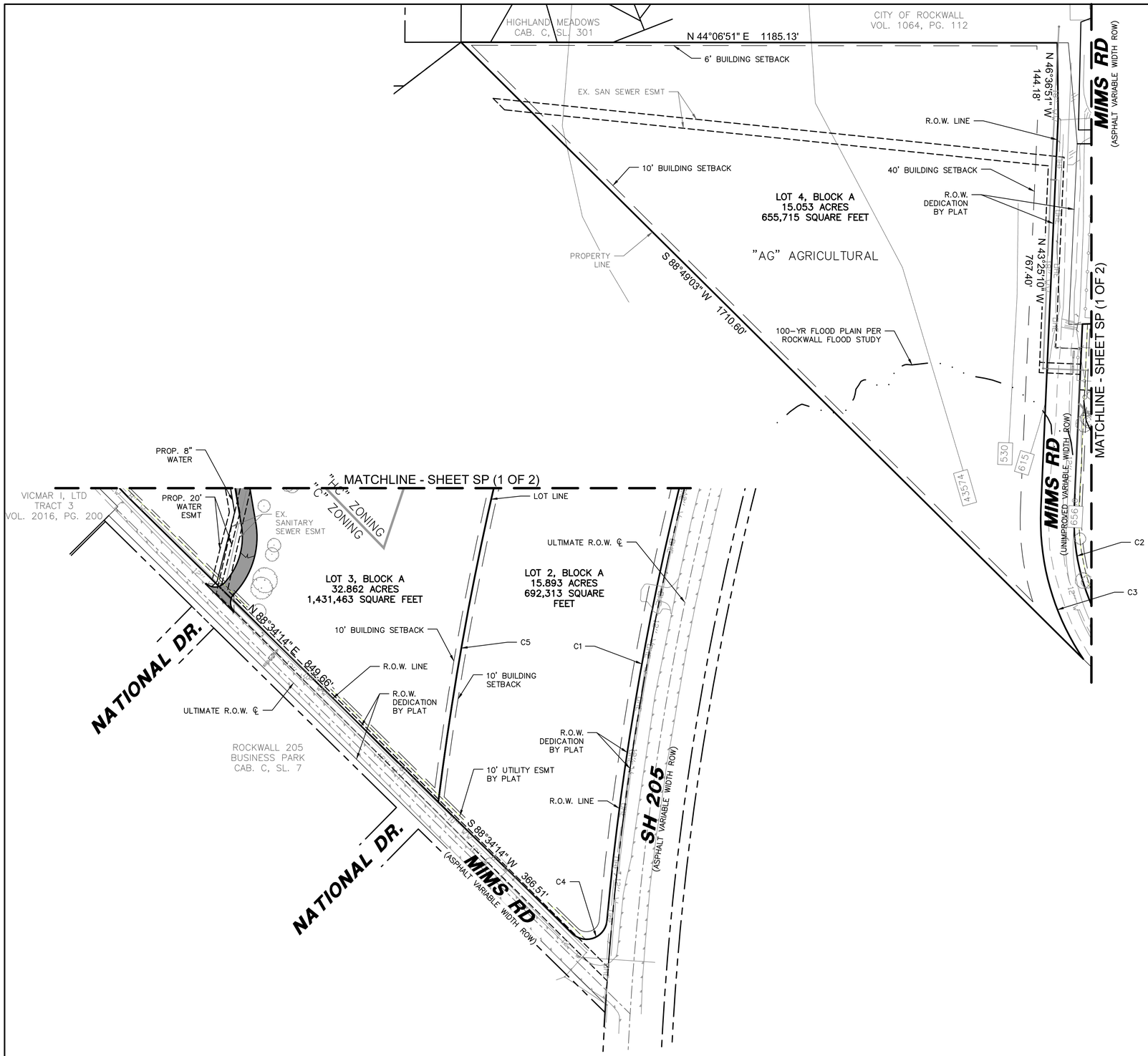
DATE
10/14/2022

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
SITE PLAN

CASE# SP2022-041

SHEET NO.
SP (1 OF 2)



LEGEND

EM	EX. ELECTRIC METER
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	PROPOSED WROUGHT IRON FENCE
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	ACCESSIBLE AISLE STRIPING
1000	CROSS-SECTION LOCATION- CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT

GRAPHIC SCALE IN FEET
SCALE: 1" = 100'

NOTES:

1. SEE SHEET SP (2 OF 2) FOR BOUNDARY CURVE DATA.

SITE INFORMATION:

SEE SP (1 OF 2)

PAVEMENT INFORMATION:

SEE SP (1 OF 2)

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REC CAMPUS ADDITION
LOTS 1-4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
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MCKINNEY, TX 75069

STRUCTURAL ENGINEER
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DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER/ APPLICANT
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950 SIDS ROAD
ROCKWALL, TX 75087
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CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
TBPE No. F-1515

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PROFESSIONAL ENGINEER

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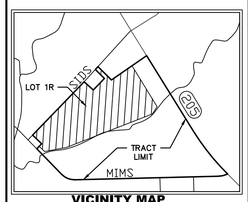

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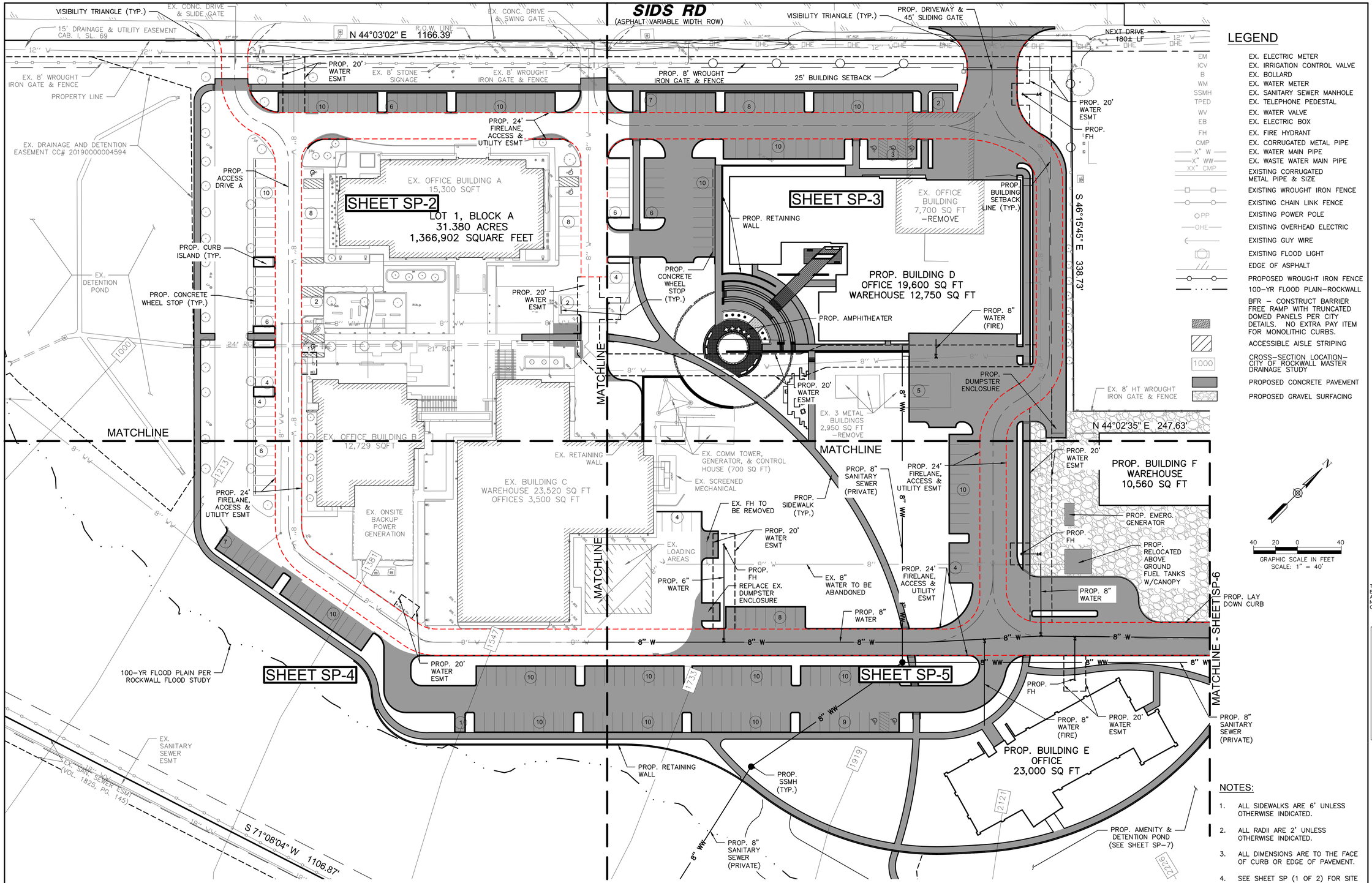
SP (2 OF 2)



LEGEND

- EX. ELECTRIC METER
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- ACCESSIBLE AISLE STRIPING
- CROSS-SECTION LOCATION– CITY OF ROCKWALL MASTER DRAINAGE STUDY
- PROPOSED CONCRETE PAVEMENT
- PROPOSED GRAVEL SURFACING

NOTES:

1. ALL SIDEWALKS ARE 6' UNLESS OTHERWISE INDICATED.
2. ALL RADII ARE 2' UNLESS OTHERWISE INDICATED.
3. ALL DIMENSIONS ARE TO THE FACE OF CURB OR EDGE OF PAVEMENT.
4. SEE SHEET SP (1 OF 2) FOR SITE INFORMATION AND PARKING INFORMATION.

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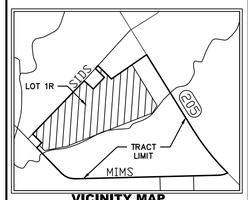

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10/14/2022

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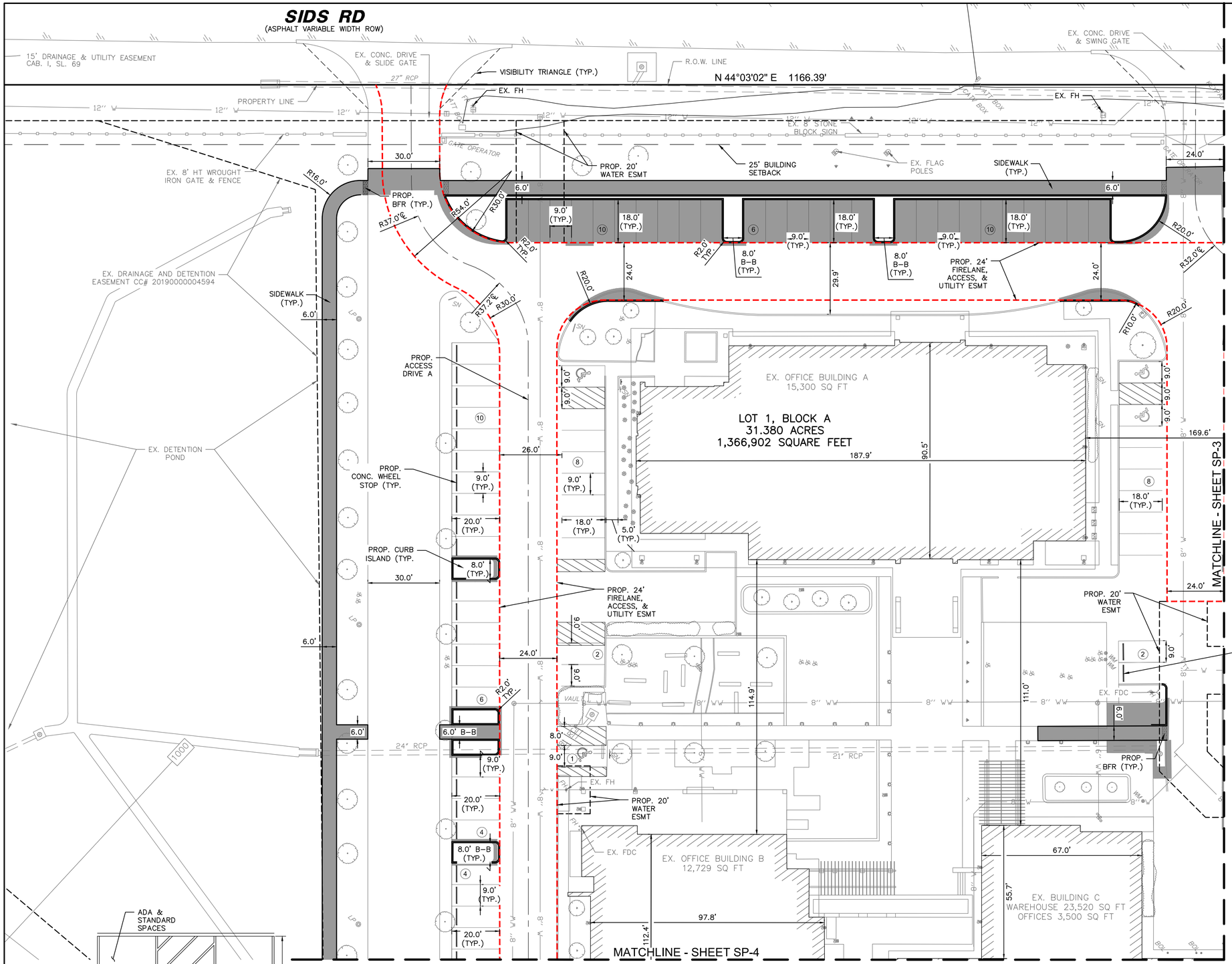
SHEET TITLE
SITE PLAN

CASE# SP2022-041

SHEET NO.
SP-1



GRAPHIC SCALE IN FEET
SCALE: 1" = 20'

LEGEND

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	ACCESSIBLE AISLE STRIPING
1000	CROSS-SECTION LOCATION- CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT

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HKS

ARCHITECT
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LANDSCAPE ARCHITECT
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MCKINNEY, TX 75069

STRUCTURAL ENGINEER
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MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
TBPE No. F-1515

Rayburn Electric COOPERATIVE

STATE OF TEXAS
BRIAN PAUL PATRICK
80844
REGISTERED
PROFESSIONAL ENGINEER

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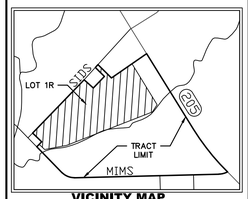


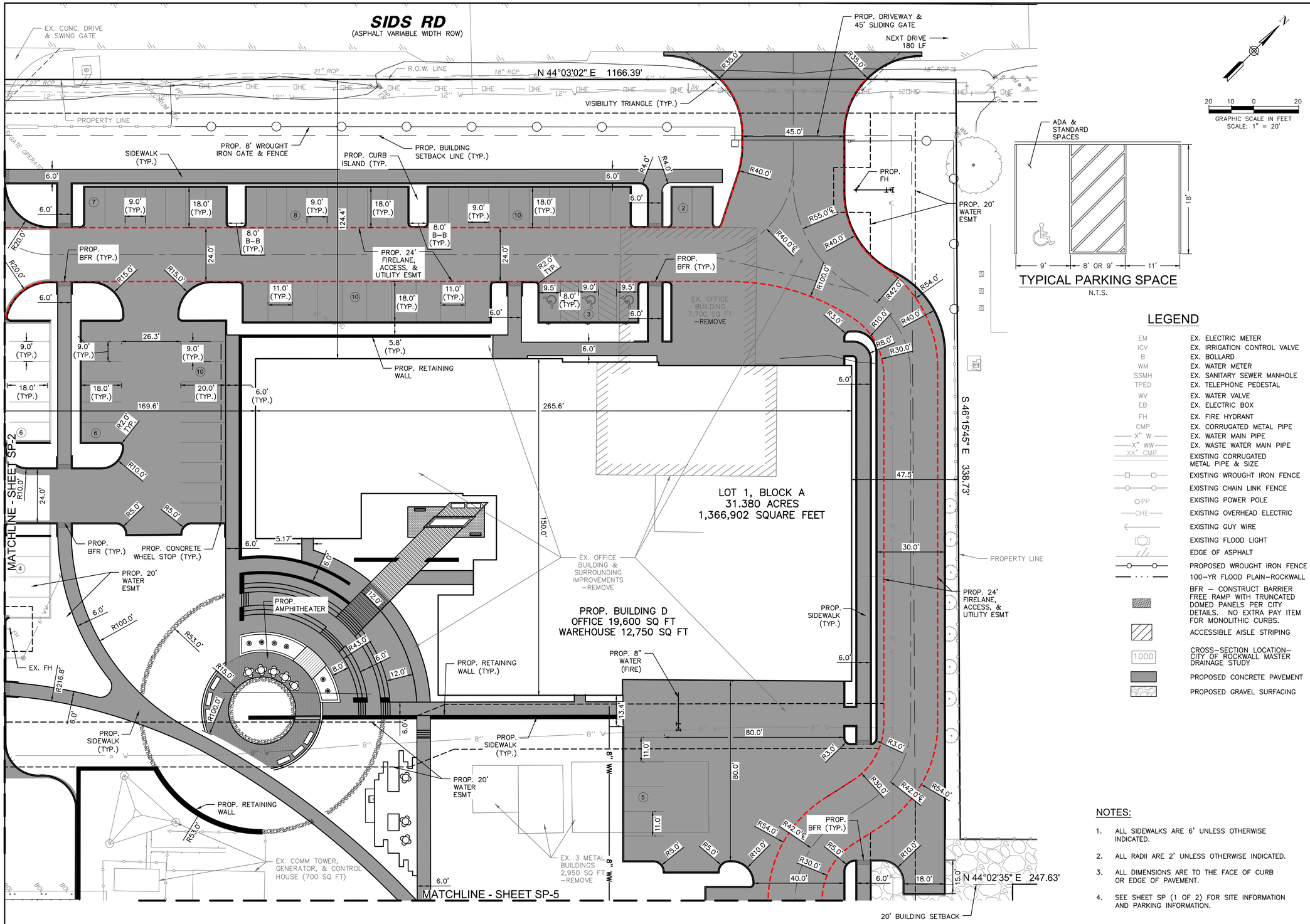
VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21
DATE
10/14/2022
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SITE PLAN
CASE# SP2022-041

SHEET NO.
SP-2



TYPICAL PARKING SPACE
N.T.S.

LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
TPED	EX. TELEPHONE PEDESTAL
WV	EX. WATER VALVE
EB	EX. ELECTRIC BOX
FH	EX. FIRE HYDRANT
CMP	EX. CORRUGATED METAL PIPE
X" W	EX. WATER MAIN PIPE
X" WW	EX. WASTE WATER MAIN PIPE
XX" CMP	EXISTING CORRUGATED METAL PIPE & SIZE
	EXISTING WROUGHT IRON FENCE
	EXISTING CHAIN LINK FENCE
PP	EXISTING POWER POLE
OHE	EXISTING OVERHEAD ELECTRIC
	EXISTING GUY WIRE
	EXISTING FLOOD LIGHT
	EDGE OF ASPHALT
	PROPOSED WROUGHT IRON FENCE
	100–YR FLOOD PLAIN–ROCKWALL
	BFR – CONSTRUCT BARRIER FREE RAMP WITH TRUNCATED DOMED PANELS PER CITY DETAILS. NO EXTRA PAY ITEM FOR MONOLITHIC CURBS.
	ACCESSIBLE AISLE STRIPING
1000	CROSS–SECTION LOCATION– CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT
	PROPOSED GRAVEL SURFACING

NOTES:

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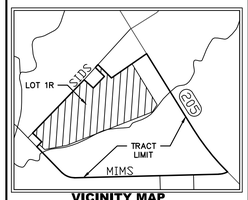

VICINITY MAP
NTS

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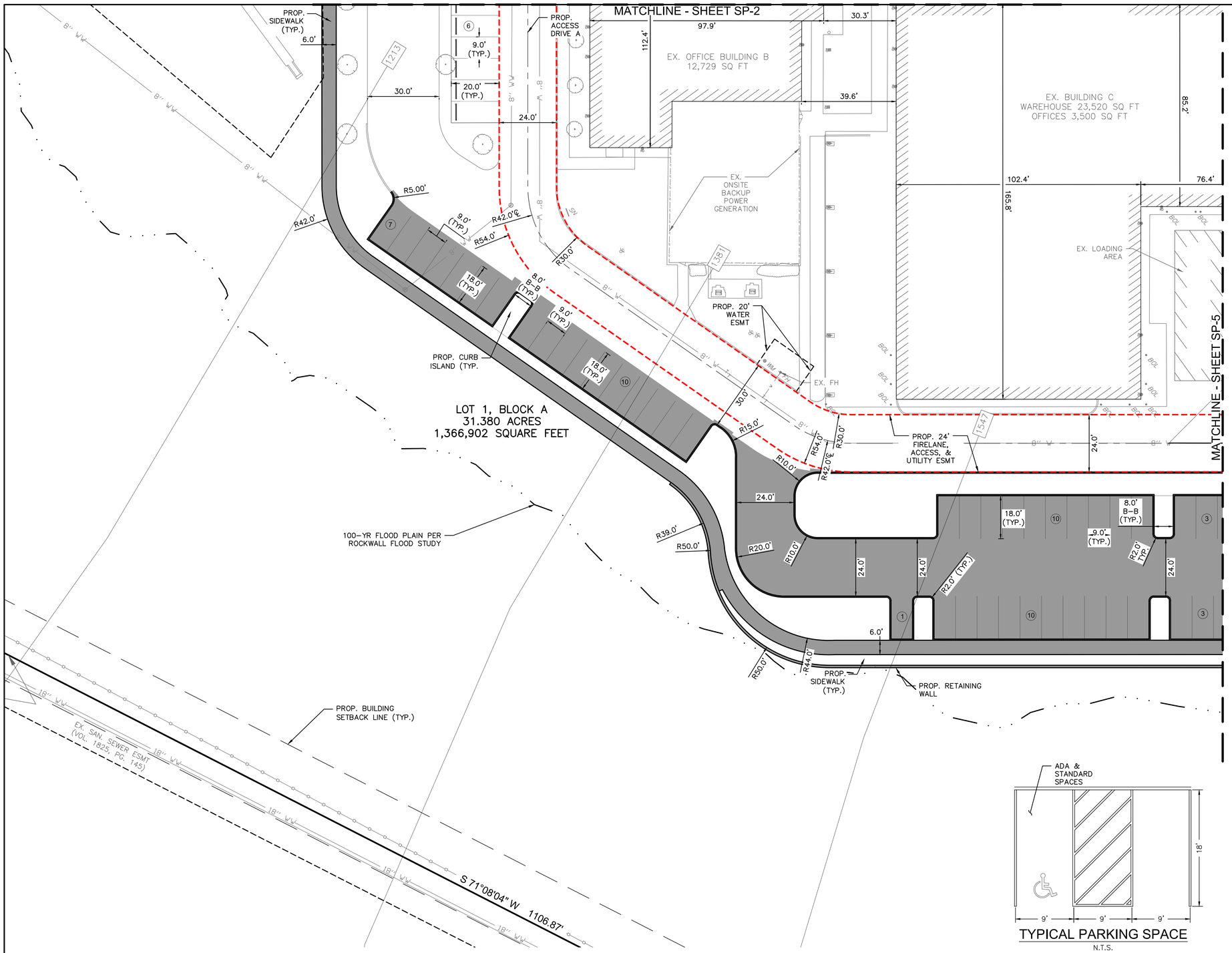
SHEET TITLE
SITE PLAN

CASE# SP2022-041

SHEET NO.
SP-3



LEGEND

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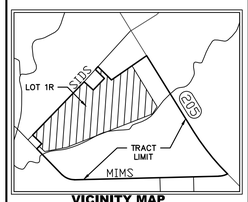

VICINITY MAP
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SITE PLAN
CASE# SP2022-041

SHEET NO.
SP-4

MATCHLINE - SHEET SP-3

MATCHLINE - SHEET SP-4

MATCHLINE - SHEET SP-6

EX. BUILDING C
WAREHOUSE 23,520 SQ FT
OFFICES 3,500 SQ FT

PROP. BUILDING F
WAREHOUSE
10,560 SQ FT

PROP. BUILDING E
OFFICE
23,000 SQ FT

LOT 1, BLOCK A
31.380 ACRES
1,366,902 SQUARE FEET

PROP. ACCESS DRIVE A

PROP. ACCESS DRIVE B

PROP. 24' FIRELANE, ACCESS, & UTILITY ESMT

PROP. 8" SANITARY SEWER (PRIVATE)

PROP. SIDEWALK (TYP.)

SIDEWALK (TYP.)

PROP. CURB ISLAND (TYP.

PROP. OUTSIDE STORAGE

PROP. EMERG. GENERATOR

PROP. 20' WATER ESMT

PROP. RELOCATED ABOVE GROUND FUEL TANKS W/ CANOPY

PROP. FH

EX. 8" WATER TO BE ABANDONED

REPLACE EX. DUMPSTER ENCLOSURE

EX. LOADING AREA

PROP. BFR (TYP.)

PROP. SSMH (TYP.)

PROP. RETAINING WALL

PROP. AMENITY & DETENTION POND (SEE SHEET SP-7)

PROP. DRAINAGE & DETENTION ESMT (SEE SHEET SP-7)

100-YR FLOOD PLAIN PER ROCKWALL FLOOD STUDY

LEGEND

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ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
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	EX. WROUGHT IRON FENCE
	EX. CHAIN LINK FENCE
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	EX. GUY WIRE
	EX. FLOOD LIGHT
	EDGE OF ASPHALT
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GRAPHIC SCALE IN FEET
SCALE: 1" = 20'

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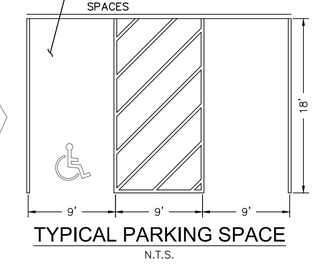

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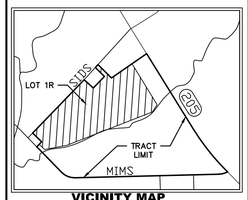

VICINITY MAP
NTS

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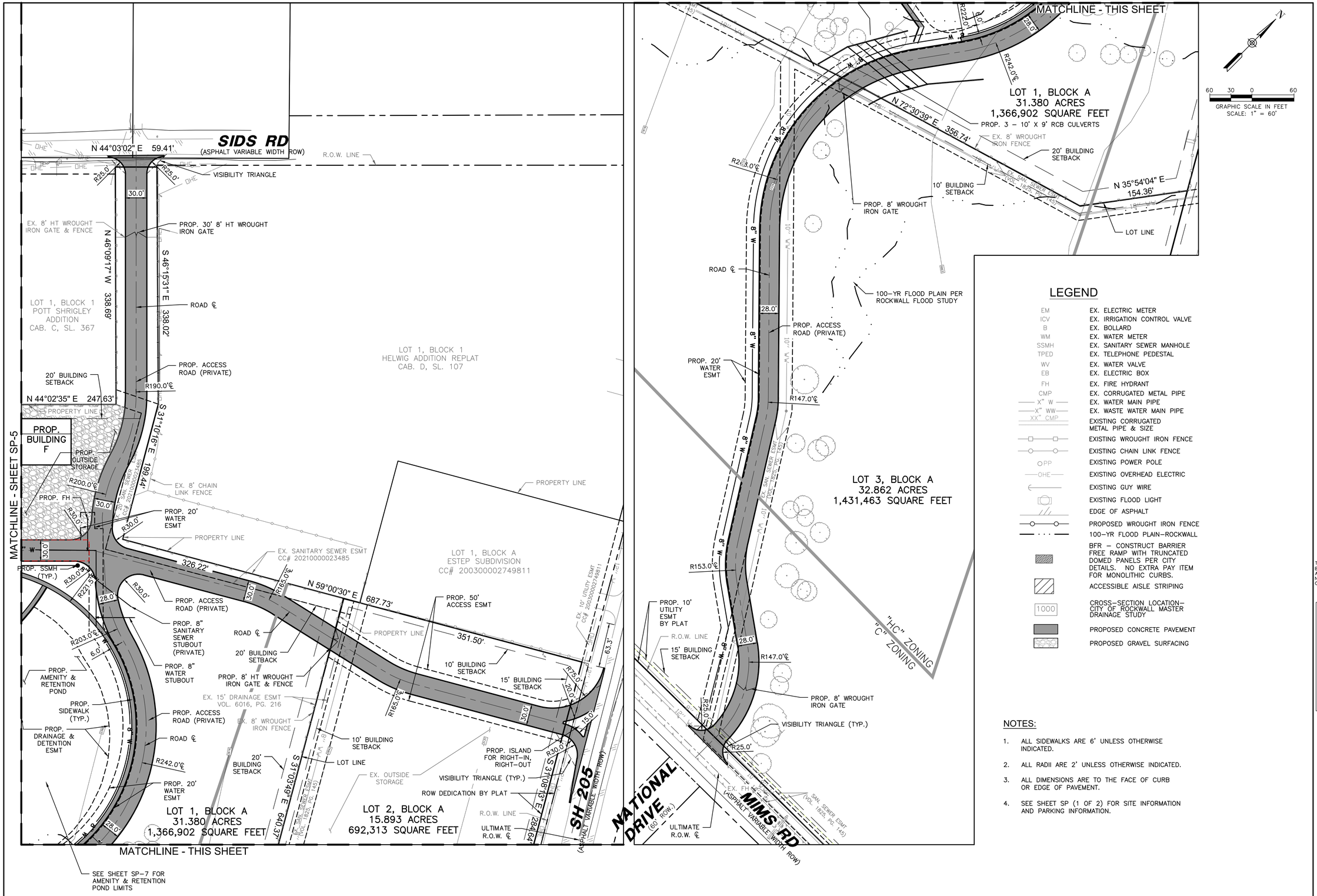
CITY SITE PLAN SUBMITTAL

SHEET TITLE
SITE PLAN

CASE# SP2022-041

SHEET NO.
SP-5



LEGEND

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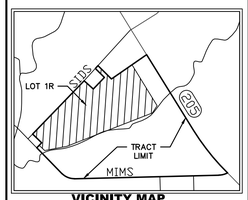

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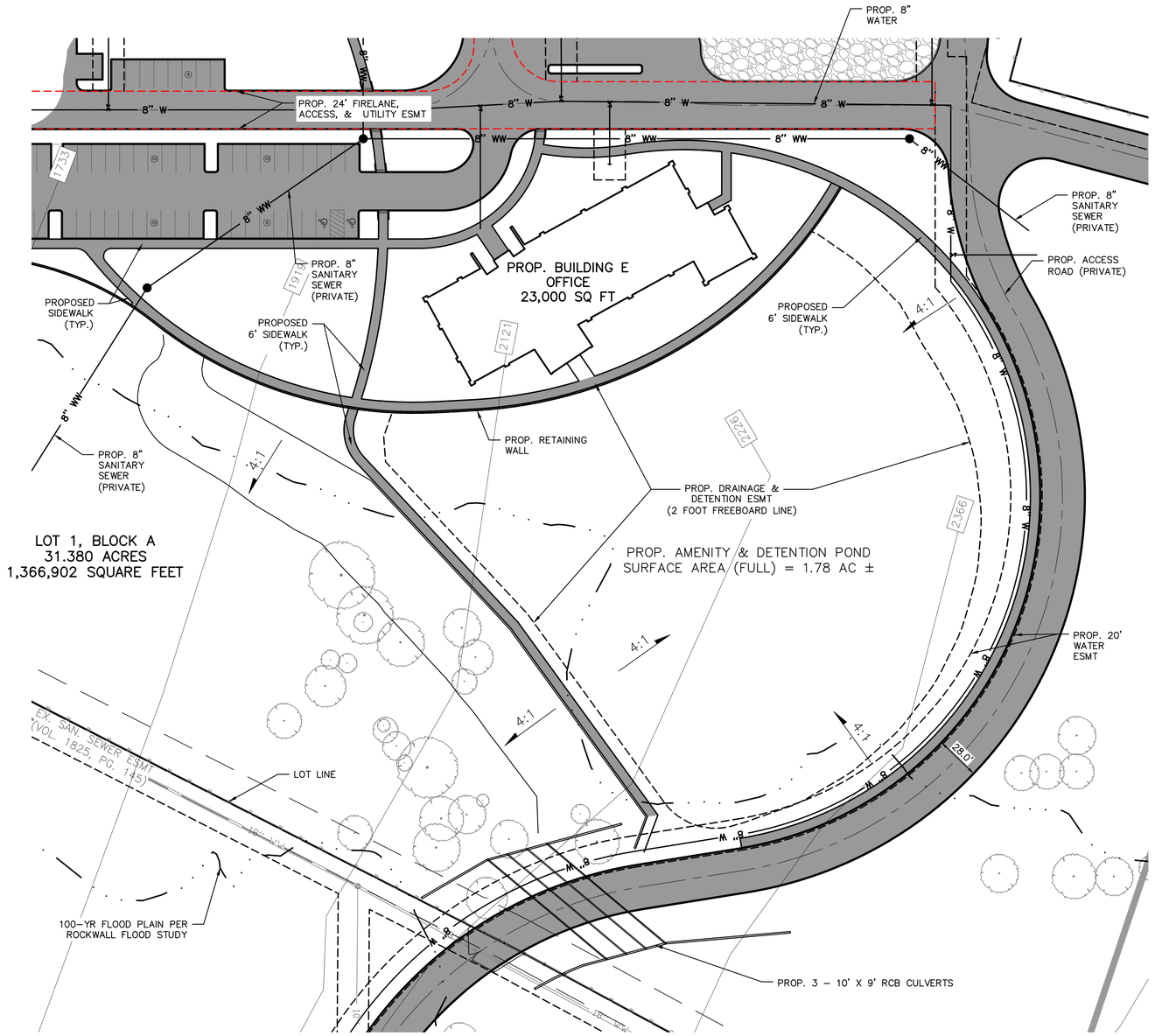
SITE PLAN

CASE# SP2022-041

SHEET NO.
SP-6



40 20 0 40

GRAPHIC SCALE IN FEET
SCALE: 1" = 40'

LEGEND

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ICV	EX. IRRIGATION CONTROL VALVE
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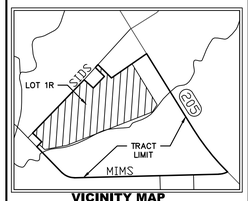

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SITE PLAN
CASE# SP2022-041

SHEET NO.
SP-7

ELEVATION MATERIAL CALCULATIONS

MATERIAL:	AMOUNT (SF):	AMOUNT%:
**NORTH		
PORTLAND CEMENT PLASTER (PCP01)	460	16
WOOD SIDING (WD01)	160	6
STONE VENEER (ST01)	607	21
GLAZING (GL01)	710	24
TILT UP CONCRETE PANELS (PC01)	975	33
TOTAL:	2,912*	100
SOUTH		
PORTLAND CEMENT PLASTER (PCP01)	547	14
WOOD SIDING (WD01)	0	0
STONE VENEER (ST01)	635	16
GLAZING (GL01)	1,374	34
TILT UP CONCRETE PANELS (PC01)	1,457	36
TOTAL:	4,013*	100
EAST		
PORTLAND CEMENT PLASTER (PCP01)	54	1
WOOD SIDING (WD01)	0	0
STONE VENEER (ST01)	120	3
GLAZING (GL01)	475	11
TILT UP CONCRETE PANELS (PC01)	3540	85
TOTAL:	4189	100
WEST		
PORTLAND CEMENT PLASTER (PCP01)	1465	31
WOOD SIDING (WD01)	154	3
STONE VENEER (ST01)	680	14
GLAZING (GL01)	950	19
TILT UP CONCRETE PANELS (PC01)	1,629	33
TOTAL:	4878	100

** Designates elevations adjacent to Public ROW

EXTERIOR MATERIALS LEGEND

ST01:
a. STONE TYPE: LIMESTONE
b. STONE NAME: LEUDERS CHOPPED BUFF
c. GROUT/SEALANT COLOR: MATCH EXISTING
d. LOCATION: EXTERIOR STONE MASONRY VENEER

AMF01:
a. MATERIAL TYPE: ALUMINIUM
b. FINISH TYPE: ANODIZED
c. ANODIZED COLOR: DARK BRONZE
d. COATING COLOR: MATCH EXISTING
e. LOCATION: MULLIONS

AMF02:
a. MATERIAL TYPE: STEEL
b. FINISH TYPE: HIGH-PERFORMANCE ORGANIC FLUOROPOLYMER
c. COATING COLOR: MATCH PT02
d. LOCATION: EXPOSED TRELLIS COLUMNS

AMF03:
a. MATERAL TYPE: STEEL
b. COATING COLOR: MATCH EXISTING ROOF, BERRIDGE PREWEATHERED GALVALUME
c. MATTE FINISH
d. LOCATION: STANDING SEAM METAL ROOF

WD01:
a. SPECIES AND CUT: WESTERN RED CEDAR
b. FINISH: CLEAR MATTE FINISH
c. LOCATION: WOOD BEAM CLADDING. EXTERIOR SOFFITS, INTERIOR CEILINGS AND TRIM.

CSM01:
a. MATERIAL TYPE: CAST STONE
b. COLOR: NATURAL
c. AGGREGATE:
d. EXPOSED TEXTURE FINISH: [SMOOTH] [HONED] [SAND TEXTURE]
e. LOCATION: WAINSCOT SILL @ STONE, PARAPET CAP

PCP01:
a. MATERIAL TYPE: PORTLAND CEMENT PLASTER
b. COLOR: MATCH SW 9111 ANTLER VELVET

PC01:
a. MATERIAL TYPE: TILT UP CONCRETE PANELS
b. COLOR: MATCH SW 9111 ANTLER VELVET

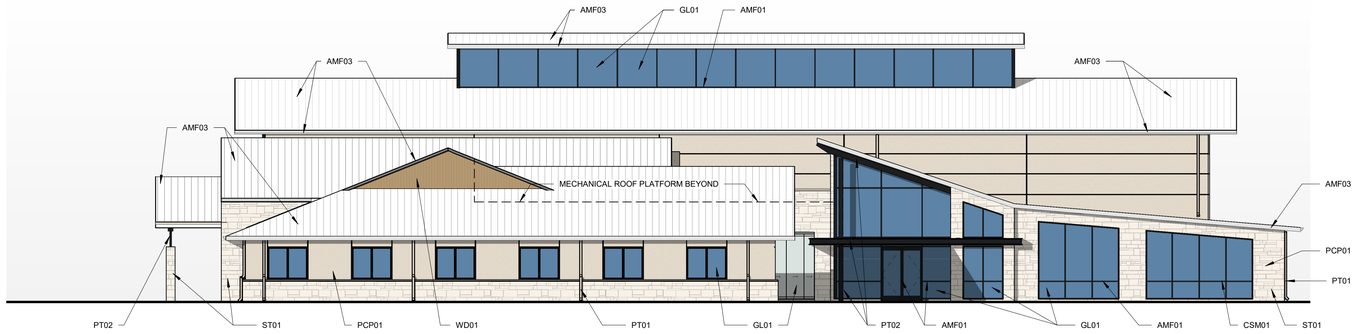
PT01:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: GUTTERS AND DOWNSPOUTS

PT02:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: EXPOSED STRUCTURAL STEEL & ENTRY CANOPIES

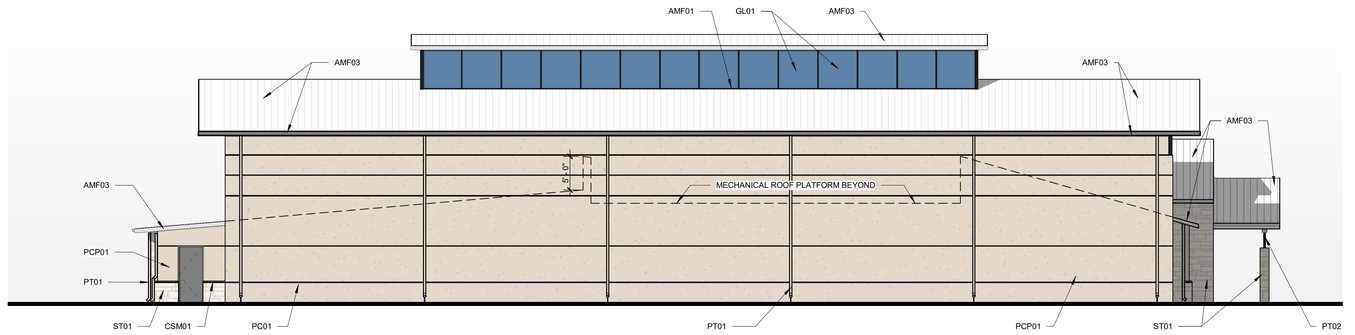
GL01: INSULATING COATED GLASS - VISION
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: CLEAR HS; 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE.
3) AIR SPACE: 1/2"; ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS

GL02: INSULATING COATED GLASS - SPANDREL
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: SPANDREL 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE.
3) AIR SPACE: 1/2"; ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS
COLOR: V908 GRAY

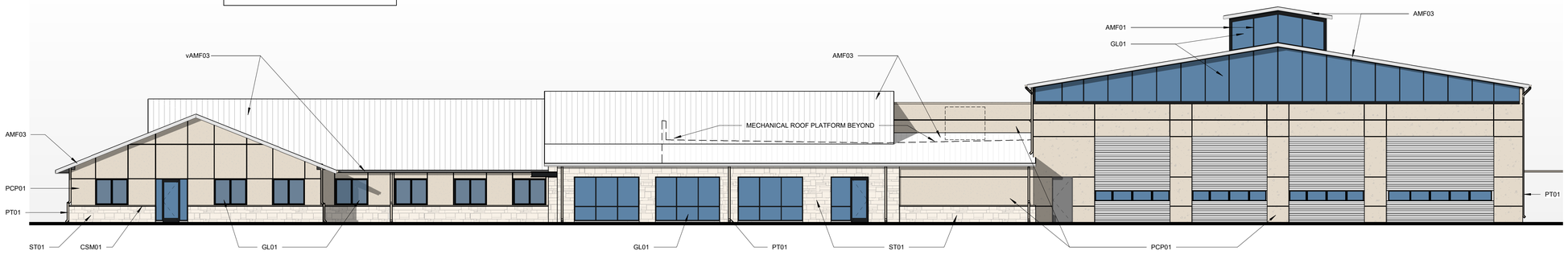
CMU01:
a. MANUFACTURER: FEATHERLITE
b. SPLIT FACE MASONRY BLOCK
c. COLOR: CREAM



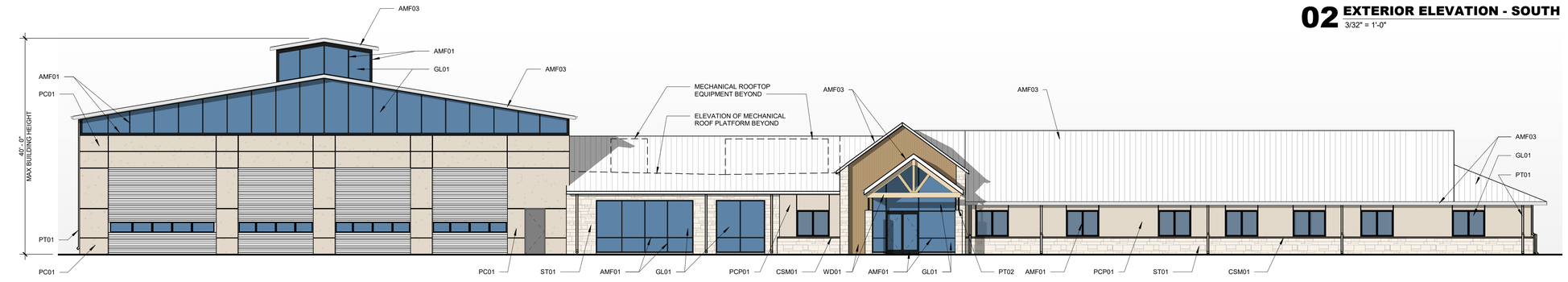
04 EXTERIOR ELEVATION - WEST
3/32" = 1'-0"



03 EXTERIOR ELEVATION - EAST
3/32" = 1'-0"



02 EXTERIOR ELEVATION - SOUTH
3/32" = 1'-0"



01 EXTERIOR ELEVATION - NORTH
3/32" = 1'-0"

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950 SIDS ROAD
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Architect:
Arch. Reg. No.:
Date:

KEY PLAN

REVISION
NO. DESCRIPTION DATE

HKS PROJECT NUMBER
25370.000
DATE
10/14/22
ISSUE

SHEET TITLE
EXTERIOR ELEVATIONS - BUILDING D
SHEET NO.
PA5.01

PLOT DATE: 10/14/2022 12:33:31 PM TEMPLATE VERSION: 21.0.0.20200831

ELEVATION MATERIAL CALCULATIONS

MATERIAL:		AMOUNT (SF):	AMOUNT%:
NORTH			
	PORTLAND CEMENT PLASTER (PCP01)	270	4
	WOOD SIDING (WD01)	180	2
	STONE VENEER (ST01)	2560	34
	GLAZING (GL01)	4366	60
	TOTAL:	7376*	100
SOUTH			
	PORTLAND CEMENT PLASTER (PCP01)	270	4
	WOOD SIDING (WD01)	93	1
	STONE VENEER (ST01)	2473	34
	GLAZING (GL01)	4421	61
	TOTAL:	7257	100
EAST			
	PORTLAND CEMENT PLASTER (PCP01)	110	3
	WOOD SIDING (WD01)	56	2
	STONE VENEER (ST01)	1683	53
	GLAZING (GL01)	1313	42
	TOTAL:	3162	100
WEST			
	PORTLAND CEMENT PLASTER (PCP01)	110	3
	WOOD SIDING (WD01)	56	2
	STONE VENEER (ST01)	1750	55
	GLAZING (GL01)	1273	40
	TOTAL:	3189	100

** Designates elevations adjacent to Public ROW

EXTERIOR MATERIALS LEGEND

ST01:
a. STONE TYPE: LIMESTONE
b. STONE NAME: LEUDERS CHOPPED BUFF
c. GROUT/SEALANT COLOR: MATCH EXISTING
d. LOCATION: EXTERIOR STONE MASONRY VENEER

AMF01:
a. MATERIAL TYPE: ALUMINIUM
b. FINISH TYPE: ANODIZED
c. ANODIZED COLOR: DARK BRONZE
d. COATING COLOR: MATCH EXISTING
e. LOCATION: MULLIONS

AMF02:
a. MATERIAL TYPE: STEEL
b. FINISH TYPE: HIGH-PERFORMANCE ORGANIC FLUOROPOLYMER
c. COATING COLOR: MATCH PT02
d. LOCATION: EXPOSED TRELLIS COLUMNS

AMF03:
a. MATERIAL TYPE: STEEL
b. COATING COLOR: MATCH EXISTING ROOF, BERRIDGE PREWEATHERED GALVALUME
c. MATTE FINISH
d. LOCATION: STANDING SEAM METAL ROOF

WD01:
a. SPECIES AND CUT: WESTERN RED CEDAR
b. FINISH: CLEAR MATTE FINISH
c. LOCATION: WOOD BEAM CLADDING. EXTERIOR SOFFITS, INTERIOR CEILINGS AND TRIM.

CSM01:
a. MATERIAL TYPE: CAST STONE
b. COLOR: NATURAL
c. AGGREGATE:
d. EXPOSED TEXTURE FINISH: [SMOOTH] [HONED] [SAND TEXTURE]
e. LOCATION: WAINSCOT SILL @ STONE, PARAPET CAP

PCP01:
a. MATERIAL TYPE: PORTLAND CEMENT PLASTER
b. COLOR: MATCH SW 9111 ANTLER VELVET

PC01:
a. MATERIAL TYPE: TILT UP CONCRETE PANELS
b. COLOR: MATCH SW 9111 ANTLER VELVET

PT01:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: GUTTERS AND DOWNSPOUTS

PT02:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: EXPOSED STRUCTURAL STEEL & ENTRY CANOPIES

GL01: INSULATING COATED GLASS - VISION
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: CLEAR HS; 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE
3) AIR SPACE: 1/2"; ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS

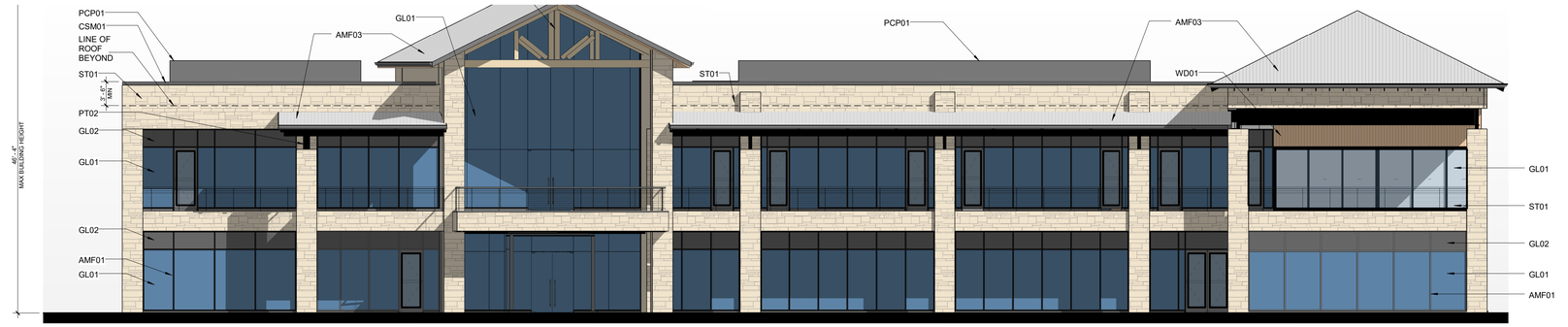
GL02: INSULATING COATED GLASS - SPANDREL
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: SPANDREL 1/4" THICK GLASS WITH COATING NO.2 SURFACE
3) AIR SPACE: 1/2"; ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS
COLOR: V908 GRAY

CMU01:
a. MANUFACTURER: FEATHERLITE
b. SPLIT FACE MASONRY BLOCK
c. COLOR: CREAM

04 EXTERIOR ELEVATION - WEST SD
1/8" = 1'-0"

03 EXTERIOR ELEVATION - EAST SD
1/8" = 1'-0"

02 EXTERIOR ELEVATION - NORTH SD
1/8" = 1'-0



01 EXTERIOR ELEVATION - SOUTH SD
1/8" = 1'-0"

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Arch. Reg. No.: _____
Date: _____

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000

DATE
10/14/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
EXTERIOR ELEVATIONS - BUILDING E

SHEET NO.
PA5.02

VVVVPLOT DATE:
TEMPLATE VERSION:

ELEVATION MATERIAL CALCULATIONS

MATERIAL:	AMOUNT (SF):	AMOUNT%:
**NORTH		
CMU SPLIT FACE (CMU01)	2720	100
TOTAL:	2,720*	100
SOUTH		
ALL OPEN		
EAST		
CMU SPLIT FACE (CMU01)	1394	100
TOTAL:	1394	100
WEST		
CMU SPLIT FACE (CMU01)	1394	100
TOTAL:	1394	100

** Designates elevations adjacent to Public ROW

EXTERIOR MATERIALS LEGEND

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b. STONE NAME: LEUDERS CHOPPED BUFF
c. GROUT/SEALANT COLOR: MATCH EXISTING
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b. FINISH: CLEAR MATTE FINISH
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a. MATERIAL TYPE: CAST STONE
b. COLOR: NATURAL
c. AGGREGATE:
d. EXPOSED TEXTURE FINISH: [SMOOTH] [HONED] [SAND TEXTURE]
e. LOCATION: WAINSCOT SILL @ STONE, PARAPET CAP

PCP01:
a. MATERIAL TYPE: PORTLAND CEMENT PLASTER
b. COLOR: MATCH SW 9111 ANTLER VELVET

PC01:
a. MATERIAL TYPE: TILT UP CONCRETE PANELS
b. COLOR: MATCH SW 9111 ANTLER VELVET

PT01:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: GUTTERS AND DOWNSPOUTS

PT02:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
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e. LOCATION: EXPOSED STRUCTURAL STEEL & ENTRY CANOPIES

GL01: INSULATING COATED GLASS - VISION
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3) AIR SPACE: 1/2", ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS

GL02: INSULATING COATED GLASS - SPANDREL
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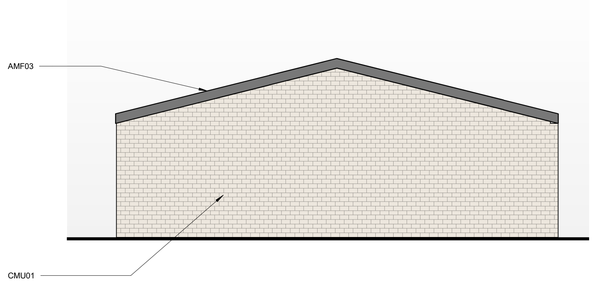
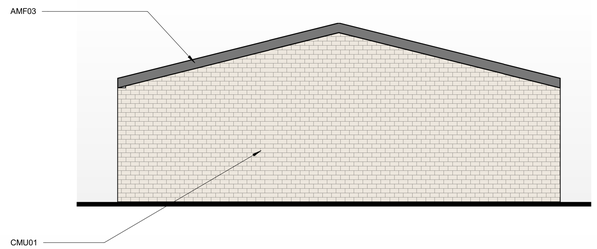
2) OUTBOARD LITE: SPANDREL 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE.
3) AIR SPACE: 1/2", ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS COLOR: V908 GRAY

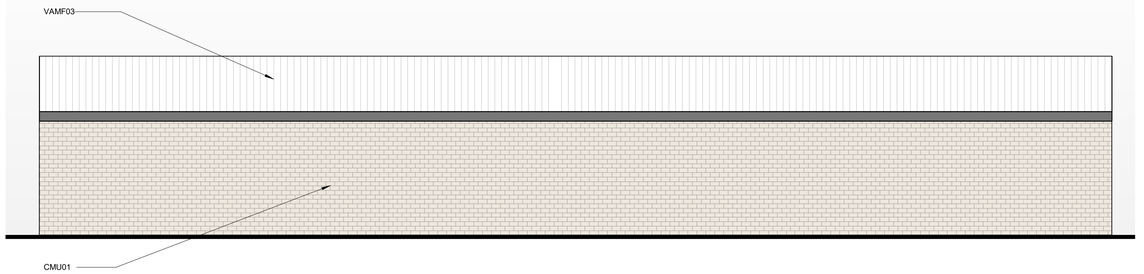
CMU01:
a. MANUFACTURER: FEATHERLITE
b. SPLIT FACE MASONRY BLOCK
c. COLOR: CREAM



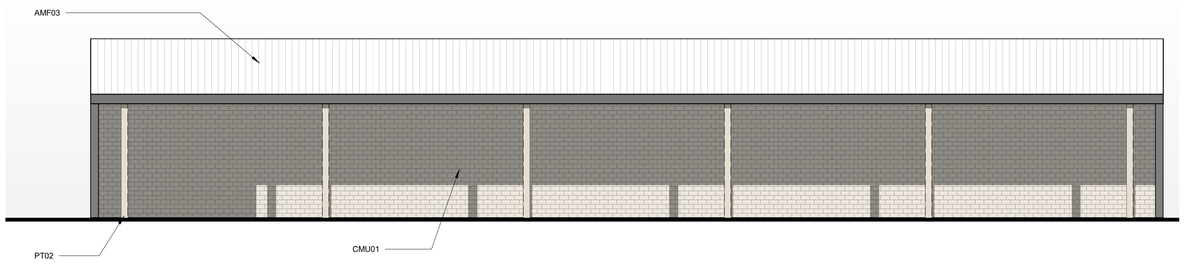
04 EXTERIOR ELEVATION - BUILDING F EAST
3/32" = 1'-0"



03 EXTERIOR ELEVATION - BUILDING F WEST
3/32" = 1'-0"



02 EXTERIOR ELEVATION - BUILDING F NORTH
3/32" = 1'-0"



01 EXTERIOR ELEVATION - BUILDING F SOUTH
3/32" = 1'-0"

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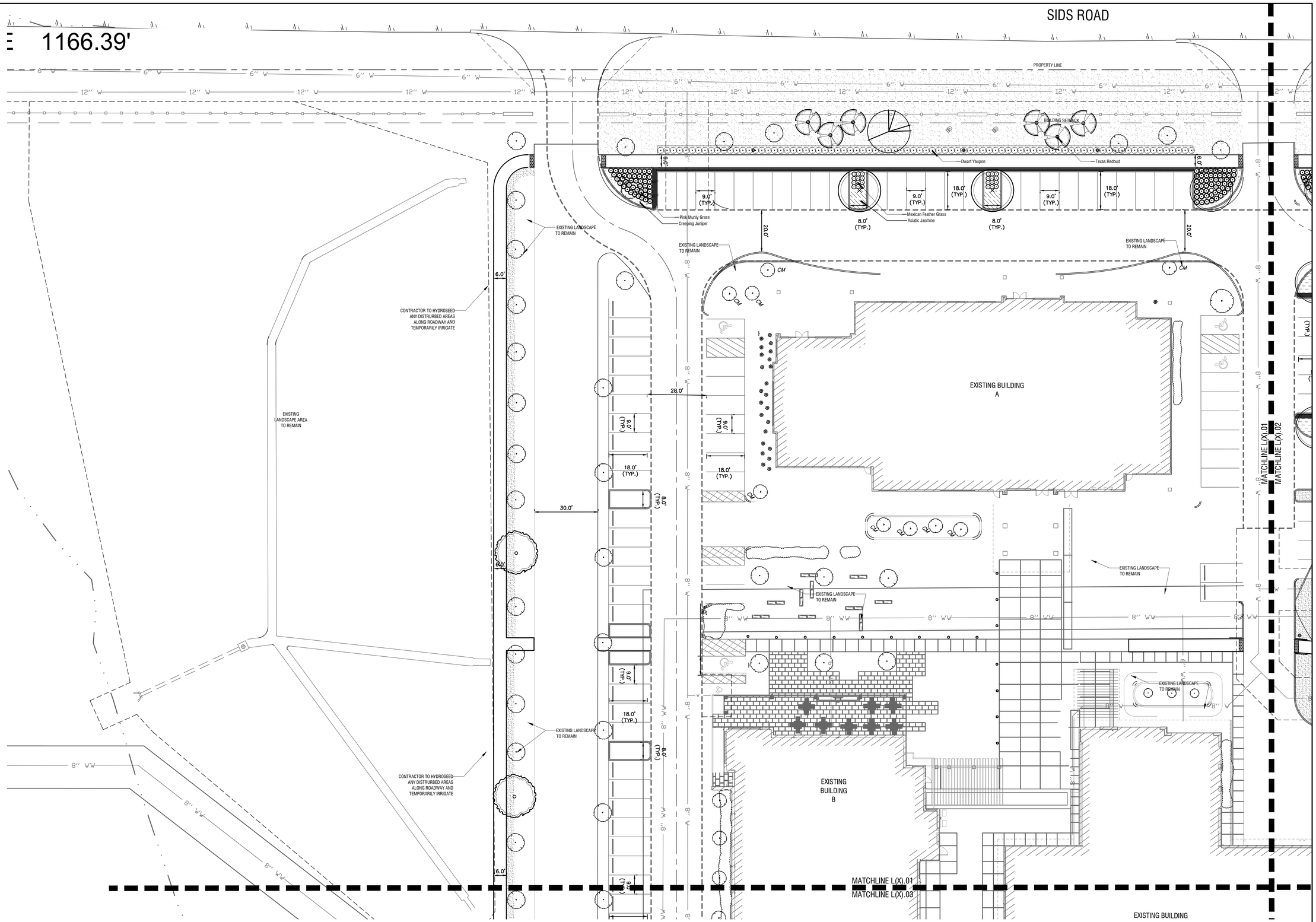
KEY PLAN

REVISION
NO. DESCRIPTION DATE

HKS PROJECT NUMBER
25370.000
DATE
10/14/2022
ISSUE

SHEET TITLE
EXTERIOR ELEVATIONS - BUILDING F
SHEET NO.
PA5.03

PLOT DATE: 10/14/2022 7:55:59 PM TEMPLATE VERSION: 21.0.0.20200831



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L.A. No. 3480 Date 10/14/2022

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NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
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10/14/22

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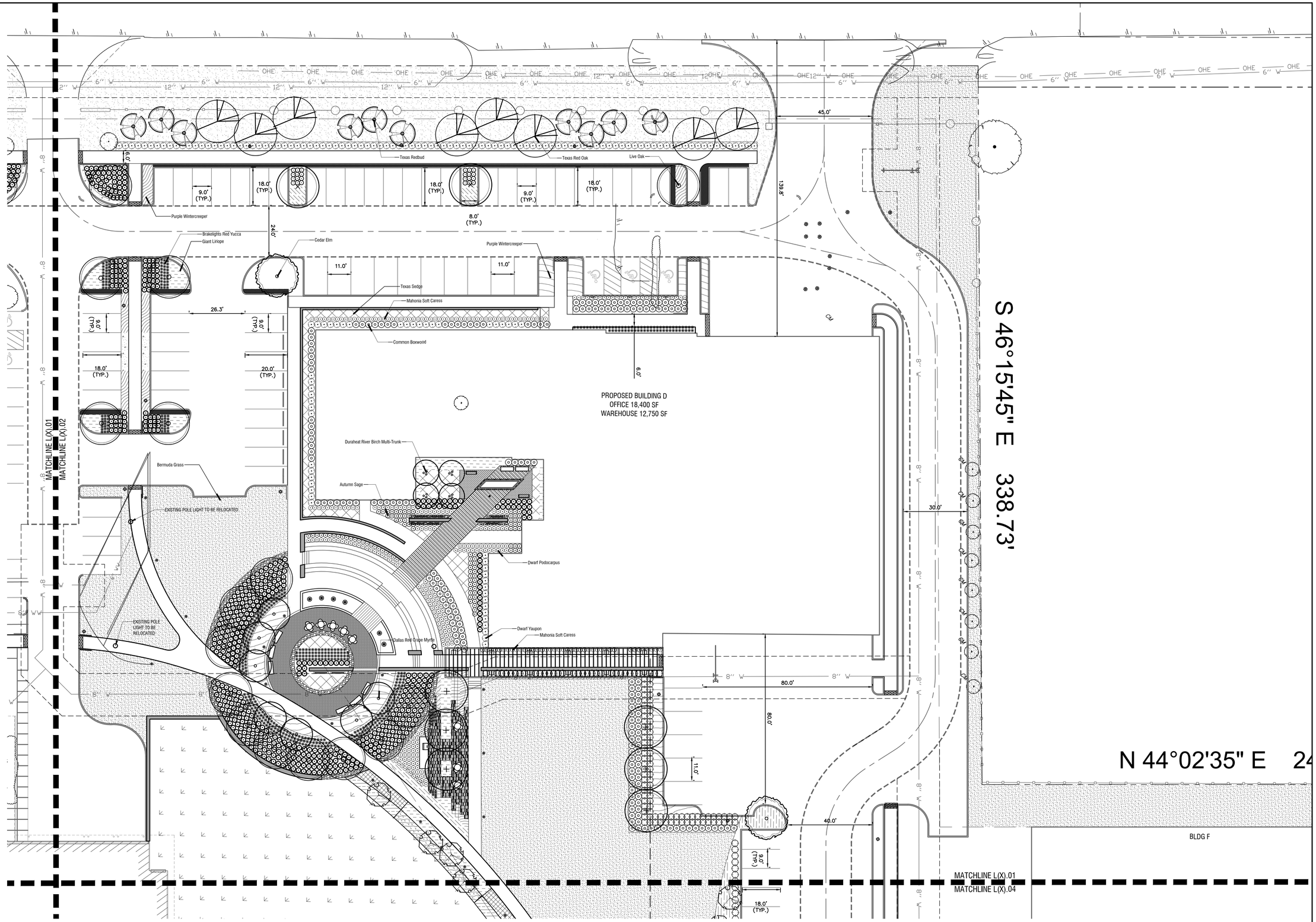
CITY SITE PLAN SUBMITTAL

SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L5.01



Landscape Plan
Scale: 1" = 20' - 0"

A

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25370.000

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CITY SITE PLAN SUBMITTAL

SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L5.02

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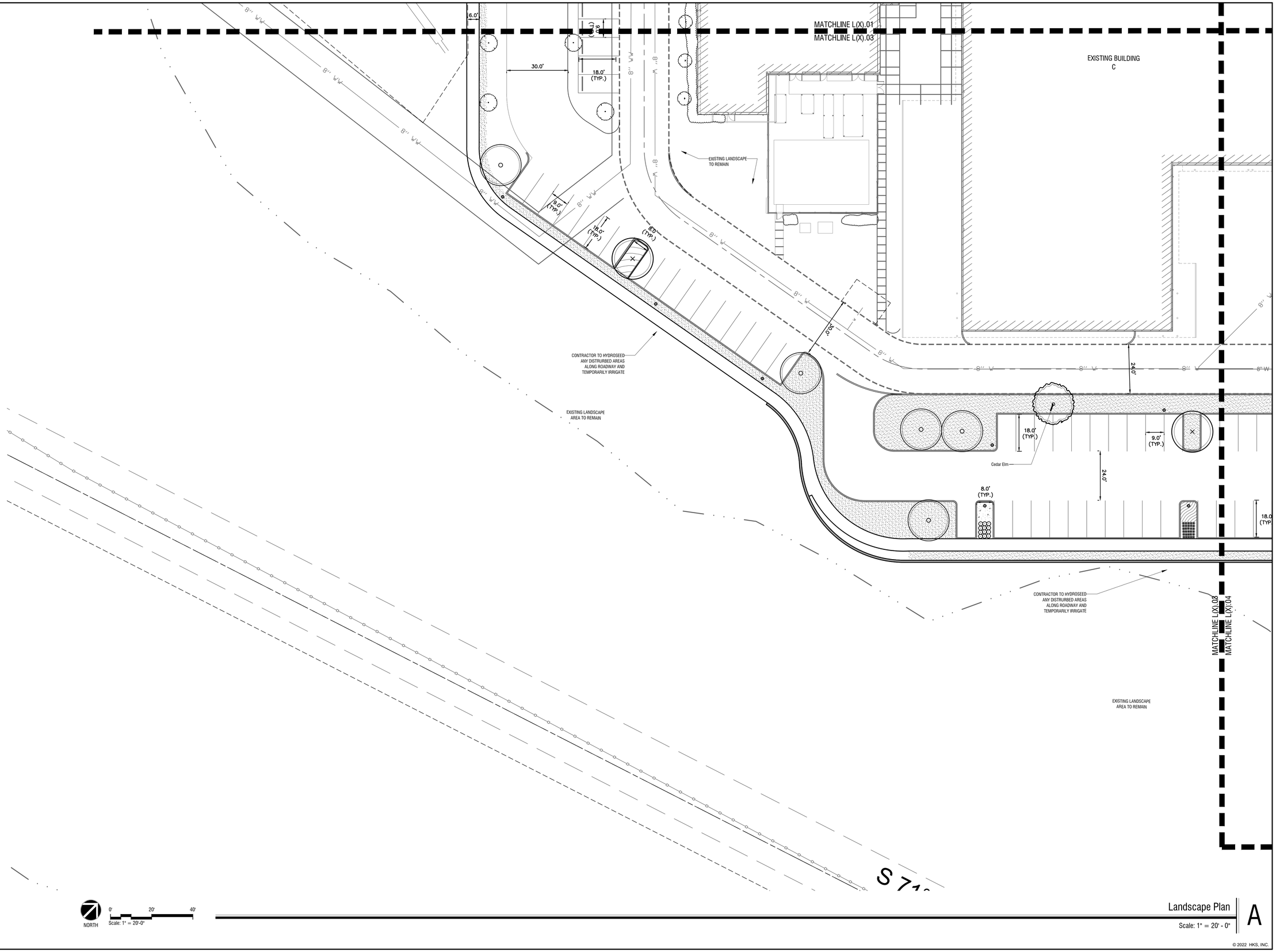
TEMPLATE VERSION:



NORTH

0' 20' 40'

Scale: 1" = 20'-0"

Landscape Plan

Scale: 1" = 20' - 0"

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PLOT DATE:

TEMPLATE VERSION:

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ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L5.03

MATCHLINE L(X).01
MATCHLINE L(X).04

18.0' (TYP.)
9.0' (TYP.)
18.0' (TYP.)
Lacebark Elm
8" W
EXISTING POLE LIGHT TO BE RELOCATED
9.0' (TYP.)
18.0' (TYP.)
11.0'
Purple Wintercreeper
24.0'
35.0'
8.0' (TYP.)
18.0' (TYP.)
9.0' (TYP.)
Yaupon Holly
Fountain Grass
Mexican Feather Grass
Littoral Planting Upland Mix
PROPOSED BUILDING E
31,350 SF (OFFICE)
Little Gem Dwarf Southern Magnolia
CONTRACTOR TO HYDROSEED ANY DISTURBED AREAS ALONG ROADWAY AND TEMPORARILY IRRIGATE
Littoral Planting Upland Mix
PROPOSED DETENTION POND

MATCHLINE L(X).03
MATCHLINE L(X).04
MATCHLINE L(X).04
MATCHLINE L(X).05
MATCHLINE L(X).04
MATCHLINE L(X).06

NORTH
0' 20' 40'
Scale: 1" = 20'-0"

Landscape Plan
Scale: 1" = 20' - 0"
A

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PLOT DATE:
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LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
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SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

RayburnElectric COOPERATIVE

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Kimley»Horn
P.L.A. LANDON R. HUCKINS
L.A. No. 3480 Date 10/14/2022

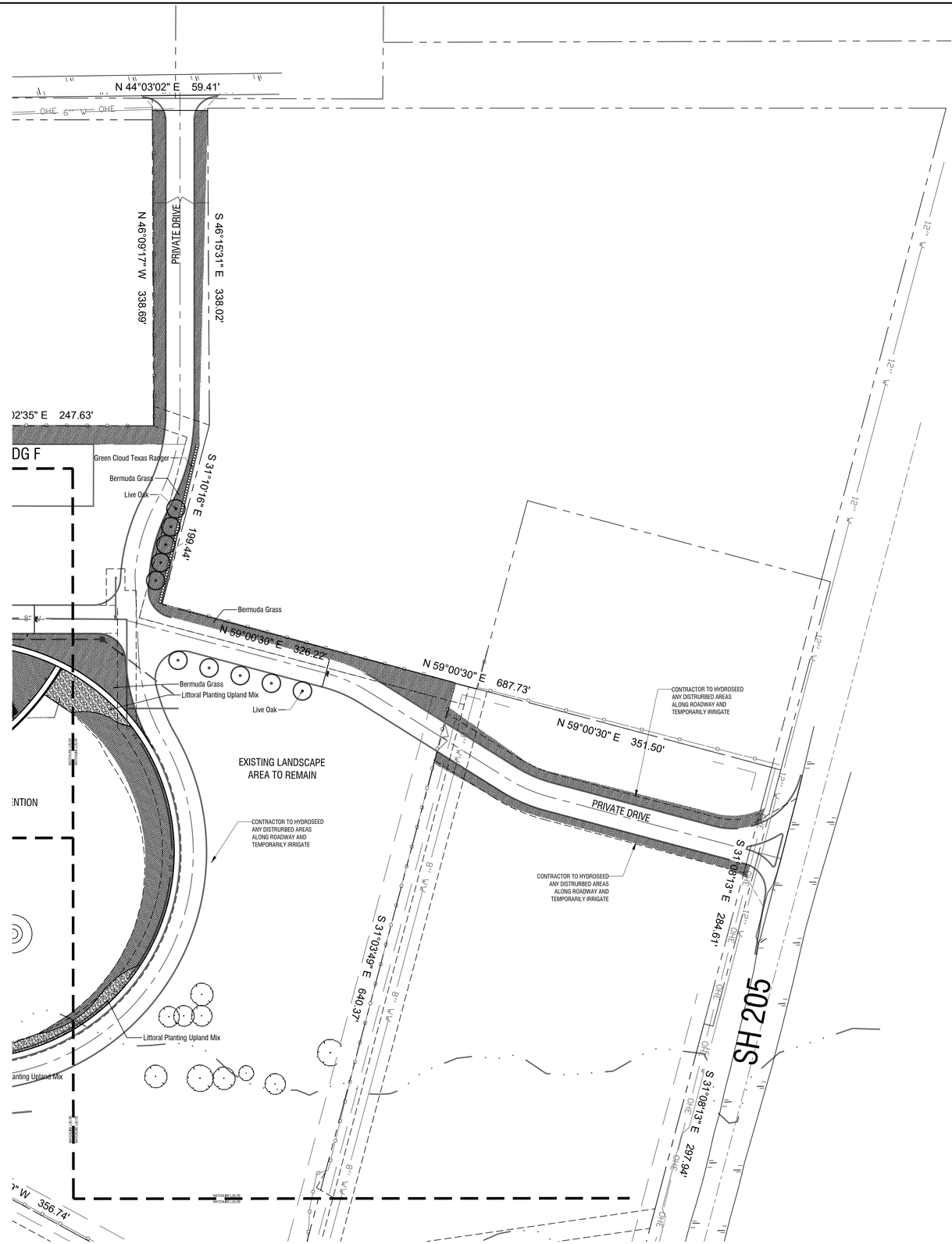
KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000
DATE
10/14/22
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L5.04



NORTH

0' 60' 120'

Scale: 1" = 60'-0"

Landscape Plan

Scale: 1" = 60' - 0"

A

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PLOT DATE:

TEMPLATE VERSION:

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HKS PROJECT NUMBER
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DATE
10/14/22

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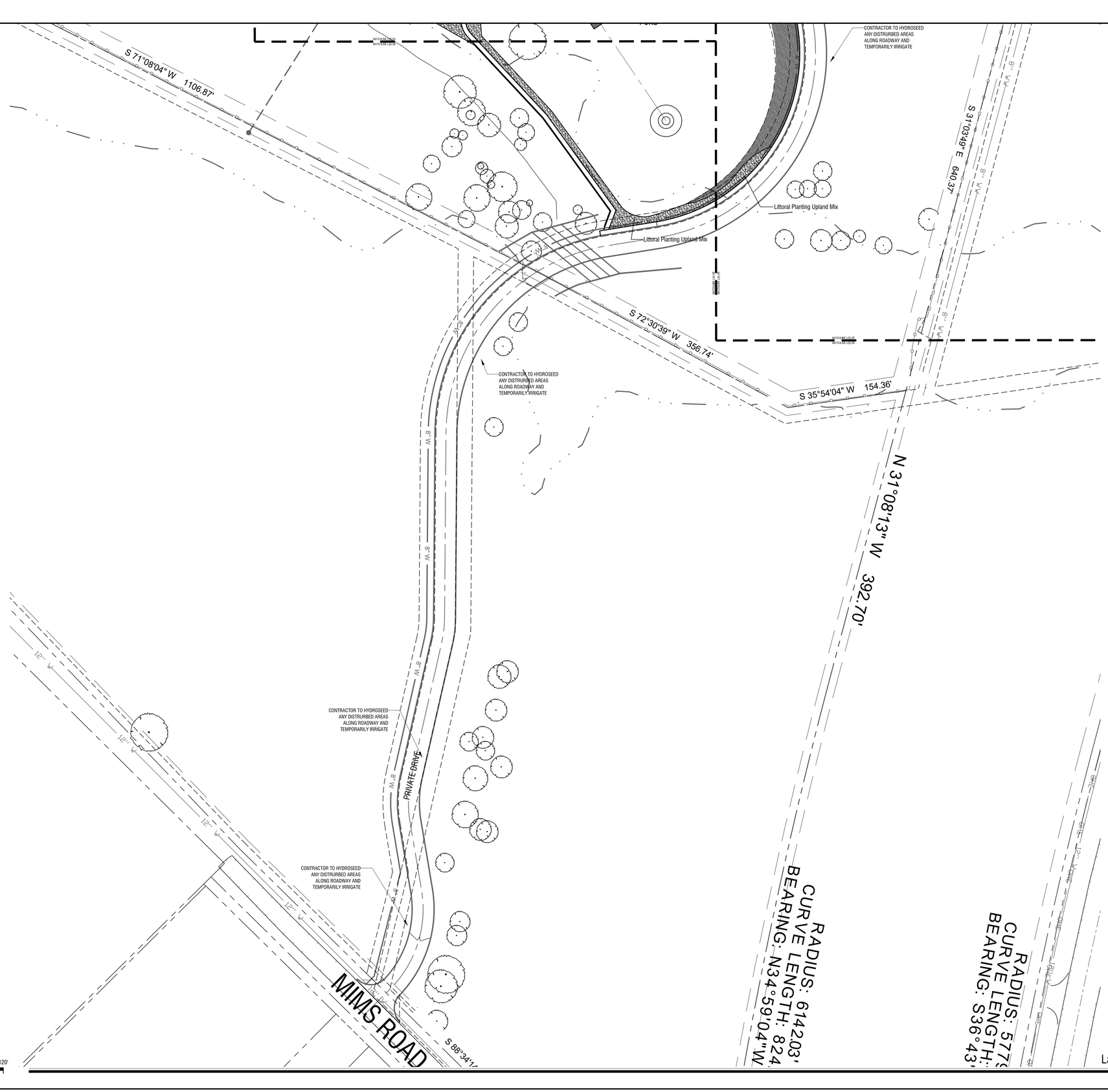
SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L5.05



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L.A. No. 3480 Date 10/14/2022

KEY PLAN

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NO.	DESCRIPTION	DATE

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DATE
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ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L5.06

Rayburn Co-Op - Rockwall Code Calculations Chart		
Site Data	**AC**	**SF**
Total Site Area	31.38	1,366,902
Surface Parking Spaces	271	
Site Landscape Area	**Required (% / SF)**	**Provided (% / SF)**
15% of site to be landscaped (Heavy Commercial zoning district)*	15%	16%
**includes Existing Landscape Area to Remain*	205,035	214,086
Street Frontage	**Required**	**Provided**
Sids Road - 832 LF(773 LF Frontage + 59.41 LF of Drive connection)		
10' Buffer	YES	YES
1 Canopy Tree/ 50 LF (Min. 4" Cal.)	17	17 (8 Existing)
1 Accent Tree/ 50LF (4' ht. Min.)	17	17
Continuous row of shrubs (min. 30" ht.- 3 Gal.)	YES	YES
SH 205 - Drive connection 200LF		
1 Canopy Tree/ 50 LF (Min. 4" Cal.)	N/A	N/A
Mims Road - Drive connection 76 LF		
1 Canopy Tree/ 50 LF (Min. 4" Cal.)	N/A	N/A
Parking Lot	**Required**	**Provided**
1 Large Canopy Tree/ 10 parking spaces	27	35
One tree within 80' of each parking space	YES	YES
Headlight Screening (min. 2' ht. berm with evergreen shrubs)	YES	YES
Total Trees	**Required**	**Provided**
Total Canopy Trees		74
Total Trees Existing		33
Total Trees		148

EXISTING SITE PARKING DATA

PUBLIC SPACES	ACCESSIBLE SPACES	TOTAL
125	5	130

PROPOSED SITE PARKING DATA

PUBLIC SPACES	ACCESSIBLE SPACES	TOTAL
262	9	271

SITE INFORMATION:

EXISTING ZONING: HEAVY COMMERCIAL (HC), COMMERCIAL (C), & AGRICULTURAL (AG)

PROPOSED ZONING: NO CHANGE

PROPOSE USE: EXPANSION OF EXISTING SITE TO INCLUDE 2 NEW OFFICE BUILDINGS, TRUCK WAREHOUSE, AND LAYDOWN STORAGE WAREHOUSE

TOTAL AREA LOT 1: 1,366,902 SQ FT 31.38 AC
TOTAL AREA LOTS 1–4: 4,146,392 SQ FT 95.19 AC

LOT 1 "HC" ZONING

MAXIMUM BUILDING HEIGHT: 60 FT
MAXIMUM LOT COVERAGE: 60%
MAXIMUM FLOOR AREA RATIO: 4:1
MAXIMUM IMPERVIOUS PARKING: 90–95%

PROPOSED MAX. BUILDING HEIGHT: 40 FT (BUILDING D)
PROPOSED LOT COVERAGE: 106,281/1,366,902 = 7.8%
PROPOSED FLOOR AREA RATIO: 113,260/1,366,902 = 0.08:1
PROPOSED IMPERVIOUS PARKING: 67,476/1,366,902 = 4.9%

EXISTING PARKING:
EXISTING WAREHOUSE 23,520 SQ FT (1:1000) = 24 SPACES
EXISTING OFFICE 31,530 SQ FT (1:300) = 106 SPACES
REMOVED OFFICE 7,700 SQ FT (1:300) = –26 SPACES

EXISTING REQUIRED PARKING = 104 SPACES

REQUIRED PARKING:
PROPOSED WAREHOUSE D 12,750 SQ FT (1:1000) = 13 SPACES
PROPOSED OFFICE D 19,600 SQ FT (1:300) = 66 SPACES
PROPOSED OFFICE E 23,000 SQ FT (1:300) = 77 SPACES
PROPOSED WAREHOUSE F 10,560 SQ FT (1:1000) = 11 SPACES

TOTAL REQUIRED PARKING = 271 SPACES
TOTAL PROVIDED PARKING = 271 SPACES

PLANT SCHEDULE

TREES	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	QTY	REMARKS
	Cedar Elm / Ulmus crassifolia	4" cal	12`-14`	As Shown	13	B&B, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, STRONG CENTRAL LEADER
	Duraheat River Birch Multi-Trunk / Betula nigra `Duraheat`	65 gal	10`-12` ht		11	CONTAINER, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, MULTI-TRUNK (3-5 TRUNKS)
	Lacebark Elm / Ulmus parvifolia	4" cal	14`-16`	As Shown	15	B&B, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, STRONG CENTRAL LEADER
	Live Oak / Quercus virginana	4" cal	12`-14` ht	As Shown	28	B&B, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, STRONG CENTRAL LEADER
	Texas Red Oak / Quercus texana	4" cal	12`-14` ht	As Shown	9	B&B, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, STRONG CENTRAL LEADER

ORNAMENTAL TREES	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	QTY	REMARKS
	Dallas Red Crape Myrtle / Lagerstroemia indica 'Dallas Red'	65 gal	10`-12`		7	CONTAINER, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED
	Little Gem Dwarf Southern Magnolia / Magnolia grandiflora 'Little Gem'	65 gal	8`-10` ht	As Shown	3	CONTAINER, NURSERY GROWN, MATCHED, FULL TO BASE, WELL-BRANCHED, STRONG CENTRAL LEADER
	Texas Redbud / Cercis canadensis texensis	45 gal	8`-10`	As Shown	16	CONTAINER, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED
	Yaupon Holly / Ilex vomitoria	45 Gal.	8`-10`	As Shown	22	CONTAINER, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, MULTI-TRUNK (3 MIN.), TREE FORM

SHRUBS	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	QTY	REMARKS
	Autumn Sage / Salvia greggii	3 gal	12" h X 18" w	24" OC	169	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Brakelights Red Yucca / Hesperaloe parviflora `Brakelights` TM	3 gal	12" h X 12" w	18" OC	949	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Common Boxwood / Buxus sempervirens	3 gal	24" h x 24" w	36" OC	289	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Dwarf Podocarpus / Podocarpus macrophyllus `Pringles`	3 gal	24" h x 18" w	24" OC	257	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Dwarf Yaupon / Ilex vomitoria `Nana`	3 gal min.	24" h x 24" w	36" OC	235	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Green Cloud Texas Ranger / Leucophyllum frutescens `Green Cloud` TM	3 gal min.	24" h x 24" w	36" OC	305	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Mahonia Soft Caress / Mahonia eurybracteata `Soft Caress`	3 gal	18" h X 18" w	24" OC	125	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Mexican Feather Grass / Nassella tenuissima	3 gal min.	12" h X 12" w	24" OC	125	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Pink Muhly Grass / Muhlenbergia capillaris	3 gal	18" h X 18" w	30" OC	711	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED

SHRUB AREAS	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	SPACING	QTY	REMARKS
	Littoral Planting Upland Mix	SEED				10,493 sf	
	Fountain Grass / Cenchrus advena	3 gal	12" Ht. x 12" W	24" OC	24" o.c.	304	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Little Spire Russian Sage / Perovskia atriplicifolia 'Little Spire'	1 gal	12" Ht. x 12" W	24" O.C.	24" o.c.	266	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Switch Grass / Panicum virgatum	3 gal	18" Ht. 12" Spr.	36" O.C.	36" o.c.	118	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED

GROUND COVERS	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	QTY	
	Hydroseed	HYDROMULCH			27,926 sf	REFER TO SPECIFICATIONS
	Asiatic Jasmine / Trachelospermum asiaticum	1 gal	8"h x 8"w	18" o.c.	1,050	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Bermuda Grass / Cynodon dactylon	sod			130,384 sf	REFER TO SPECIFICATIONS
	Creeping Juniper / Juniperus horizontalis	1 gal	8"h x 8"w	18" o.c.	232	
	Giant Liriope / Liriope gigantea	1 gal	12" h x 12" w	18" o.c.	1,056	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Little Bluestem Grass / Schizachyrium scoparium	3 gal	24" h x 18" w	24" o.c.	170	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Purple Wintercreeper / Euonymus fortunei 'Coloratus'	1 gal	8"h x 8"w	18" o.c.	1,251	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Texas Sedge / Carex texensis	1 gal	12" h x 12" w	18" o.c.	1,079	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED

NOTE: PLANT QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. IN THE CASE OF A DISCREPANCY, THE DRAWING SHALL TAKE PRECEDENCE.

NOTE: PLANTS ARE SPECIFIED BY HEIGHT, SPREAD AND CONTAINER SIZE. ALL PLANTINGS ARE EXPECTED TO MEET ALL SPECIFICATIONS PROVIDED.

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P.L.A. LANDON R. HUCKINS
L.A. No. 3480 Date 10/14/2022

KEY PLAN

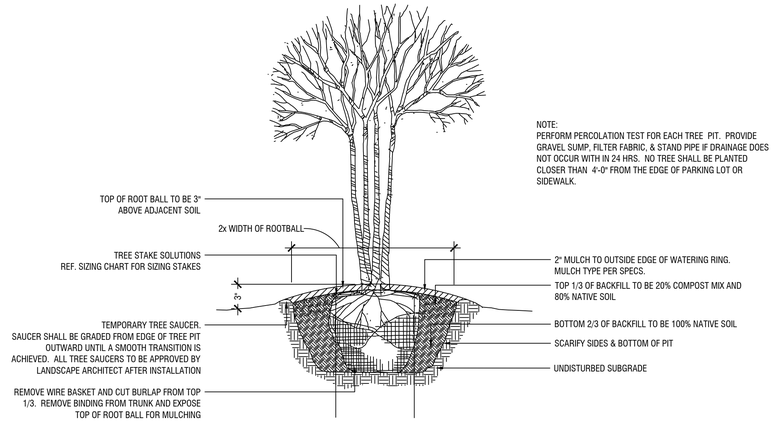
REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000
DATE
10/14/22
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
PLANTING SCHEDULE

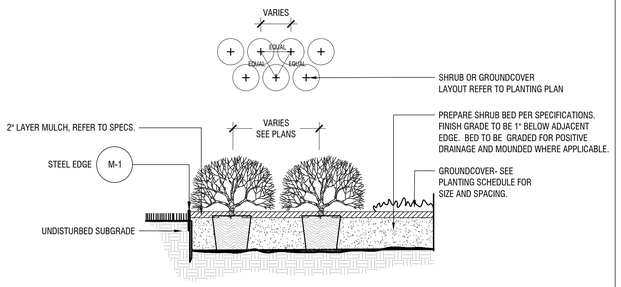
SHEET NO.
L5.07

PLOT DATE:
TEMPLATE VERSION:



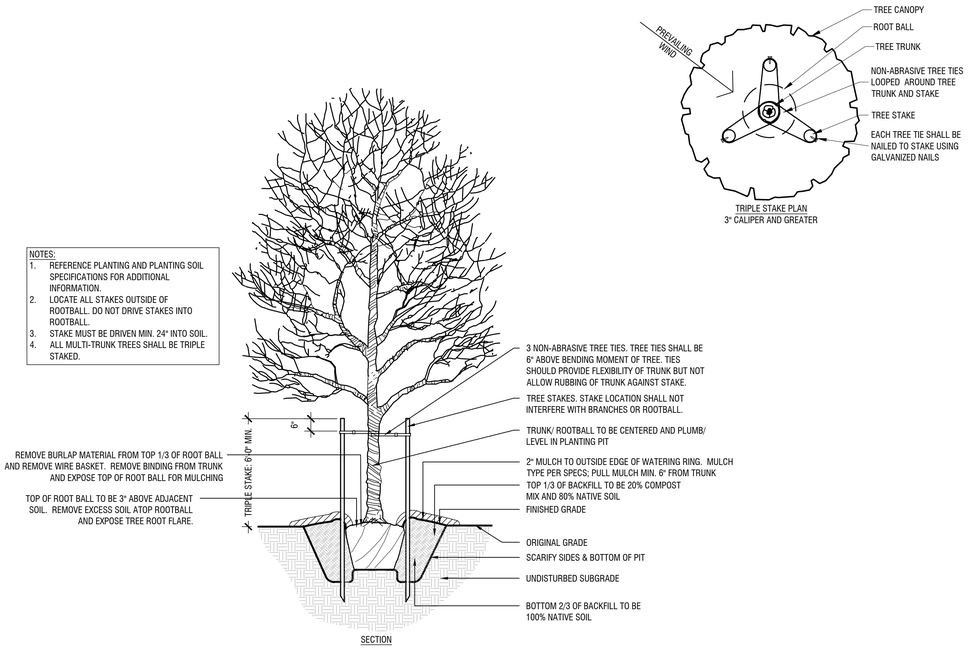
Multi-trunk / Ornamental Tree — B

Scale: 1/2" = 1'-0"



Shrubs & Groundcover — D

Scale: 1/2" = 1'-0"



Canopy Tree (Above Grade Stakes) — A

Scale: 1/2"=1'-0"

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TEMPLATE VERSION:

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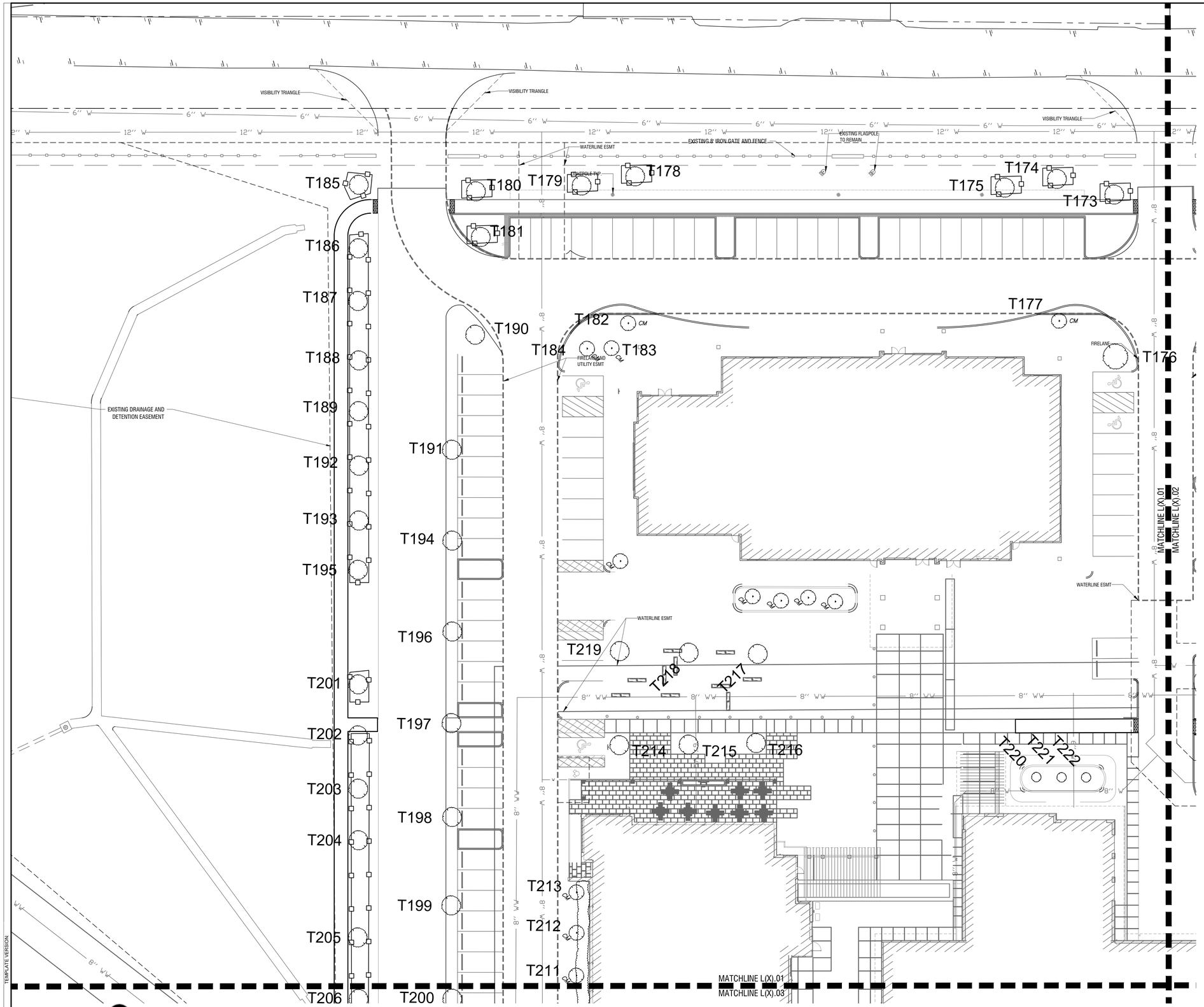
ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
PLANTING DETAILS

SHEET NO.
L5.08



LEGEND

- T40 — EXISTING TREE TAG NUMBER
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCING

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DATE
10/14/22
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
TREESCAPE PLAN

SHEET NO.
L7.01

Treescape Plan
Scale: 1" = 20' - 0"
A

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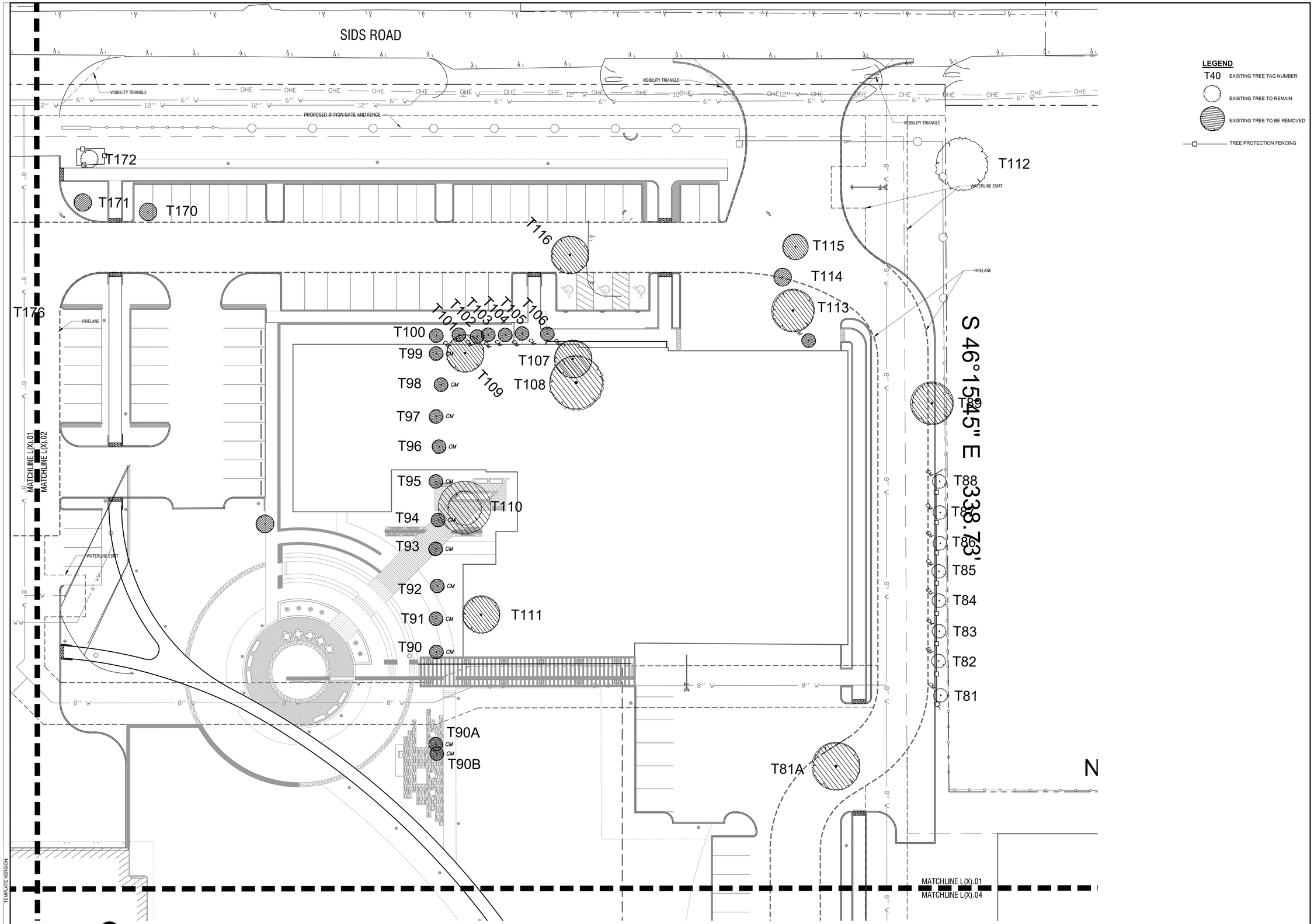
PLOT DATE:
TEMPLATE VERSION:



LEGEND

- T40 — EXISTING TREE TAG NUMBER
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCING

Treescape Plan

Scale: 1" = 20' - 0"

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DATE
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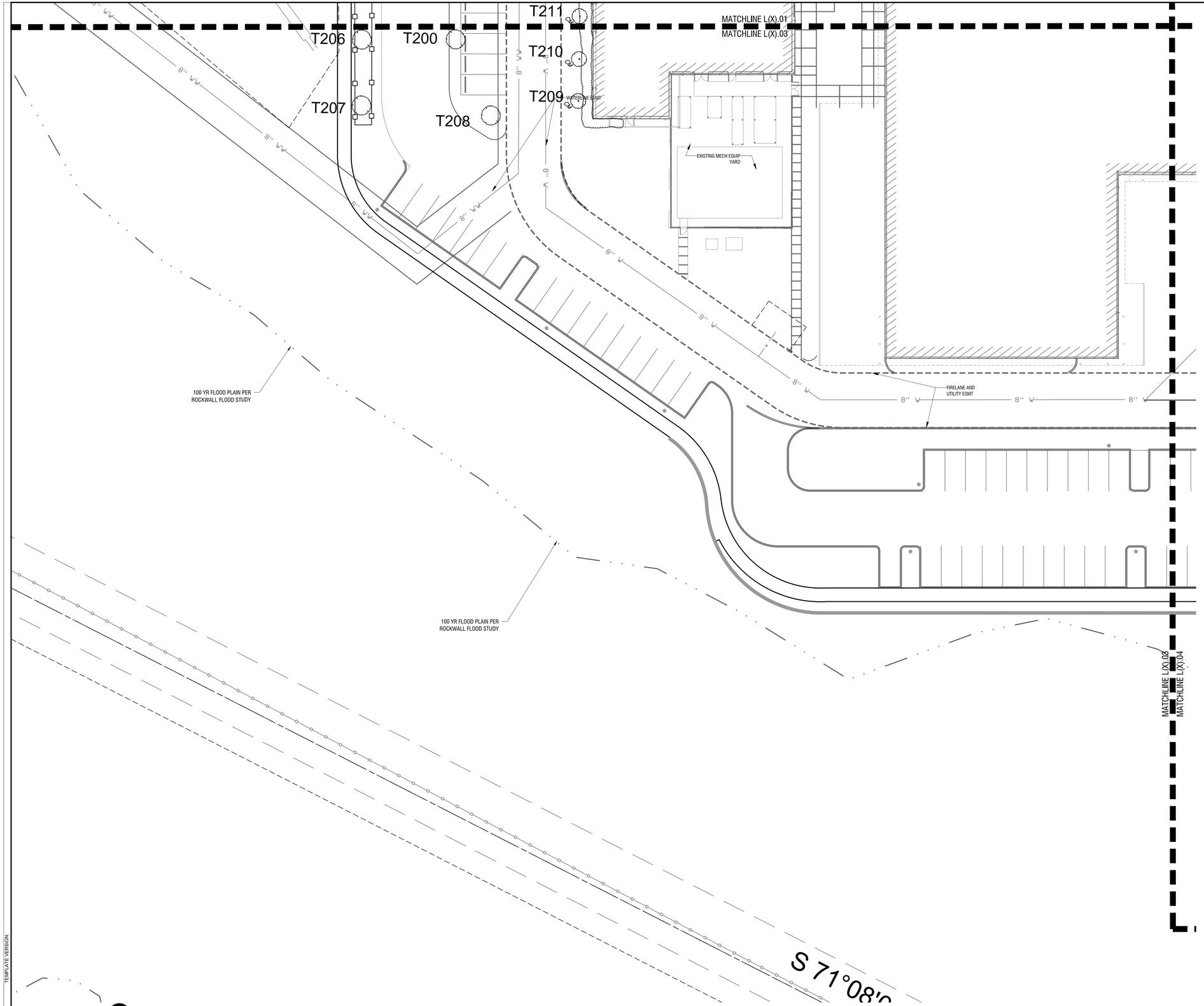
ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
TREESCAPE PLAN

SHEET NO.
L7.02

TEMPLATE VERSION:

PLOT DATE:



LEGEND

T40 EXISTING TREE TAG NUMBER

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED

TREE PROTECTION FENCING

Treescape Plan

Scale: 1" = 20' - 0"

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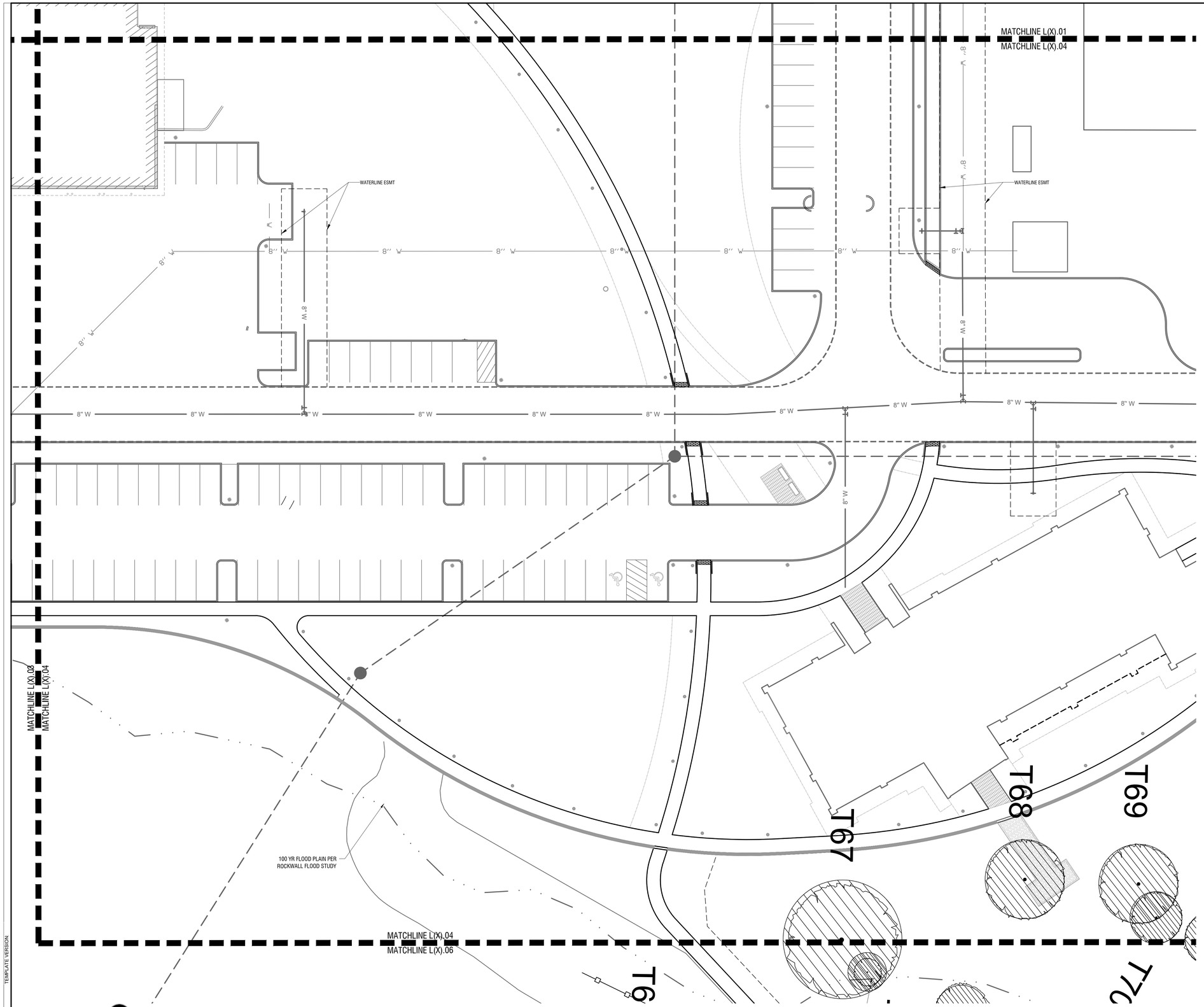
SHEET TITLE
TREESCAPE PLAN

SHEET NO.
L7.03

PLOT DATE:

TEMPLATE VERSION: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MATCHLINE L(X).04
WATERLINE ESMT
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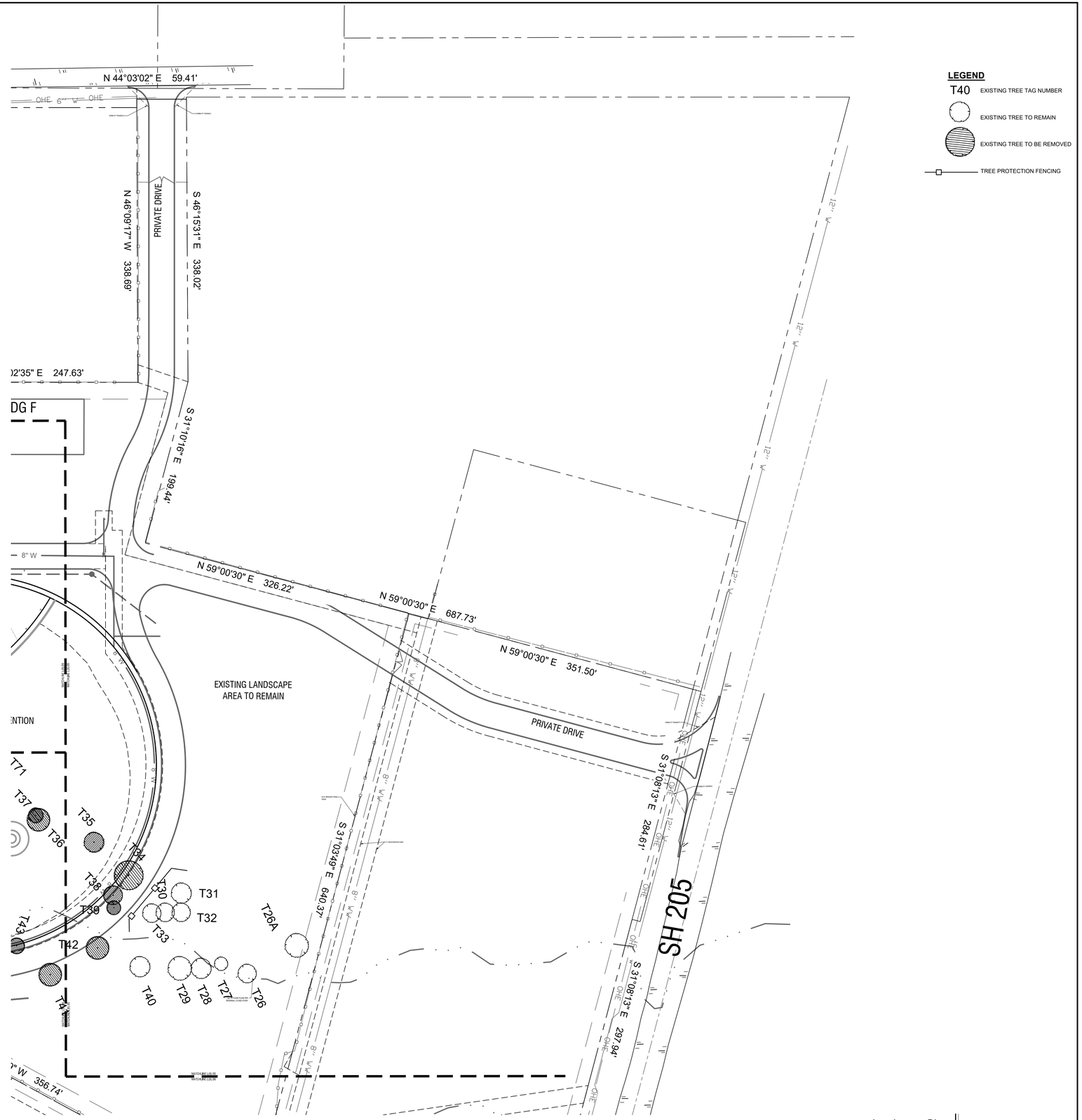
8" W
8" W



LEGEND

- T40 — EXISTING TREE TAG NUMBER
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCING

NORTH

0' 60' 120'

Scale: 1" = 60'-0"

Landscape Plan

Scale: 1" = 60' - 0"

A

© 2022 HKS, INC.

PLOT DATE:

TEMPLATE VERSION:

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

Rayburn Electric COOPERATIVE

PRELIMINARY
FOR REVIEW ONLY
Not for construction or permit purposes.
Kimley»Horn
P.L.A. LANDON R. HUCKINS
L.A. No. 3480 Date 10/14/2022

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

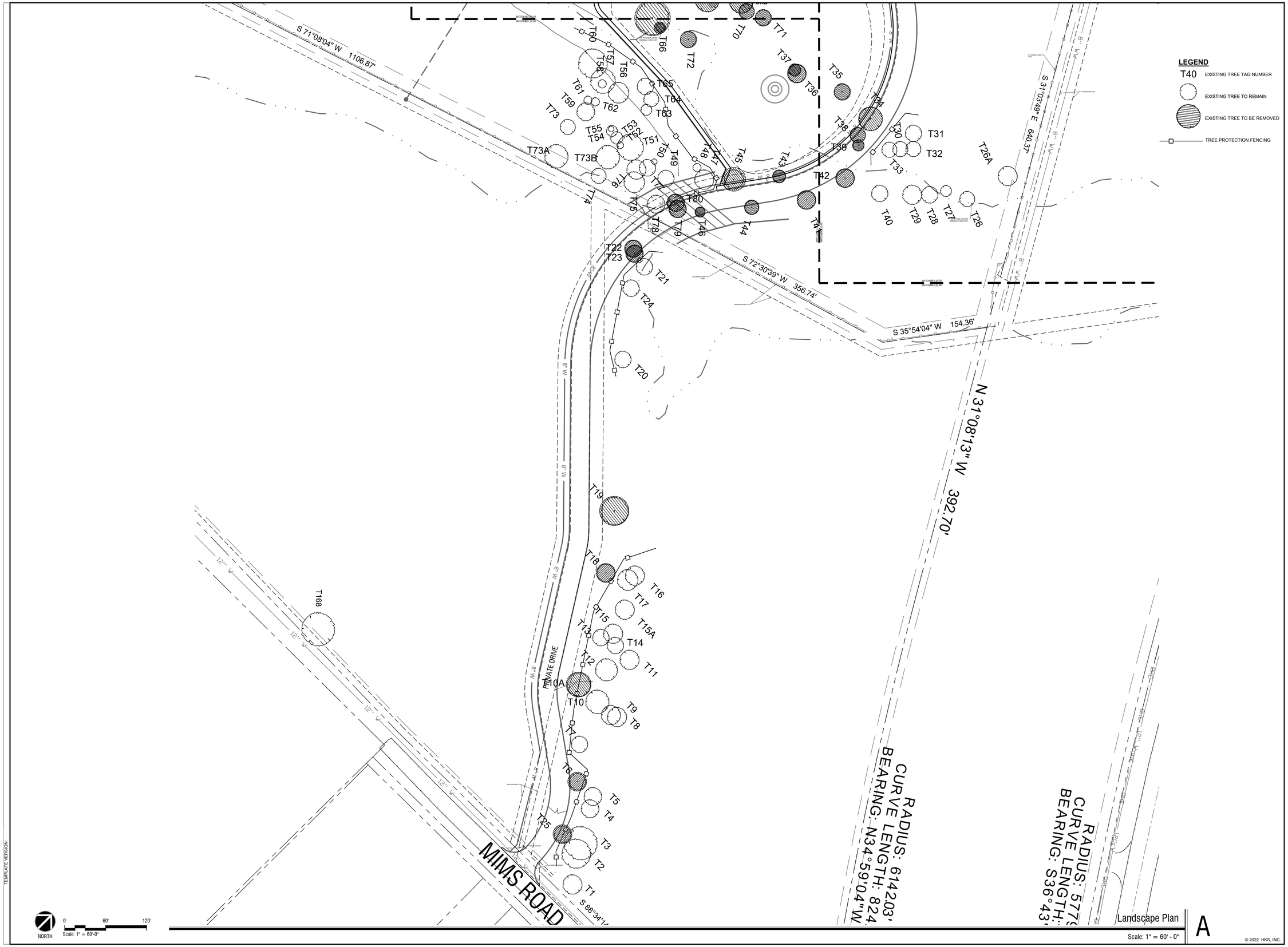
HKS PROJECT NUMBER
25370.000

DATE
10/14/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
TREESCAPE PLAN

SHEET NO.
L7.05



Landscape Plan

Scale: 1" = 60' - 0"

A

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CITY SITE PLAN SUBMITTAL

SHEET TITLE
TREESCAPE PLAN

SHEET NO.
L7.06

Location Key	Size DBH (Inches)	Description	Common Name	Comments	Tree Designation				Removal Status	Replacement Caliper Inches
					Feature	Primary	Secondary	Non-Protected		
T1	14	M.T.	Bois D'Arc					X		
T2	24	M.T.	Bois D'Arc					X		
T3	24		Bois D'Arc					X		
T4	16	M.T.	Hackberry				X			
T5	13		American Elm			X				
T6	12		Eastern Red Cedar				X		Removed	6
T7	12		Eastern Red Cedar				X			
T8	14		Hackberry				X			
T9	15	M.T.	Bois D'Arc					X		
T10	18	M.T.	American Elm			X				
T10A	30		Cottonwood					X	Removed	
T11	14		Black Willow					X		
T12	16		Black Willow					X		
T13	12		Eastern Red Cedar				X			
T14	15	M.T.	Hackberry	Dying and Covered with Poison Ivy			X			
T15	14		Hackberry	Diseased Crown			X			
T15A	14	M.T.	Hackberry				X			
T16	14		Hackberry				X			
T17	15		American Elm			X				
T18	13		Hackberry				X		Removed	6.5
T19	14	M.T.	Bois D'Arc	Tagged as "20"				X	Removed	
T20	12		Eastern Red Cedar				X			
T21	13	M.T.	Eastern Red Cedar				X			
T22	12		Eastern Red Cedar				X		Removed	6
T23	12		Eastern Red Cedar				X		Removed	6
T24	12		Eastern Red Cedar				X			
T25	12		Eastern Red Cedar				X		Removed	6
T26A	9		Cedar Elm			X				
T26	11		Eastern Red Cedar				X			
T27	8		White Ash			X				
T28	13	M.T.	Eastern Red Cedar				X			
T29	14	M.T.	Eastern Red Cedar				X			
T30	11		Eastern Red Cedar				X			
T31	12		Eastern Red Cedar				X			
T32	11		Eastern Red Cedar	Branched to Ground			X			
T33	11		Eastern Red Cedar				X			
T34	17		White Ash			X			Removed	17
T35	12		Eastern Red Cedar	Only Top 1/4 of Tree is Alive.			X		Removed	6
T36	13		Eastern Red Cedar	Entirely Dead			X		Removed	6.5
T37	9		White Ash			X			Removed	9
T38	11		Hackberry				X		Removed	5.5
T39	8		Slippery Elm	Entire Tree is Wilted.		X			Removed	8
T40	12		Hackberry				X			
T41	13		Hackberry				X		Removed	6.5
T42	14	M.T.	Eastern Red Cedar				X		Removed	7
T43	8		Hackberry					X	Removed	
T44	10"		Bois D'Arc					X	Removed	
T45	14		American Elm			X			Removed	14
T46	7		Slippery Elm			X			Removed	7
T47	14		White Ash			X				
T48	6		Cedar Elm			X				
T49	12		Eastern Red Cedar				X			
T50	4		Bois D'Arc					X		
T51	19		Bois D'Arc					X		
T52	5		Persimmon			X				
T53	9		Persimmon			X				
T54	8		Black Willow					X		
T55	4		Persimmon			X				
T56	15		White Ash			X				
T57	18		Bois D'Arc					X		
T58	6		Bois D'Arc					X		
T59	14	M.T.	Bois D'Arc					X		
T60	21	M.T.	Bois D'Arc					X		
T61	6		Bois D'Arc	Tagged as "62"				X		
T62	6		Bois D'Arc	Tagged as "63"				X		
T63	8		American Elm			X				
T64	8	M.T.	Hackberry					X		
T65	12		White Ash			X				
T66	6		Bois D'Arc					X	Removed	
T67	24	M.T.	Bois D'Arc					X	Removed	
T68	17	M.T.	Hackberry				X		Removed	8.5
T69	15	M.T.	Hackberry				X		Removed	7.5
T70	11		Hackberry				X		Removed	5.5
T71	12		Bois D'Arc					X	Removed	
T72	14		Hackberry				X		Removed	7
T73	11		Cedar Elm			X				
T73A	8		American Elm			X				
T73B	12		Eastern Red Cedar				X			
T74	15		Eastern Red Cedar				X			
T75	15		Eastern Red Cedar				X			
T76	14		Eastern Red Cedar				X			
T77	12		Black Willow					X		
T78	13		Eastern Red Cedar				X			
T79	12		Eastern Red Cedar				X		Removed	6
T80	12		Eastern Red Cedar				X		Removed	6
T81	12	M.T.	'Natchez' Crape Myrtle					X		
T81A	18		Live Oak			X			Removed	18
T82	7	M.T.	'Natchez' Crape Myrtle					X		
T83	6	M.T.	'Natchez' Crape Myrtle					X		
T84	11	M.T.	'Natchez' Crape Myrtle					X		
T85	16	M.T.	'Natchez' Crape Myrtle					X		
T86	18	M.T.	'Natchez' Crape Myrtle					X		
T87	15	M.T.	'Natchez' Crape Myrtle					X		
T88	11	M.T.	'Natchez' Crape Myrtle					X		
T89	15		Bradford Pear			X			Removed	15
T90	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T90A	20	M.T.	'Natchez' Crape Myrtle					X	Removed	
T90B	9	M.T.	'Watermelon Red' Crape Myrtle					X	Removed	
T91	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T92	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T93	15	M.T.	'Natchez' Crape Myrtle					X	Removed	
T94	9	M.T.	'Natchez' Crape Myrtle					X	Removed	
T95	19	M.T.	'Natchez' Crape Myrtle					X	Removed	
T96	7	M.T.	'Watermelon Red' Crape Myrtle					X	Removed	
T96	7	M.T.	'Watermelon Red' Crape Myrtle					X	Removed	
T97	19	M.T.	'Natchez' Crape Myrtle					X	Removed	
T98	9	M.T.	'Watermelon Red' Crape Myrtle					X	Removed	
T99	13	M.T.	'Natchez' Crape Myrtle					X	Removed	
T100	8	M.T.	'Natchez' Crape Myrtle					X	Removed	
T101	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T102	7	M.T.	'Natchez' Crape Myrtle					X	Removed	
T103	10	M.T.	'Natchez' Crape Myrtle					X	Removed	
T104	7	M.T.	'Natchez' Crape Myrtle					X	Removed	
T105	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T106	6	M.T.	'Natchez' Crape Myrtle					X	Removed	
T107	18		Red Oak			X			Removed	18
T108	22		Bradford Pear			X			Removed	22
T109	12		Bradford Pear	Diseased		X			Removed	12
T110	15		Bradford Pear	Wind Damaged		X				
T111	15		Live Oak			X			Removed	15
T112	17		Live Oak			X				
T113	13		Live Oak	Bad Freeze Damaged Trunk		X			Removed	13
T114	5		Magnolia			X			Removed	5
T115	9		Live Oak	Bad Freeze Damaged Trunk		X			Removed	9
T116	12		Texas Red Oak	Substantial Trunk Damage with Borer Infestation		X			Removed	12
T138	18	M.T.	Hackberry				X			
T141	12		Eastern Red Cedar				X			
T142	14		Eastern Red Cedar				X			
T143	17	M.T.	Eastern Red Cedar				X			
T144	4		Cedar Elm			X				
T145	16		Eastern Red Cedar				X			
T146	11		Eastern Red Cedar				X			
T147	14		Eastern Red Cedar				X			
T148	12		Eastern Red Cedar				X			
T149	12		Eastern Red Cedar				X			
T150	12		Eastern Red Cedar				X			
T151	12	M.T.	Eastern Red Cedar				X			
T152	15		Eastern Red Cedar				X			
T153	11		Eastern Red Cedar				X			
T155	16		Eastern Red Cedar				X			
T156	12		Eastern Red Cedar				X			
T157	14		Eastern Red Cedar				X			
T158	8		Cedar Elm			X				
T158A	7		Cedar Elm			X				
T159	8		Locust					X		
T160	5		White Ash			X				
T161	5		Cedar Elm			X				
T162	4		White Ash			X				
T163	4		Cedar Elm			X				
T164	8		Cedar Elm			X				
T164A	7		Cedar Elm			X				
T164B	10	M.T.	Cedar Elm			X				
T164C	6		Cedar Elm			X				
T165	7		Black Willow					X		
T166	20		Black Willow					X		
T168	19	M.T.	Eastern Red Cedar				X			
T168A	23	M.T.	Eastern Red Cedar				X			
T170	6		Live Oak			X			Removed	6
T171	6		Live Oak			X				
T172	6		Bur Oak			X				
T173	6		Bur Oak			X				
T174	6		Bur Oak			X				
T175	6		Bur Oak			X				
T176	7		Live Oak			X				
T177	8	M.T.	'Natchez' Crape Myrtle					X		
T178	6		Bur Oak			X				
T179	6		Bur Oak			X				
T180	6		Bur Oak			X				
T181	6		Live Oak	Stunted- Old Sapsucker Damage		X				
T182	10	M.T.	'Natchez' Crape Myrtle					X		
T183	7.5	M.T.	'Natchez' Crape Myrtle					X		
T184	7	M.T.	'Natchez' Crape Myrtle					X		
T185	6		Bald Cypress			X				
T186	6		Bald Cypress			X				
T187	6		Bald Cypress			X				
T188	6		Bald Cypress			X				
T189	6		Bald Cypress			X				
T190	6		Live Oak	Stunted- Old Sapsucker Damage		X				
T191	6		Live Oak			X				
T192	6		Bald Cypress			X				
T193	6		Bald Cypress			X				
T194	6		Live Oak			X				
T195	6		Bald Cypress			X				
T196	6		Live Oak			X				
T197	6		Live Oak			X				
T198	6		Live Oak			X				
T199	6		Live Oak			X				
T200	6		Live Oak			X				
T201	6		Bald Cypress			X				
T202	6		Bald Cypress			X				
T203	6		Bald Cypress			X				
T204	6		Bald Cypress			X				
T205	6		Bald Cypress			X				
T206	6		Bald Cypress			X				
T207	6		Bald Cypress			X				
T208	6		Live Oak			X				
T209	-		Crape Myrtle	Dead, Coming Back From Roots						
T210	3.5	M.T.	'Natchez' Crape Myrtle					X		
T211	2.5	M.T.	'Natchez' Crape Myrtle					X		
T212	2.5	M.T.	'Natchez' Crape Myrtle					X		
T213	3	M.T.	'Natchez' Crape Myrtle					X		
T214	6		Live Oak	Weeping Habit		X				
T215	6		Live Oak	Weeping Habit		X				
T216	6		Live Oak	Weeping Habit		X				
T217	6		Live Oak	Weeping Habit		X				
T218	6		Live Oak	Weeping Habit		X				
T219	6		Live Oak	Weeping Habit		X				
T223	14		Black Willow					X		
TOTAL	**2,210**									

TOTAL REPLACEMENT INCHES REQUIRED:	302.5
MITIGATION INCHES PROVIDED ON SITE:	513
MITIGATION INCHES REMAINING:	-210.5

NOTE: REFER TO L5.08 FOR TREE PROTECTION FENCING DETAIL.

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L.A. No. 3480 Date 10/14/2022

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

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DATE
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ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
TREESCAPE TABLE

SHEET NO.
L7.07

RAYBURN ELECTRIC COOPERATIVE

LANDSCAPE PLANS
FOR
BUILDING D AND E CAMPUS EXPANSION
ROCKWALL, TX

HARDSCAPE, LANDSCAPE, IRRIGATION

		Drawings Issued										
		30% PROGRESS SET (ISSUE DATE - 09.01.22)	65% PROGRESS SET (ISSUE DATE - 09.26.22)	PSP SUBMITTAL (ISSUE DATE - 10.11.22)								
Sheet Number	Sheet Title											
L0.00	SHEET INDEX		●	●								
GENERAL												
L1.00	GENERAL NOTES & MATERIALS LEGEND		●	●								
L1.01	OVERALL PLAN		●	●								
HARDSCAPE												
L2.01	HARDSCAPE PLAN		●	●								
L2.02	HARDSCAPE PLAN		●	●								
L2.03	HARDSCAPE PLAN		●	●								
L2.04	HARDSCAPE PLAN		●	●								
L2.05	HARDSCAPE PLAN		●	●								
L2.06	HARDSCAPE PLAN		●	●								
DETAILS												
L4.01	HARDSCAPE DETAILS		●	●								
PLANTING												
L5.01	LANDSCAPE PLAN	●	●	●								
L5.02	LANDSCAPE PLAN	●	●	●								
L5.03	LANDSCAPE PLAN	●	●	●								
L5.04	LANDSCAPE PLAN	●	●	●								
L5.05	LANDSCAPE PLAN	●	●	●								
L5.06	LANDSCAPE PLAN	●	●	●								
L5.07	PLANTING SCHEDULE	●	●	●								
L5.08	PLANTING DETAILS	●	●	●								
TREE PRESERVATION												
L7.01	TREESCAPE PLAN	●	●	●								
L7.02	TREESCAPE PLAN		●	●								
L7.03	TREESCAPE PLAN		●	●								
L7.04	TREESCAPE PLAN		●	●								
L7.05	TREESCAPE PLAN		●	●								
L7.06	TREESCAPE PLAN		●	●								
L7.07	TREESCAPE TABLE	●	●	●								

HKS

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SHEET TITLE
SHEET INDEX

SHEET NO.
L0.00

PLOT DATE:
TEMPLATE VERSION:

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GENERAL NOTES:

1. WRITTEN DIMENSIONS PREVAIL OVER SCALED DIMENSIONS. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
2. THE CONTRACTOR BEARS ALL RESPONSIBILITY FOR VERIFYING ALL UNDERGROUND UTILITIES, PIPES, STRUCTURES, AND LINE RUNS IN THE FIELD PRIOR TO CONSTRUCTION. ANY DAMAGE TO UTILITIES THAT ARE TO REMAIN SHALL BE REPAIRED IMMEDIATELY AT NO EXPENSE TO THE OWNER. LANDSCAPE ARCHITECT ASSUMES NO RESPONSIBILITY FOR ANY NOT SHOWN ON PLANS.
3. ALL PROPOSED AND FINISHED GRADES ARE BASED ON INFORMATION PROVIDED BY THE OWNER'S SURVEY AND/OR CIVIL ENGINEER. ANY DISCREPANCIES IN ACTUAL FIELD MEASUREMENTS ARE TO BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
4. PRIOR TO COMMENCEMENT OF HARDSCAPE CONSTRUCTION, ALL PIERS, FOOTINGS, AND WALLS ARE TO BE SURVEYED, LAID OUT, AND STAKED IN FIELD FOR REVIEW BY LANDSCAPE ARCHITECT. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY DEMOLITION, ADJUSTMENTS, OR RECONSTRUCTION RESULTING FROM UNAUTHORIZED CONSTRUCTION ACTIVITIES.
5. CONTRACTOR IS RESPONSIBLE FOR ALL QUANTITIES PER DRAWINGS AND SPECIFICATIONS. ANY QUANTITIES PROVIDED BY LANDSCAPE ARCHITECT ARE PROVIDED FOR CONVENIENCE ONLY. CONTRACTORS ARE TO BID THEIR OWN VERIFIED QUANTITIES. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
6. EASEMENTS SETBACKS, BUILDING, CURB AND GUTTER, UNDERGROUND UTILITIES HAVE BEEN SUPPLIED TO LANDSCAPE ARCHITECT BY THE PROJECT CIVIL ENGINEER. REFER TO CIVIL ENGINEERS DRAWINGS FOR ADDITIONAL INFORMATION.
7. **DESIGN BUILD FOUNTAIN CONTRACTOR TO PROVIDE ALL DESIGN & ENGINEERING FOR POOL AND FOUNTAIN TO INCLUDE ALL MEP AND STRUCTURE DESIGN.**

IRRIGATION NOTES:

1. AN AUTOMATIC IRRIGATION SYSTEM SHALL BE PROVIDED FOR ALL PLANTING AREAS. OVER SPRAY ON STREETS AND WALKS IS PROHIBITED.
2. IRRIGATION SYSTEMS SHALL BE MAINTAINED AND REPLACED AS NECESSARY.
3. ALL PLANTING AREAS TO BE FULLY IRRIGATED.
4. IRRIGATION SYSTEM TO HAVE A FULLY AUTOMATED CONTROL SYSTEM.
5. ANY EXISTING PLANTING DAMAGED DURING CONSTRUCTION IS TO BE REPLACED AT NO COST THE OWNER.
6. IF THE EXISTING IRRIGATION SYSTEM IS DAMAGED OR TURNED OFF DURING CONSTRUCTION ACTIVITIES, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAND WATER ALL PLANT MATERIAL AS NEEDED.

PLANTING NOTES:

1. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UNDERGROUND UTILITIES, PIPES, STRUCTURES, AND LINE RUNS IN THE FIELD PRIOR TO THE INSTALLATION OF ANY PLANT MATERIAL.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADVISE THE LANDSCAPE ARCHITECT OF ANY CONDITION FOUND ON THE SITE WHICH PROHIBITS INSTALLATION AS SHOWN ON THESE DRAWINGS.
3. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AND MUST BE REPLACED WITH PLANT MATERIAL OF SAME VARIETY AND SIZE IF DAMAGED, DESTROYED, OR REMOVED.
4. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR FINE GRADING AND REMOVAL OF DEBRIS PRIOR TO PLANTING IN ALL AREAS.
5. FINAL FINISH GRADING SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL TOPSOIL REQUIRED TO CREATE A SMOOTH CONDITION PRIOR TO PLANTING.
6. ALL PLANT QUANTITIES LISTED ARE FOR INFORMATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FULL COVERAGE IN ALL PLANTING AREAS AS SPECIFIED IN THE PLANT SCHEDULE AND VERIFY ALL QUANTITIES.
7. LANDSCAPE CONTRACTOR TO PROVIDE STEEL EDGING (REFER TO MATERIALS PAGE) BETWEEN ALL PLANTING BEDS AND LAWN AREAS.
8. ALL PLANT MATERIAL SHALL CONFORM TO THE SPECIFICATIONS AND SIZES GIVEN IN THE PLANT LIST AND SHALL BE NURSERY GROWN IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK. LATEST EDITION AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS. ANY PLANT SUBSTITUTION SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PURCHASE.
9. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ANY COORDINATION WITH OTHER CONTRACTORS ON SITE AS REQUIRED TO ACCOMPLISH ALL PLANTING OPERATIONS.
10. ALL NEW PLANTING AREAS TO BE AMENDED PER SPECIFICATIONS.
11. ANY PLANT MATERIAL THAT DOES NOT SURVIVE SHALL BE REPLACED WITH AN EQUIVALENT SIZE AND SPECIES WITHIN THIRTY (30) DAYS.
12. PLANT MATERIAL SHALL BE PRUNED AS NECESSARY TO CONTROL SIZE BUT NOT TO DISRUPT THE NATURAL GROWTH PATTERN OR CHARACTERISTIC FORM OF THE PLANT EXCEPT AS NECESSARY TO ACHIEVE HEIGHT CLEARANCE FOR VISIBILITY AND PEDESTRIAN PASSAGE OR TO ACHIEVE A CONTINUOUS OPAQUE HEDGE IF REQUIRED.
13. LANDSCAPED AREAS SHALL BE KEPT FREE OF TRASH, WEEDS, DEBRIS, AND DEAD PLANT MATERIAL.
14. ALL LIME STABILIZED SOIL & INORGANIC SELECT FILL FOR BUILDING SHOULD BE REMOVED FROM PLANTING AREAS TO A DEPTH OF 24" & REPLACED WITH ORGANIC IMPORTED TOPSOIL FILL.
15. TREES OVERHANGING PEDESTRIAN WALKWAYS AND PARKING SHALL HAVE 7' CLEAR TRUNK HEIGHT TO MEET ACCESSIBILITY REQUIREMENTS. TREES OVERHANGING PUBLIC STREETS AND FIRE LANE SHALL HAVE A 14' MIN. CLEAR TRUNK HEIGHT.
16. CONTRACTOR TO PROVIDE 12 MONTH WARRANTY AFTER FINAL ACCEPTANCE.
17. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITY (NOT ALREADY INCLUDED IN PLANTING PLANS) TO BE FINE GRADED, AND PLANTED WITH PLANTED WITH PLANTS OR SOD TO MATCH EXISTING CONDITIONS.

MATERIAL LEGEND:

PAVING

P-1 CONCRETE PAVING (STANDARD)

COLOR:	NATURAL GRAY
FINISH:	MEDIUM BROOM FINISH
CONTROL JOINTS:	SAWCUT (1/4 DEPTH OF CONCRETE) @ REGULAR INTERVALS (TYPICAL JOINT SPACING TO BE EQUAL TO WIDTH OF WALK)
EXPANSION JOINTS:	GENERALLY 30' O.C. MAX. (SEE PLANS FOR LOCATION)
JOINT SEALANT:	COLOR TO MATCH CONCRETE
IMPORTANT:	**REPLACE ALL COARSE AGGREGATE WITH 3/8" CRUSHED WHITE LIMESTONE**
APPROVAL:	***MOCKUP, EJ SEALANT SAMPLE***

P-2 CONCRETE PAVING (INTEGRAL COLOR)

COLOR:	TBD (SCOFIELD, CHROMIX ADMIXTURE)
FINISH:	HEAVY ROCK SALT (50% COVERAGE)
CONTROL JOINTS:	SAWCUT (1/4 DEPTH OF CONCRETE) REGULAR INTERVALS (JOINT SPACING REFERENCE PLAN)
EXPANSION JOINTS:	GENERALLY 30' O.C. MAX. (SEE PLANS FOR EXACT LOCATION)
JOINT SEALANT:	COLOR TO MATCH CONCRETE
APPROVAL:	***COLOR SAMPLE, EJ SEALANT SAMPLE, MOCKUP***

P-3 CONCRETE PAVING (AMPHITHEATER SEATING)

COLOR:	TBD (SCOFIELD, CHROMIX ADMIXTURE)
FINISH:	ARCHITECTURAL FINISH
CONTROL JOINTS:	SAWCUT (1/4 DEPTH OF CONCRETE) REGULAR INTERVALS (JOINT SPACING REFERENCE PLAN)
EXPANSION JOINTS:	GENERALLY 30' O.C. MAX. (SEE PLANS FOR EXACT LOCATION)
JOINT SEALANT:	COLOR TO MATCH CONCRETE
INSTALL:	PHENOLIC FACED HIGH DENSITY OVERLAY PLYFORM (REF. SPECS). TIE HOLES SPACED 12" FROM WALL TOP AND ENDS, SPACED EQUALLY WITHIN WALL FIELD AT 24" O.C. MAX. PROVIDE SAW CUT CONTROL JOINTS CENTERED BETWEEN EVERY OTHER ROW OF TIE HOLES (APPROX. 4'-0" O.C. MAX) WALL TOP TO BE TROWELED SMOOTH. PROVIDE SHARP 90° CORNERS. NO CHAMFERED OR RADIUS CORNERS WILL BE ACCEPTED. ON ARCHITECTURALLY FINISHED CONCRETE, EXCESSIVELY LARGE OR FREQUENT BUGHOLES AND/OR OTHER SURFACE DEFECTS WILL BE CAUSE FOR REJECTION OF MOCKUP.
APPROVAL:	***COLOR SAMPLE, EJ SEALANT SAMPLE, MOCKUP***

P-4 UNIT PAVER (ENTRY WALKWAY)

TYPE:	VERONA
COLOR:	PEWTER(33%), ANTIQUE PEWTER (33%), SLATE (33%)
SIZE:	3" x 18" x 80mm
PATTERN:	RANDOM 1/3 RUNNING BOND
INSTALL:	REF. DETAILS
SUPPLIER:	KEYSTONE HARDSCAPES
CONTACT:	JOEY GUEDEA (214.684.4427)
APPROVAL:	***CUT SHEET, SAMPLE, MOCKUP***

P-5 UNIT PAVER (UPPER COURTYARD)

TYPE:	VERONA
COLOR:	SAND HILL BLEND
SIZE:	8" x 16" x 80mm
PATTERN:	*RUNNING BOND*
INSTALL:	REF. DETAILS
SUPPLIER:	KEYSTONE HARDSCAPES
CONTACT:	JOEY GUEDEA (214.684.4427)
APPROVAL:	***CUT SHEET, SAMPLE, MOCKUP***

P-6 UNIT PAVER (OUTDOOR KITCHEN PAVING)

TYPE:	VERONA
COLOR:	CHARCOAL
SIZE:	3" x 18" x 80mm
PATTERN:	RANDOM STACKED BOND
INSTALL:	REF. DETAILS
SUPPLIER:	KEYSTONE HARDSCAPES
CONTACT:	JOEY GUEDEA (214.684.4427)
APPROVAL:	***CUT SHEET, SAMPLE, MOCKUP***

P-7 UNIT PAVER (LOWER COURTYARD)

TYPE:	HOLLAND
COLOR:	ANTIQUE PEWTER (50% FIELD), SAND HILL BLEND (50% FIELD), CHARCOAL (BORDER)
SIZE:	4" x 8" x 60mm
PATTERN:	HERRINGBONE WITH SINGLE SOLDIER COURSE BORDER
INSTALL:	REF. DETAILS
SUPPLIER:	KEYSTONE HARDSCAPES
CONTACT:	JOEY GUEDEA (214.684.4427)
APPROVAL:	***CUT SHEET, SAMPLE, MOCKUP***

P-8 UNIT PAVER (TRUNCATED)

TYPE:	TRUNCATED DOME CONCTETE PAVER
COLOR:	CHARCOAL
SIZE:	4" x 8" x 60mm
PATTERN:	RUNNING BOND
INSTALL:	REF. DETAILS
SUPPLIER:	KEYSTONE HARDSCAPES
CONTACT:	JOEY GUEDEA (214.684.4427)
APPROVAL:	***CUT SHEET, SAMPLE, MOCKUP***

AGGREGATES

AG-1 DECORATIVE GRAVEL

TYPE:	TEJAS BLACK GRAVEL
SIZE:	2"-4"
INSTALL:	REFER DETAILS
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***SAMPLE, MOCKUP***

AG-2 DECOMPOSED GRANITE

TYPE:	NATURAL
SIZE:	3/4" - FINES
INSTALL:	REFER DETAILS
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***SAMPLE, MOCKUP***

METALS

M-1 STEEL EDGE

MATERIAL:	*PLANTING:* 3/16" x 4" STEEL PLATE *HARDSCAPE:* 1/4" x 6" STEEL PLATE
COLOR:	*PLANTING:* POWDERCOAT BLACK *HARDSCAPE:* POWDERCOAT BLACK
SIZE:	LENGTHS PER PLAN, ALL SEAMS TO BE FLUSH AND LEVEL
INSTALL:	REF. DETAILS

M-3 HANDRAIL

MATERIAL:	STAINLESS STEEL (TYPE 304)
FINISH:	BRUSHED
SIZE:	1.5" DIA.
INSTALL:	REF. DETAILS

SITE AMENITIES

A-1 GRILL

TYPE:	PGS T
MODEL:	S36T
FINISH:	STAINLESS STEEL
SUPPLIER:	AEI CORPORATION
INSTALL:	PROVIDE ALL PRODUCTS REQUIRED FOR NATURAL GAS HOOKUP, PROVIDE STAINLESS TIMER WALL SWITCH
APPROVAL:	***CUT SHEET***

A-2 COUNTERTOP

MATERIAL:	CONCRETE
COLOR / FINISH:	TBD
SIZE:	2" THICK
INSTALL:	REF. DETAILS
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***SAMPLE, SHOP DRAWINGS***

A-3 BENCH

TYPE:	GENERATION 50 (ANGLE END ARMS W/ BACK)
FINISH / COLOR:	THERMALLY MODIFIED ASH/BLUE ASH
INSTALL:	SURFACE MOUNT
SUPPLIER:	LANDSCAPE FORMS
CONTACT:	LARA MOFFET (972.740.3373)
APPROVAL:	***CUT SHEET***

A-4 LITTER/ RECYCLING RECEPTACLE

TYPE:	GENERATION 50 (ANGLE END ARMS W/ BACK)
FINISH / COLOR:	THERMALLY MODIFIED ASH/BLUE ASH
INSTALL:	PER MANUFACTURER'S SPECIFICATIONS
SUPPLIER:	LANDSCAPE FORMS
CONTACT:	LARA MOFFET (972.740.3373)
APPROVAL:	***CUT SHEET***

A-5 CAFE DINING TABLE

TYPE:	CHIPMAN ROUND
FINISH / COLOR:	WHITE
INSTALL:	SURFACE MOUNT
SUPPLIER:	LANDSCAPE FORMS
CONTACT:	LARA MOFFET (972.740.3373)
APPROVAL:	***CUT SHEET***

A-6 STONE BLOCK SEATING

TYPE:	LUEDERS LIMESTONE BLOCK
FINISH / COLOR:	*HONED TOP, BOTTOM, AND ENDS W/ ROUGHBACK SIDES*
SIZE:	24" HT. x 18" W. x 6' LENGTH
INSTALL:	REF. DETAILS
SUPPLIER:	MOTHERROCK STONE GROUP
CONTACT:	CLINT HART (214.205.6491)
APPROVAL:	***CUT SHEET***

A-7 OUTDOOR KITCHEN STONE

TYPE:	LUEDERS LIMESTONE VENEER
FINISH / COLOR:	*TBD*
SIZE:	TBD
INSTALL:	REF. DETAILS
SUPPLIER:	MOTHERROCK STONE GROUP
CONTACT:	CLINT HART (214.205.6491)
APPROVAL:	***CUT SHEET***

WALL SYSTEMS/FINISHES

W-1 STONE RETAINING WALLS

TYPE:	STONE VENEER WITH CONCRETE CORE
MATERIAL:	CUT LUEDERS LIMESTONE (TO MATCH EXISTING BUILDINGS/WALLS
COLOR/FINISH:	ROUGHBACK, ASHLAR PATTERN
SIZE:	*CAP* - 12" X 24" X 3" THICK *FIELD* - VARIED SIZES, REF. PLAN FOR WALL HEIGHTS
INSTALL:	REF. DETAILS
SUPPLIER:	MOTHERROCK STONE GROUP
CONTACT:	CLINT HART (214.205.6491)
APPROVAL:	***SAMPLE, SHOP DRAWINGS, MOCKUP***

W-2 FEATURE WALLS

TYPE:	STONE VENEER WITH CONCRETE CORE
MATERIAL:	LUEDERS LIMESTONE
COLOR/FINISH:	HONED FINISH, RUNNING BOND PATTERN
SIZE:	CAP - 12" x 24" X 3" THICK FIELD - 12" x 24"
INSTALL:	REF. DETAILS
SUPPLIER:	MOTHERROCK STONE GROUP
CONTACT:	CLINT HART (214.205.6491)
APPROVAL:	***SAMPLE, SHOP DRAWINGS, MOCKUP***

WOOD

WD-1 WOOD DECKING

TYPE:	IPE
FINISH:	TBD
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***SAMPLE, SHOP DRAWINGS, MOCKUP***

DRAINS

D-1 AREA DRAIN

MODEL:	*TBD*
SIZE:	6" SQUARE
FINISH:	STAINLESS STEEL OR BRONZE
COLOR:	BLACK
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***CUT SHEET***

D-2 PLANTER DRAIN

MODEL:	*TBD*
SIZE:	12" SQUARE WITH ATRIUM GRATE TOP
FINISH:	CAST IRON
COLOR:	BLACK
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***CUT SHEET***

LIGHTING

L-1 POLE LIGHT

TYPE:	LITHONIA CSX1 LED (TO MATCH EXISTING)
COLOR/FINISH:	BROWN TO MATCH EXISTING
CONTACT:	ALA, REF. ARCH PLANS

L-2 LIT BOLLARD

TYPE:	LITHONIA CSX1 LED (TO MATCH EXISTING)
COLOR/FINISH:	BROWN TO MATCH EXISTING
CONTACT:	ALA, REF. ARCH PLANS

L-3 TREE UPLIGHT

MANUFACTURER:	BK
MODEL:	DS-LED-E65-MFL-A9-BLP-12-11-A/PP-S-18-B-BLP-SF
COLOR/FINISH:	TBD
INSTALL:	PER MANUFACTURERS SPECIFICATIONS
SUPPLIER:	ALA LIGHTING
CONTACT:	TIM GALVIN (214.658.9024)

L-4 ACCENT WALL LIGHT (RECESSED WALL WASH)

MANUFACTURER:	LUMENPULSE
MODEL:	LOG RO 120-24-30K-80X30-UMP-SI-DIM IP68 RATED LIGHT. LIGHT TO BE INSTALLED BELOW FINISH GRADE, REF. DETAILS
COLOR/FINISH:	SILVER SANDTEX
INSTALL:	PER MANUFACTURERS SPECIFICATIONS
SUPPLIER:	ALA LIGHTING
CONTACT:	TIM GALVIN (214.658.9024)

L-5 WALL STEP LIGHT

MANUFACTURER:	BEGA
MODEL:	RECESSED WALL LUMINAIRE (SHIELDED)
COLOR/FINISH:	BRUSHED STAINLESS STEEL
INSTALL:	PER MANUFACTURERS SPECIFICATIONS
SUPPLIER:	ALA LIGHTING
CONTACT:	TIM GALVIN (214.658.9024)

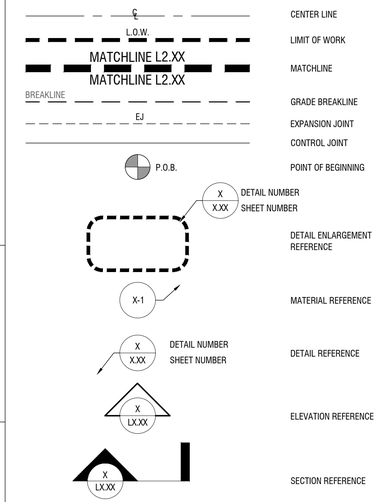
MISCELLANEOUS

MI-1 BUBBLER

MANUFACTURER:	CRYSTAL FOUNTAINS
MODEL:	TBD (FOAM JET W/ FIBER OPTIC LIGHT)
FINISH:	BRONZE
INSTALL:	TOP OF NOZZLE TO BE SET FLUSH WITH POOL FINISH, INSTALL PER MANUFACTURER RECOMMENDATIONS
APPROVAL:	***CUT SHEET***

SYMBOLS LEGEND:

GENERAL



CENTER LINE
LIMIT OF WORK
MATCHLINE
GRADE BREAKLINE
EXPANSION JOINT
CONTROL JOINT
POINT OF BEGINNING
DETAIL NUMBER / SHEET NUMBER
DETAIL ENLARGEMENT REFERENCE
MATERIAL REFERENCE
DETAIL NUMBER / SHEET NUMBER
DETAIL REFERENCE
ELEVATION REFERENCE
SECTION REFERENCE

ABBREVIATIONS

735.46	PROPOSED SPOT GRADE
⊕ 735.46	EXISTING SPOT GRADE
TW	TOP OF WALL
BW	BOTTOM OF WALL
TF	TOP OF FOOTING
COL	TOP OF COLUMN
TS	TOP STEP
BS	BOTTOM STEP
TR	TOP OF RAMP
BR	BOTTOM OF RAMP
TC	TOP OF CURB
BC	BOTTOM OF CURB
TB	TOP OF BAND
TP	TOP OF PAVEMENT
TGr	TOP OF GRAVEL
TG	TOP OF GRADE
FL	FLOWLINE/INVERT ELEVATION
EJ	EXPANSION JOINT
CJ	CONTROL JOINT
CL	CENTER LINE
POB	POINT OF BEGINNING

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RayburnElectric COOPERATIVE

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Kimley»Horn
P.I.A. _____ LANDON R. HUCKINS
L.A. No. 3480 Date 10/14/2022

KEY PLAN

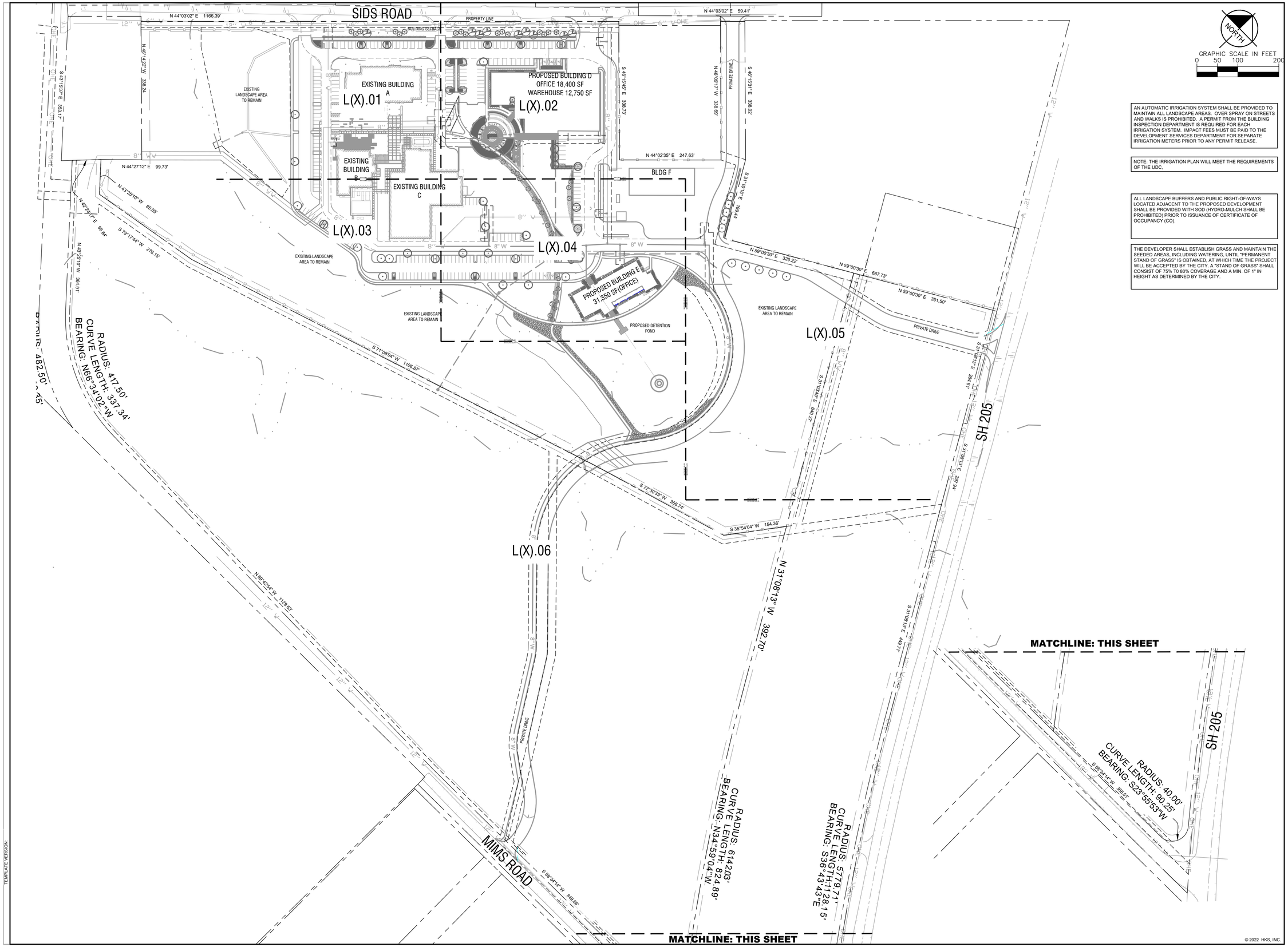
REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000
DATE
10/14/22
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
GENERAL NOTES & MATERIALS LEGEND

SHEET NO.
L1.00

PLOT DATE:
TEMPLATE VERSION:



GRAPHIC SCALE IN FEET
0 50 100 200

AN AUTOMATIC IRRIGATION SYSTEM SHALL BE PROVIDED TO MAINTAIN ALL LANDSCAPE AREAS. OVER SPRAY ON STREETS AND WALKS IS PROHIBITED. A PERMIT FROM THE BUILDING INSPECTION DEPARTMENT IS REQUIRED FOR EACH IRRIGATION SYSTEM. IMPACT FEES MUST BE PAID TO THE DEVELOPMENT SERVICES DEPARTMENT FOR SEPARATE IRRIGATION METERS PRIOR TO ANY PERMIT RELEASE.

NOTE: THE IRRIGATION PLAN WILL MEET THE REQUIREMENTS OF THE UDC.

ALL LANDSCAPE BUFFERS AND PUBLIC RIGHT-OF-WAYS LOCATED ADJACENT TO THE PROPOSED DEVELOPMENT SHALL BE PROVIDED WITH SOD (HYDRO-MULCH SHALL BE PROHIBITED) PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY (CO).

THE DEVELOPER SHALL ESTABLISH GRASS AND MAINTAIN THE SEEDED AREAS, INCLUDING WATERING, UNTIL "PERMANENT STAND OF GRASS" IS OBTAINED, AT WHICH TIME THE PROJECT WILL BE ACCEPTED BY THE CITY. A "STAND OF GRASS" SHALL CONSIST OF 75% TO 80% COVERAGE AND A MIN. OF 1" IN HEIGHT AS DETERMINED BY THE CITY.

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DATE
10/14/22
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
OVERALL PLAN

SHEET NO.
L1.01

PLOT DATE:
TEMPLATE VERSION:

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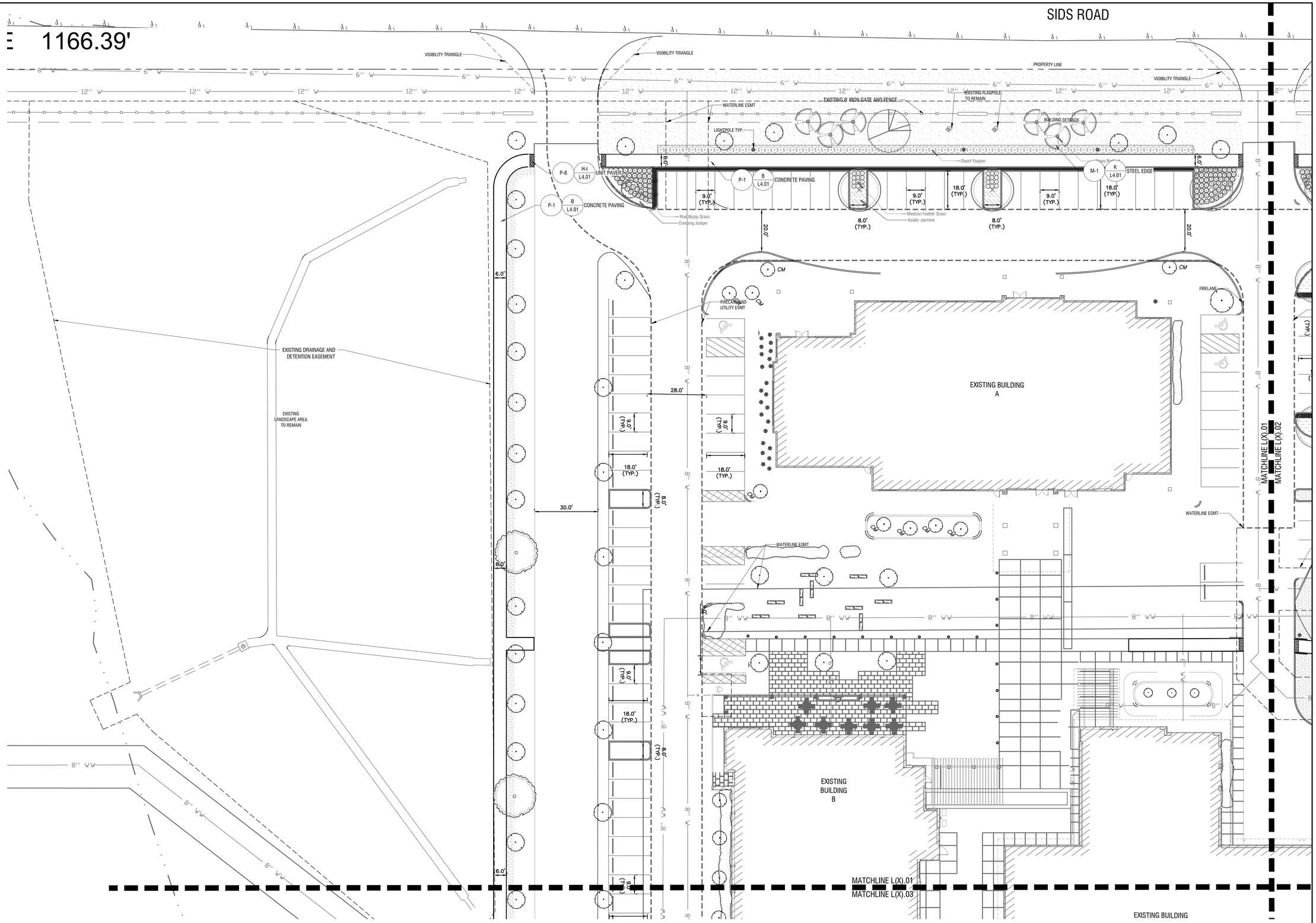

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HKS PROJECT NUMBER
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10/14/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
HARDSCAPE PLAN

SHEET NO.
L2.01

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TEMPLATE VERSION:
PLOT DATE:

SIDS ROAD

VISIBILITY TRIANGLE

PROPOSED 8' IRON GATE AND FENCE

Texas Redbud

Texas Red Oak

Live Oak

Purple Wintercreeper

Brakelights Red Yucca

Giant Liriope

Cedar Elm

Texas Sage

Mahonia Soft Caress

Common Boxwood

Bermuda Grass

Autumn Sage

Multi-Trunk

Dallas Red Crape Myrtle

WATERLINE ESMT

FIRELANE

BISTRO TABLES A-5

STONE BLOCK SEATING A-6

DECORATIVE GRAVEL J L4.01 A6-2

M-1 K L4.01 STEEL EDGE

AG-1 J L4.01 DECOMPOSED GRANITE

P-1 B L4.01 CONCRETE PAVING

P-3

P-4 E L4.01 UNIT PAVER

P-5 E L4.01 UNIT PAVER

P-6 E L4.01 UNIT PAVER

P-7 E L4.01 UNIT PAVER

P-8 H-I L4.01 UNIT PAVER

W-1 X LX.XX STONE RETAINING WALLS

W-2 X LX.XX FEATURE WALLS

WD-1 X LX.XX WOOD DECKING

A-3 BENCH

A-6 STONE BLOCK SEATING

A6-2 J L4.01 DECORATIVE GRAVEL

A-7 X LX.XX OUTDOOR KITCHEN STONE

PROPOSED BUILDING D
OFFICE 18,400 SF
WAREHOUSE 12,750 SF

S 46°15'45" E 338.73'

N 44°02'35" E 24

BLDG F

MATCHLINE L(X).01
MATCHLINE L(X).02
MATCHLINE L(X).01
MATCHLINE L(X).04

NORTH
0' 20' 40'
Scale: 1" = 20'-0"

Hardscape Plan
Scale: 1" = 20' - 0"

A

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HKS PROJECT NUMBER
25370.000

DATE
10/14/22

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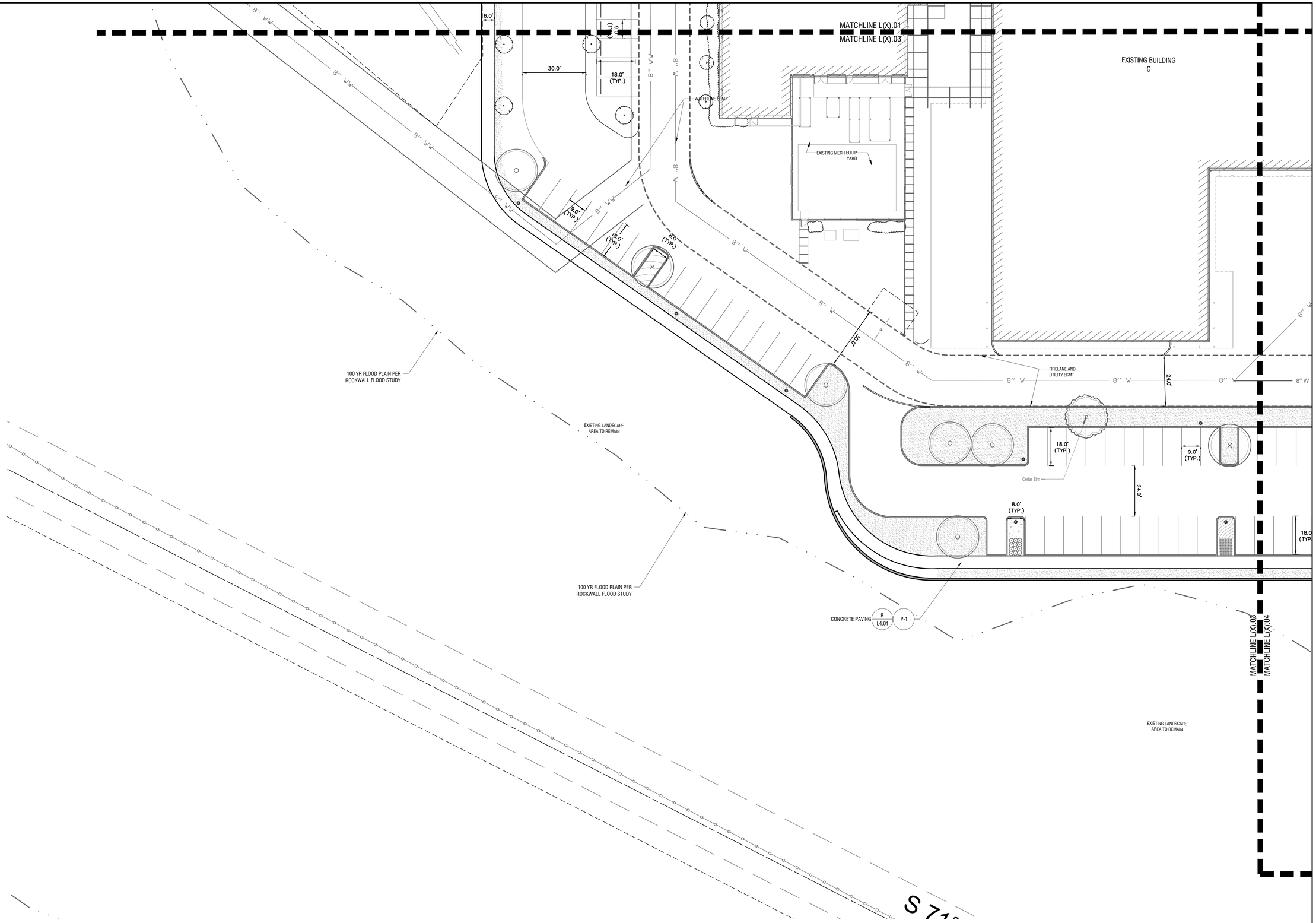
CITY SITE PLAN SUBMITTAL

SHEET TITLE
HARDSCAPE PLAN

SHEET NO.
L2.02



NORTH

0' 20' 40'

Scale: 1" = 20'-0"

Hardscape Plan

Scale: 1" = 20' - 0"

A

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PLOT DATE:

TEMPLATE VERSION:

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RayburnElectric COOPERATIVE

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KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000

DATE
10/14/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
HARDSCAPE PLAN

SHEET NO.
L2.03

MATCHLINE L(X).01
MATCHLINE L(X).04

18.0' (TYP.)
9.0' (TYP.)
18.0' (TYP.)
Lacebark Elm
WATERLINE ESMT
8" W
8' W
9.0' (TYP.)
18.0' (TYP.)
11.0'
24.0'
Purple Wintercreeper
P-8
H-I
L4.01
UNIT PAVER
35.0'
WATERLINE ESMT
A-6
STONE BLOCK SEATING
P-4
Yaupon Holly
Fountain Grass
Mexican Feather Grass
Littoral Planting Upland Mix
PROPOSED BUILDING E
31,350 SF(OFFICE)
M-1
K
L4.01
STEEL EDGE
W-1
X
LX.XX
STONE RETAINING WALLS
WD-1
X
LX.XX
WOOD DECKING
CONCRETE PAVING
B
L4.01
P-1
100 YR FLOOD PLAIN PER
ROCKWALL FLOOD STUDY
8.0' (TYP.)
18.0' (TYP.)
9.0' (TYP.)
24.0'
MATCHLINE L(X).03
MATCHLINE L(X).04
MATCHLINE L(X).04
MATCHLINE L(X).05
MATCHLINE L(X).04
MATCHLINE L(X).06
PROPOSED DETENTION

NORTH
0' 20' 40'
Scale: 1" = 20'-0"

Hardscape Plan
Scale: 1" = 20' - 0"
A

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DALLAS, TX 75206

OWNER
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950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

RayburnElectric COOPERATIVE

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P.L.A. LANDON R. HUCKINS
L.A. No. 3480 Date 10/14/2022

KEY PLAN

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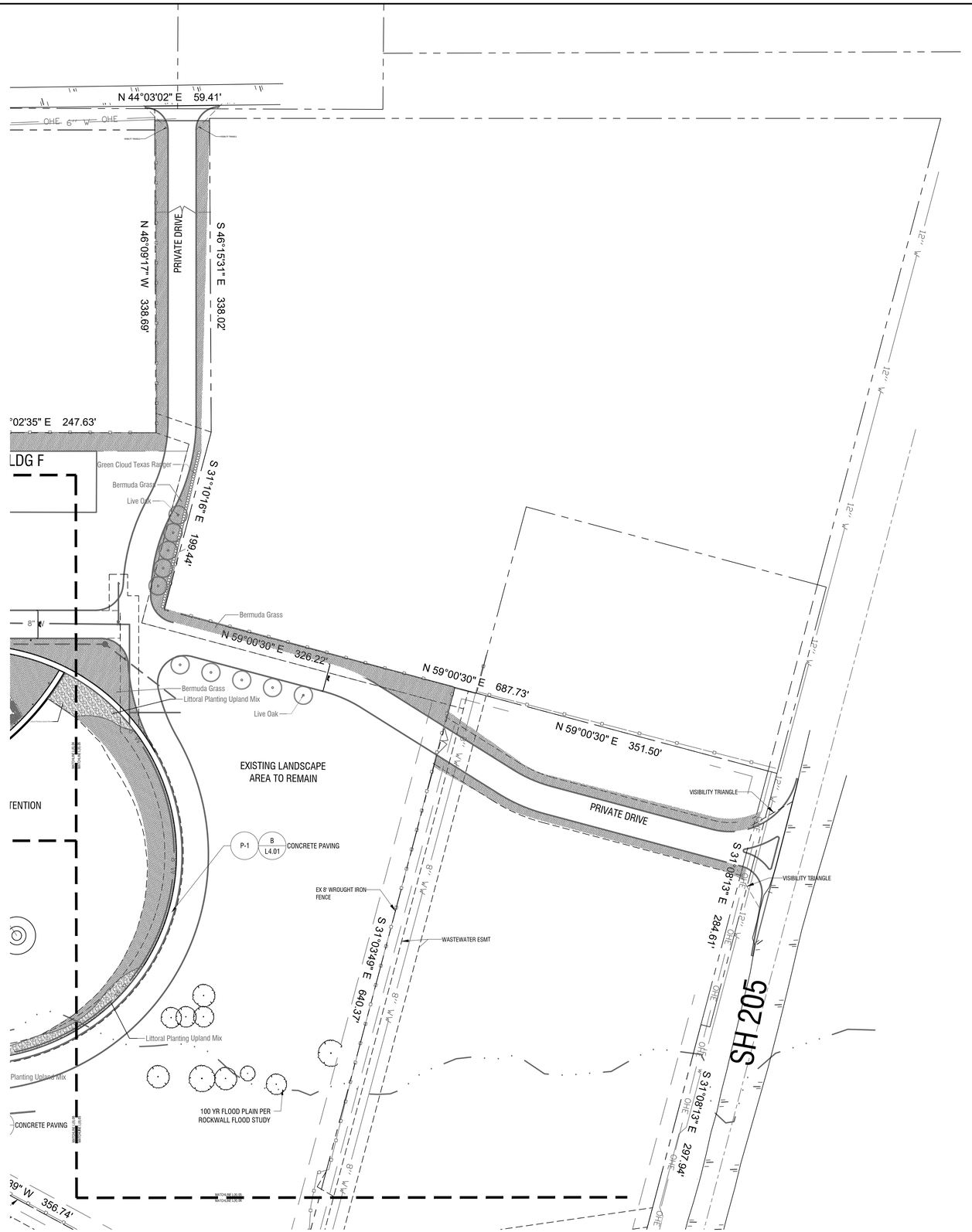
SHEET TITLE
HARDSCAPE PLAN

SHEET NO.
L2.04



NORTH

0' 60' 120'

Scale: 1" = 60'-0"

Hardscape Plan

Scale: 1" = 60' - 0"

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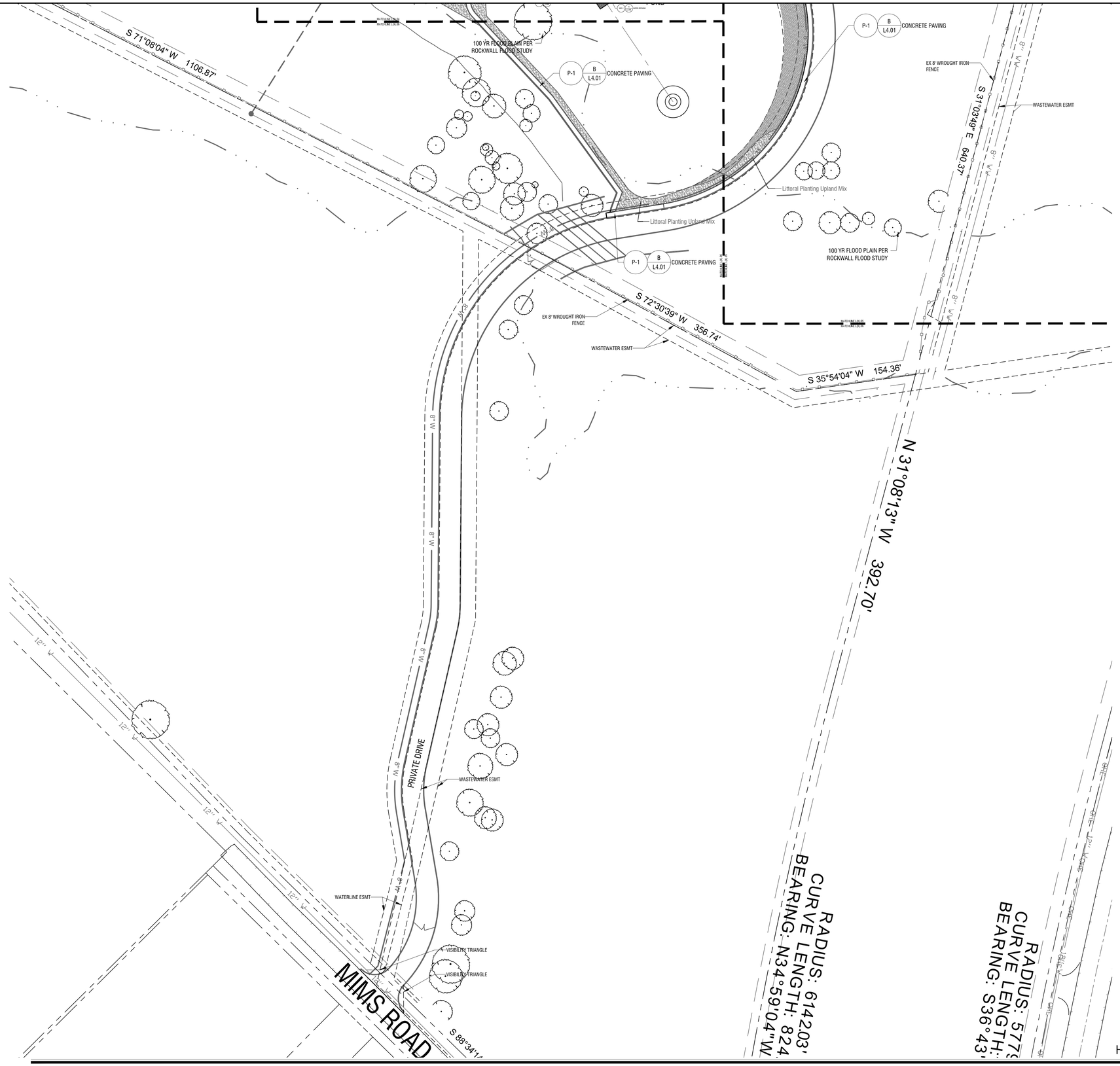

Hardscape Plan

Scale: 1" = 60' - 0"

A

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SHEET TITLE
HARDSCAPE PLAN

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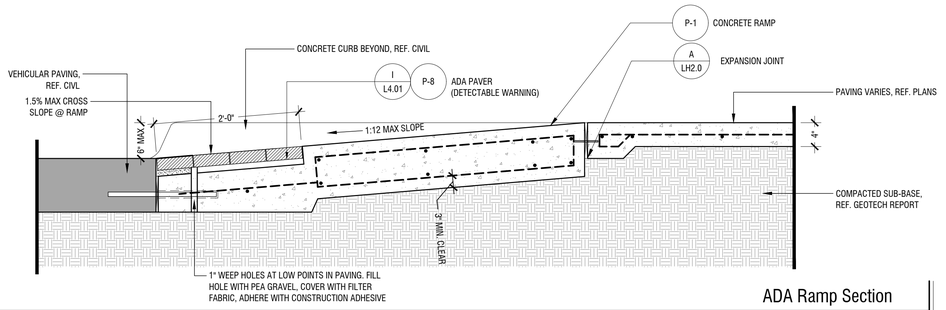
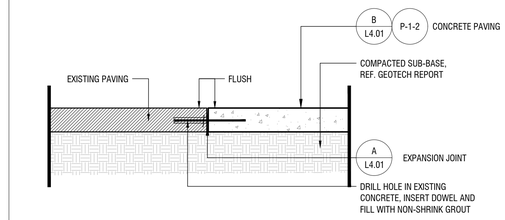


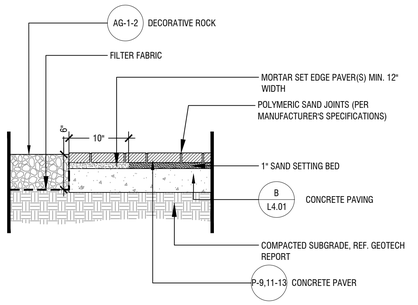
ADA Ramp Section — H

Scale: 1" = 1'-0"



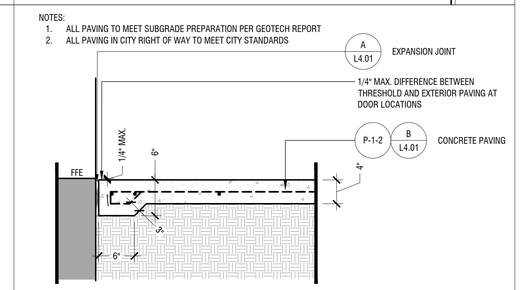
Concrete to Existing Sidewalk — D

Scale: 1" = 1'-0"



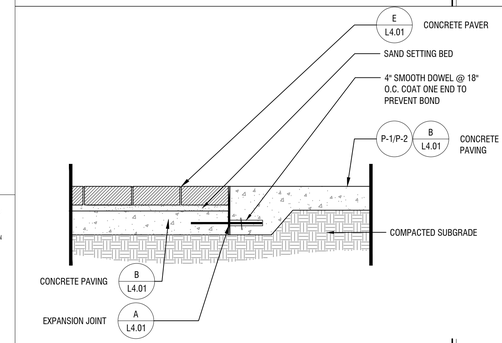
Paver to Decorative Rock Transition — G

Scale: 1"=1'-0"



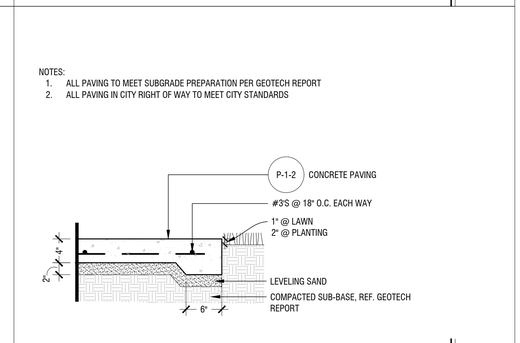
Concrete Paving @ Building — C

Scale: 1" = 1'-0"



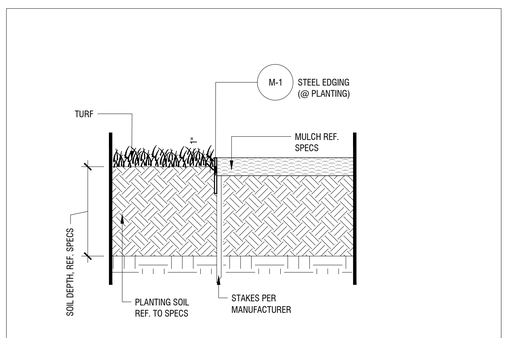
Concrete Paver to Concrete Paving Transition — F

Scale: 1" = 1'-0"



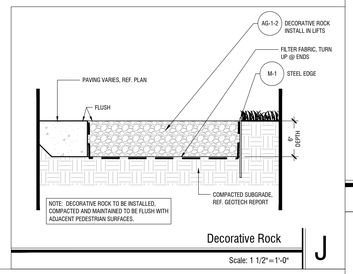
Typ. Concrete Paving — B

Scale: 1" = 1'-0"



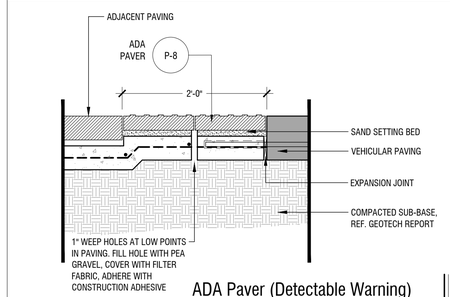
Steel Edge — K

Scale: 1 1/2" = 1'-0"



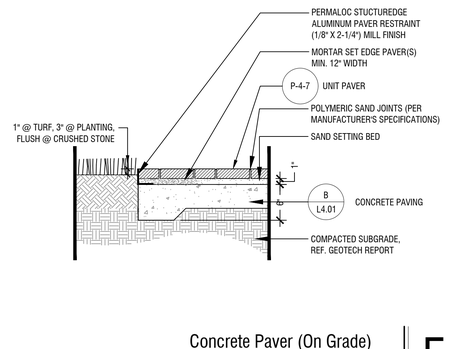
Decorative Rock — J

Scale: 1 1/2" = 1'-0"



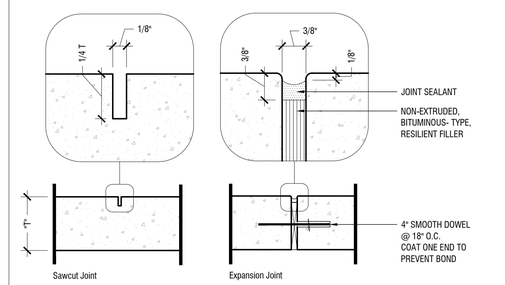
ADA Paver (Detectable Warning) — I

Scale: 1" = 1'-0"



Concrete Paver (On Grade) — E

Scale: 1" = 1'-0"



Concrete Paving Joints — A

N.T.S.

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Kimley»Horn
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L.A. No. 3480 Date 10/14/2022

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

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DATE
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SHEET TITLE
HARDSCAPE DETAILS

SHEET NO.
L4.01

PLOT DATE:

TEMPLATE VERSION:

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Luminaire Schedule								
Symbol	Type	Qty	Manufacturer / Catalog Number	Total Lumen Output	Total Input Watts	Ballast Factor	Light Lost Factor	User Defined Factor
	AA	51	LITHONIA CSX1 LED 60C 700 40K T4M HS	12377	134	1.000	0.900	1.000
	BB	40	LITHONIA KBD8 LED 12C 350 40K ASY MVOLT	809	16	1.000	0.900	1.000
	CC	2	LITHONIA DSXW2 LED 20C 350 40K T2S MVOLT	2988	25	1.000	0.900	1.000

Calculation Summary						
Calculation Grid Location	Calc. Height (Ft.)	Units	Avg	Max	Min	Avg/Min
GROUND_Planar	0	Fc	0.78	5.0	0.0	N.A.
PARKING LOT 1		Fc	2.69	4.1	1.4	1.92
PARKING LOT 2 & ROADWAY		Fc	2.90	5.0	0.8	3.63

AA

CSX1 LED
LED Area Luminaire

Specifications
EPA: 0.7 ft² (65 m²)
Length: 23-1/2" (597 mm)
Width: 18-1/2" (470 mm)
Height: 5-7/8" (149 mm)
Weight (max): 37 lbs (16 kg)

CC

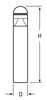
D-Series Size 2
LED Wall Luminaire

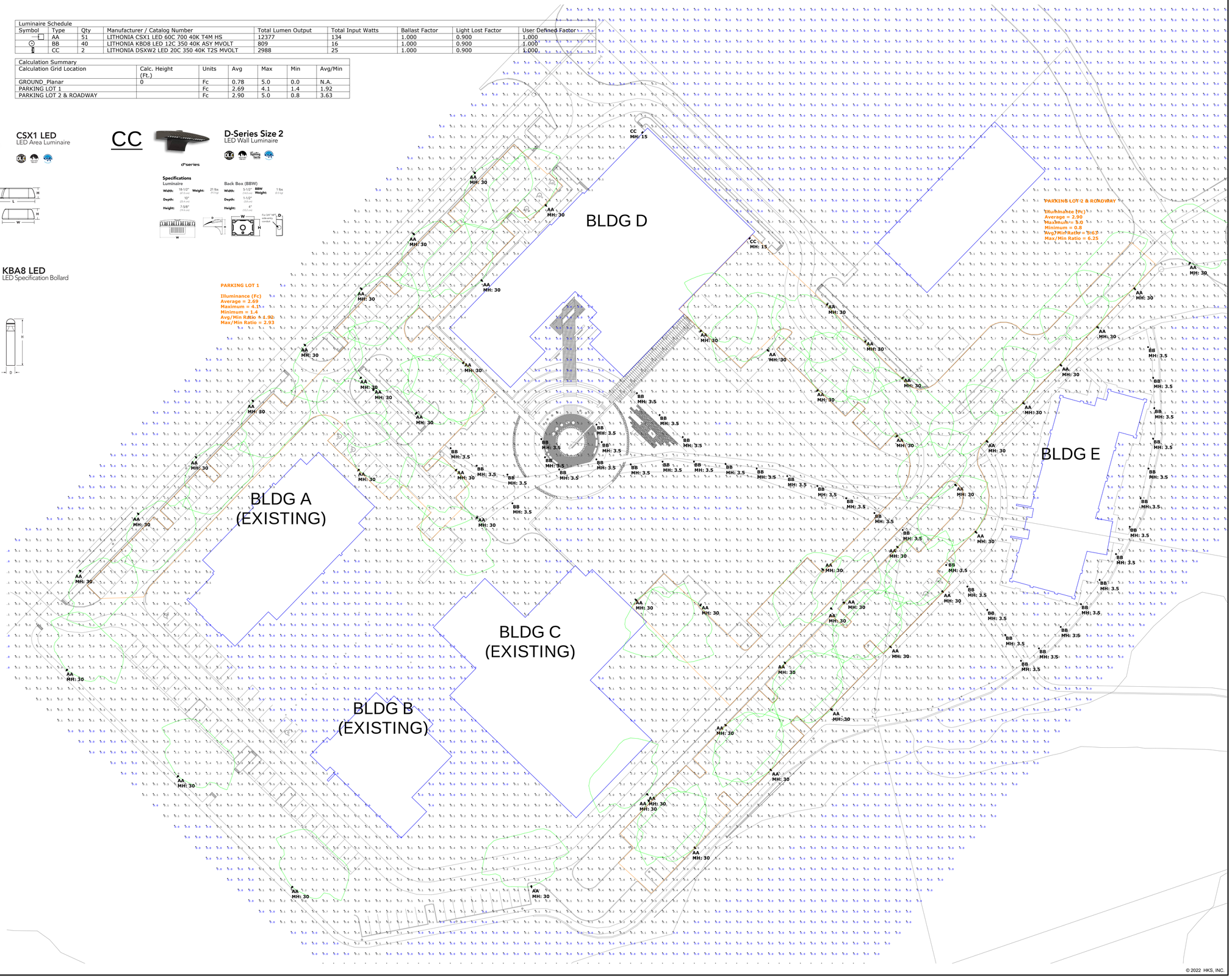
Specifications
Luminaire
Width: 18-1/2" (470 mm) Weight: 21 lbs (9.5 kg)
Depth: 10" (254 mm)
Height: 7-5/8" (194 mm)
Back Box (BBW)
Width: 5-1/2" (140 mm) BBW Weight: 1 lbs (0.5 kg)
Depth: 1-1/2" (38 mm)
Height: 4" (102 mm)

BB

KBA8 LED
LED Specification Bollard

Specifications
8" Round (203 mm)
Height: 42" (106.7 cm)
Weight (max): 27 lbs (12.25 kg)





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OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
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618 MAIN STREET
GARLAND, TEXAS 75040

HKS PROJECT NUMBER
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SHEET TITLE
SITE LIGHTING - PHOTOMETRIC CALCS

SHEET NO.
SL.00

VP:LOT DATE:
TEMPLATE VERSION:

Traffic Impact Analysis

Rayburn Electric Cooperative
Rockwall, Texas

October 13, 2022

Kimley-Horn and Associates, Inc.
Dallas, Texas

Project #67075002
Registered Firm F-928

Kimley»Horn

Traffic Impact Analysis

Rayburn Electric Cooperative Campus Expansion
Rockwall, Texas

Prepared by:

Kimley-Horn and Associates, Inc.
13455 Noel Road, Two Galleria Tower, Suite 700
Dallas, Texas 75240
Registered Firm F-928

10/13/2022

Contact:
Christian DeLuca, P.E., PTOE
972-770-1300
October 13, 2022

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EXECUTIVE SUMMARY

The proposed Rayburn Electric Cooperative (REC) Campus Expansion development is located within the block bounded by Goliad Street, Sims Road, and Mims Road in Rockwall, Texas. The site is proposed to be built as a distribution center. This study is intended to identify traffic generation characteristics, identify potential traffic related impacts on the local street system, and to develop mitigation measures required for identified impacts. The following existing intersections were selected to be part of this study:

- Goliad Street & Sids Road
- Mims Road & Sids Road
- Goliad Street & Mims Road
- Mims Road & National Drive

The analysis also included the following driveways having access in and out of the site:

- Drive 1, which is an existing full-access driveway for the REC Campus to Sids Road
- Drive 2, which is an existing full-access driveway for the REC Campus to Sids Road. The driveway is across from the driveway for Air Performance.
- Drive 3, which is an existing full-access driveway for the REC Campus to Sids Road. The driveway is across from the driveway for Rockwall ISD school bus parking lot.
- Drive 4, which is an existing full-access driveway for the REC Campus to Sids Road
- Drive 5, which is a proposed right-in right-out driveway to Goliad Street.
- Drive 6, which is an existing full-access driveway for the REC Campus to Mims Road. The driveway is across from the existing roadway, National Drive.

Traffic operations were analyzed at the study intersections for existing volumes and 2024 background traffic volumes and 2024 background plus site-generated traffic volumes. The future years correspond to the expected buildout year of the site. Conditions were analyzed for the weekday AM and PM peak hours. The background traffic conditions include existing traffic with compound growth rates.

The REC campus expansion development is expected to generate approximately 26 new weekday AM peak hour one-way vehicle trips and 37 new weekday PM peak hour one-way vehicle trips at buildout. The distribution of the site-generated traffic volumes onto the street system was based on the surrounding roadway network, existing traffic patterns, and the project's proposed access locations.

Based on the analysis presented in this report, the proposed Rayburn Electric Cooperative Campus Expansion development can be successfully incorporated into the surrounding roadway network. The proposed site driveways provide the appropriate level of access for the development. The site-generated traffic does not have a significant or disproportionate effect on the existing vehicle traffic operations. The following recommendations should be included in the development of the site:

1. Construct Drive 4 to Goliad Street as a right-in/right-out driveway due to not meeting TxDOT driveway access spacing.

I.INTRODUCTION

A. Purpose

Kimley-Horn was retained to conduct a Traffic Impact Analysis (TIA) of future traffic conditions associated with the development of the Rayburn Electric Cooperative Campus Expansion site located within the block bounded by Goliad Street, Sims Road, and Mims Road in Rockwall, Texas. A site vicinity map is provided as **Exhibit 1**. **Exhibit 2** shows the proposed conceptual site plan. This study is intended to identify traffic generation characteristics, identify potential traffic related impacts on the local street system, and to develop mitigation measures required for identified impacts.

B. Methodology

Traffic operations were analyzed at the study intersections for AM and PM peak hours for the following scenarios due to falling into Analysis Category 1 based on the requirements listed in Table 2.6 in the City of Rockwall's Standards of Design & Construction.

- 2022 existing traffic
- 2024 background traffic
- 2024 background plus site traffic

The capacity analyses were conducted using the *Synchro*™ software package and its associated *Intersection* reports for signalized intersections and *Highway Capacity Manual* reports for unsignalized intersections.

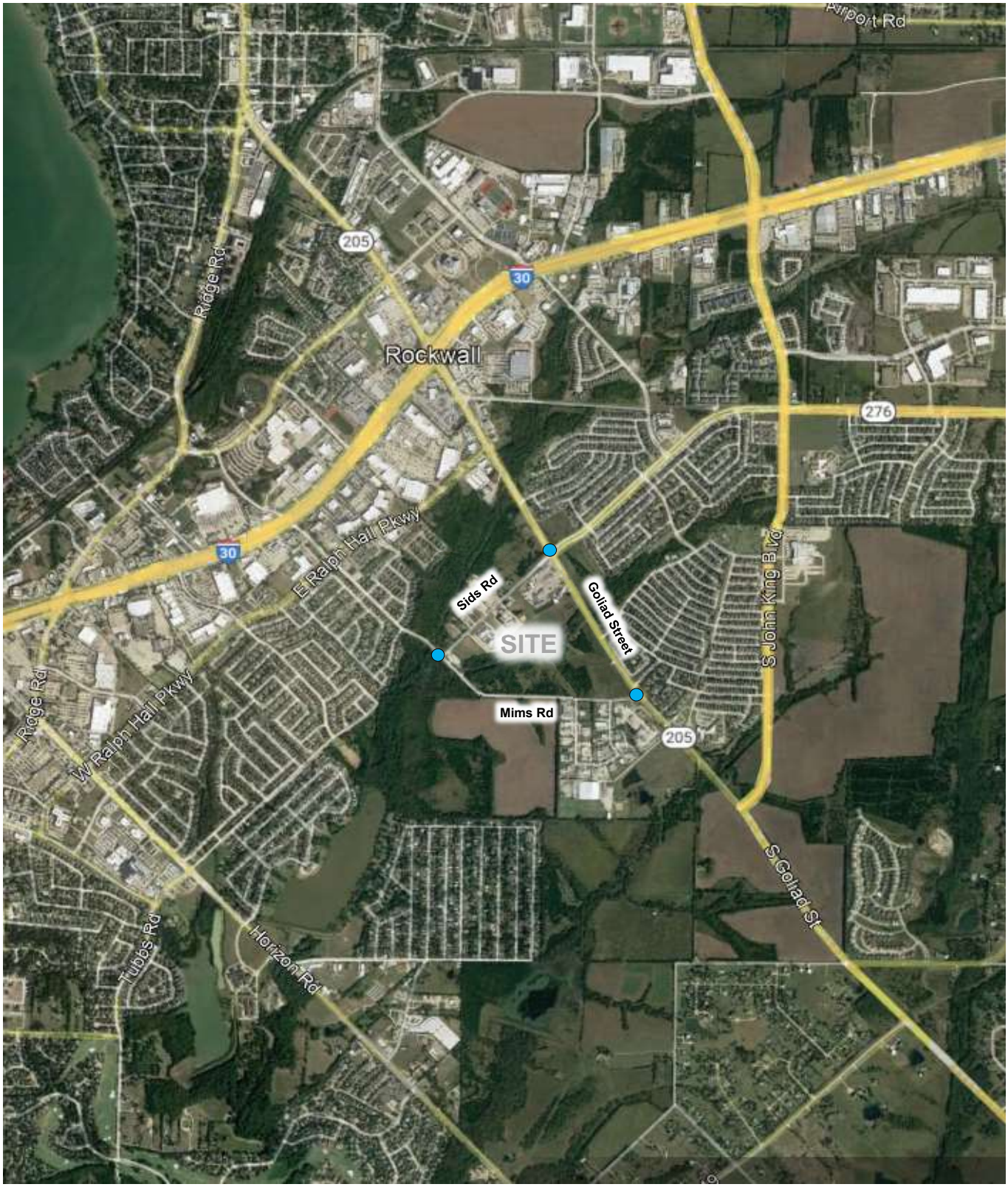


EXHIBIT 1

Vicinity Map

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

= Study Intersection

North

Not To Scale

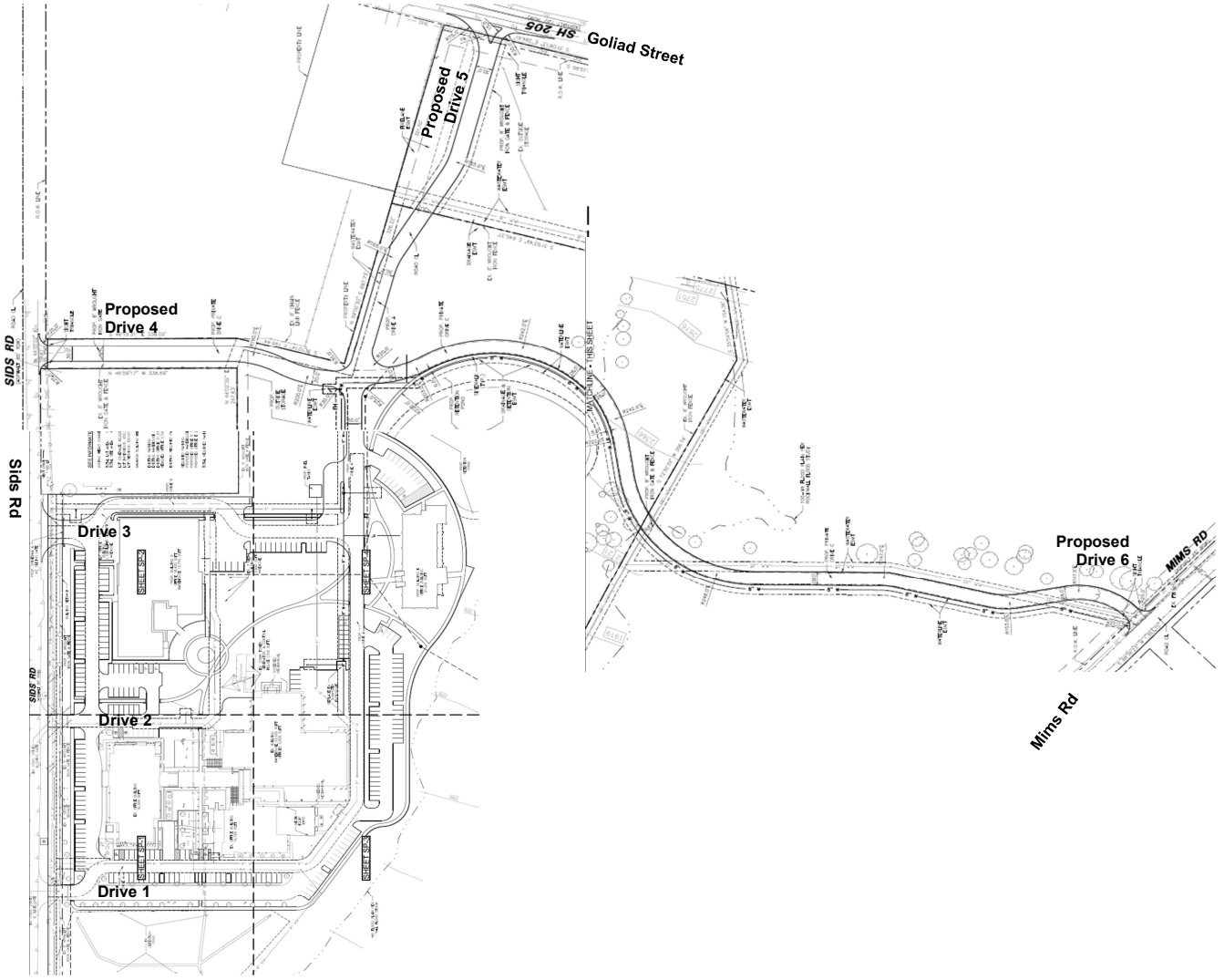


EXHIBIT 2

Conceptual Site Plan

Lineman Building - Rockwall, Texas

Kimley»Horn

North

Not To Scale

II. EXISTING AND FUTURE AREA CONDITIONS

A. Roadway Characteristics

The following signalized intersections were evaluated as part of this study:

- Goliad Street & Sids Road

The following unsignalized intersections were evaluated as part of this study:

- Mims Road & Sids Road
- Goliad Street & Mims Road
- Mims Road & National Drive

The major study area roadways are described below.

Sids Road – is a two-lane undivided roadway between Mims Road to Goliad Street and then transitions into a four-lane divided roadway east of Goliad Street. The speed limit is 30 mph west of Goliad Street adjacent to the proposed site and 50 mph east of Goliad Street. Sids Road is identified as a 4-lane undivided minor arterial, west of Goliad Street, and a 6-lane divided arterial, east of Goliad Street.

Goliad Street (SH 205) – is a two-lane undivided roadway between John King Boulevard to Sids Road and then transitions into a six-lane divided roadway north of Sids Road. The speed limit is 55 mph south of Sids Road adjacent to the proposed site and 45 mph north of Sids Road. Goliad Street is identified as a 6-lane divided arterial on the City of Rockwall Thoroughfare Plan.

Mims Road – is a two-lane undivided roadway that runs from Goliad Street to I-30. On the City of Rockwall Thoroughfare Plan, Industrial Boulevard is designated as a four-lane undivided minor arterial. The speed limit near the site is 30 mph.

Exhibit 3 illustrates the intersection geometry used for the traffic analysis.

B. Existing Study Area

The property is zoned as Heavy Commercial (LHC with “office/warehouse combinations land uses” listed as a primary land use. The use of the property will not be changing.

C. Proposed Site Improvements

The development as proposed includes expansion of the Rayburn Electric.Cooperative Campus. The existing REC campus contains 62,750 square feet; 7700 square feet will be removed while two buildings totaling 52,500 square feet will be added. The net gain is 44,800 square feet.

As shown in **Exhibit 3**, the site has three proposed driveways. The driveways to be modeled in this analysis are as follows:

Drive 1 – is an existing full-access driveway to Sids Road. The drive is approximately 550 feet northeast of the intersection of Mims Road and Sids Road.

Drive 2 – is an existing full-access driveway to Sids Road and is located across from another commercial driveway. The drive is approximately 300 feet northeast of Drive 1.

Drive 3 – would reconstruct and widen the site's northenmost driveway to Sids Road. The drive is approximately 375 feet northeast of Drive 2 and meets the City of Rockwall's minimum driveway spacing of 200 feet.

Proposed Drive 4 – would be a full-access driveway to Sids Road approximately 285 feet north of Drive 3. Drive 4 is proposed to be 100 feet northeast of the existing commercial driveway servicing S & A Systems Inc. The City of Rockwall requires 200 feet driveway spacing on Arterials and 100 feet of spacing on Collectors. Sids Road is expected to be a 4-lane arterial in the future based on the thoroughfare plan, however, functions as a two-lane collector today. Furthermore, the roadway dead ends into Mims Road and traffic volumes will likely remain low for quite sometimes. Further attributing to collector characteristics. The S & A Systems driveway only services a few parking spaces and has very low traffic. For these reasons, the 100-foot driveway spacing is appropriate for this driveway.

Proposed Drive 5 – would be a right-in right-out driveway to Goliad Street (SH 205) approximately 810 feet south of Goliad Street. The driveway will be 155 feet south of the next driveway to the north. Goliad Street is a TxDOT roadway and therefore requires 360 feet of spacing as a 45 MPH road. This spacing requirement is not met. To provide reasonable access under these conditions but also provide the safest operation, the driveway connection should be constructed to only allow right-in/right out turning movements.

Proposed Drive 6 – would be a full access driveway to the existing intersection of Mims Road and National Drive. The access point will create the fourth leg of the existing three-legged intersection

The intersection spacing appears to meet the City of Rockwall standards for driveway spacing away from intersections of minor arterials, and between driveways to minor arterials. Intersection sight distance at the proposed driveways is acceptable with each on relatively straight segments of their respective roadway.

D. Existing Traffic Volumes

Exhibit 4 shows the existing weekday AM and PM peak hour traffic volumes. 24-hour machine counts were collected near the site at the intersection of Goliad Street and Sids Road. The raw count sheets, as well as a comparison between the 24-hour volumes collected and previous 24-hour counts, are provided at the end of this report.

The 24-hour count showed the daily volume on the roadway link as follows:

- Goliad Street, west of Sids Road: 11,423 vehicles per day (vpd)
- Sids Road, south of Goliad Street: 2,339 vpd

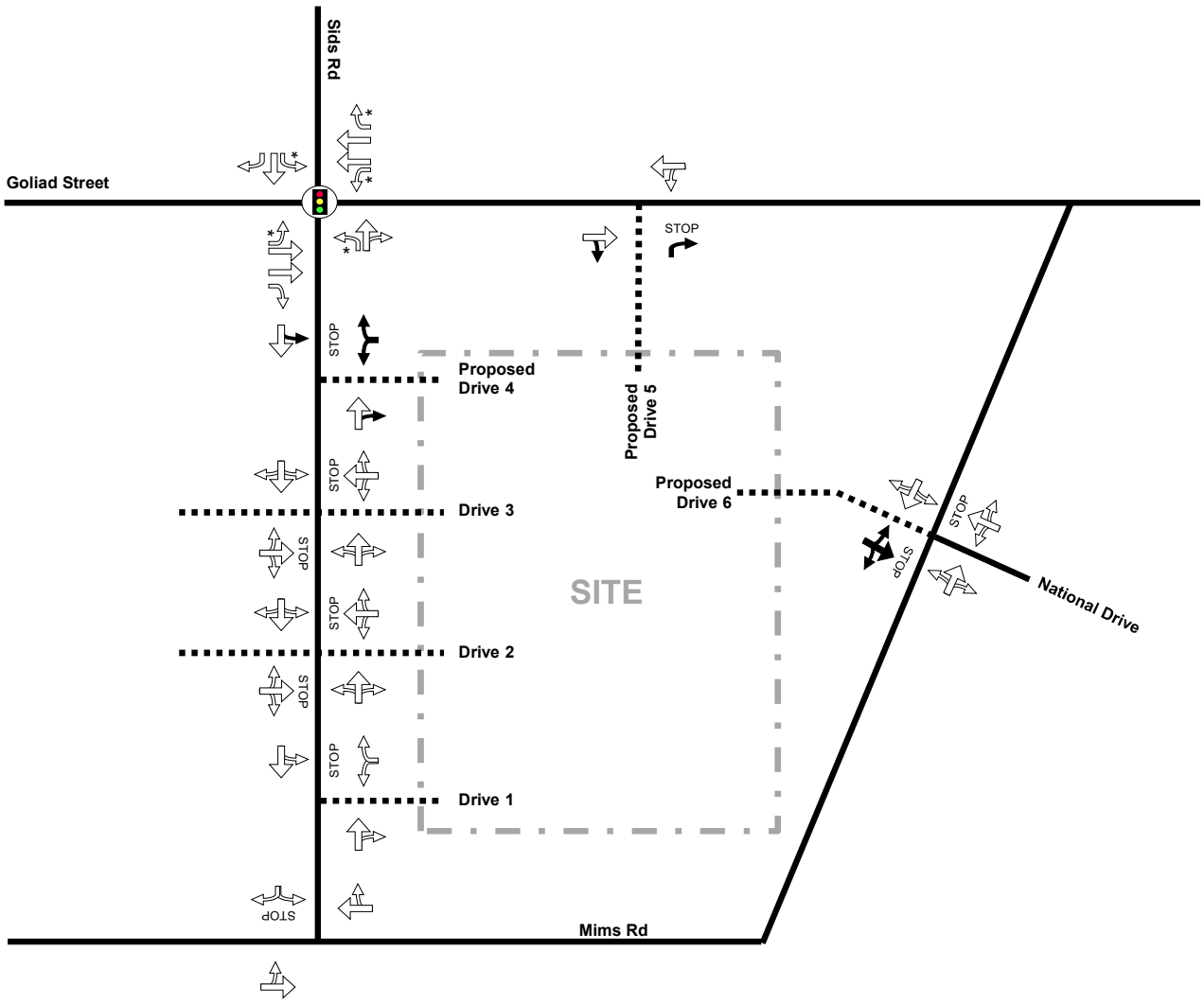


EXHIBIT 3

Lane Assignment and Intersection Control

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

= Signalized Intersection

STOP = Stop-Controlled Approach

= Travel Lane

* = Turn Bay

= Driveway Lanes or Off-Site Improvements

TWLTL = Two-Way Left Turn Lane

North

Not To Scale

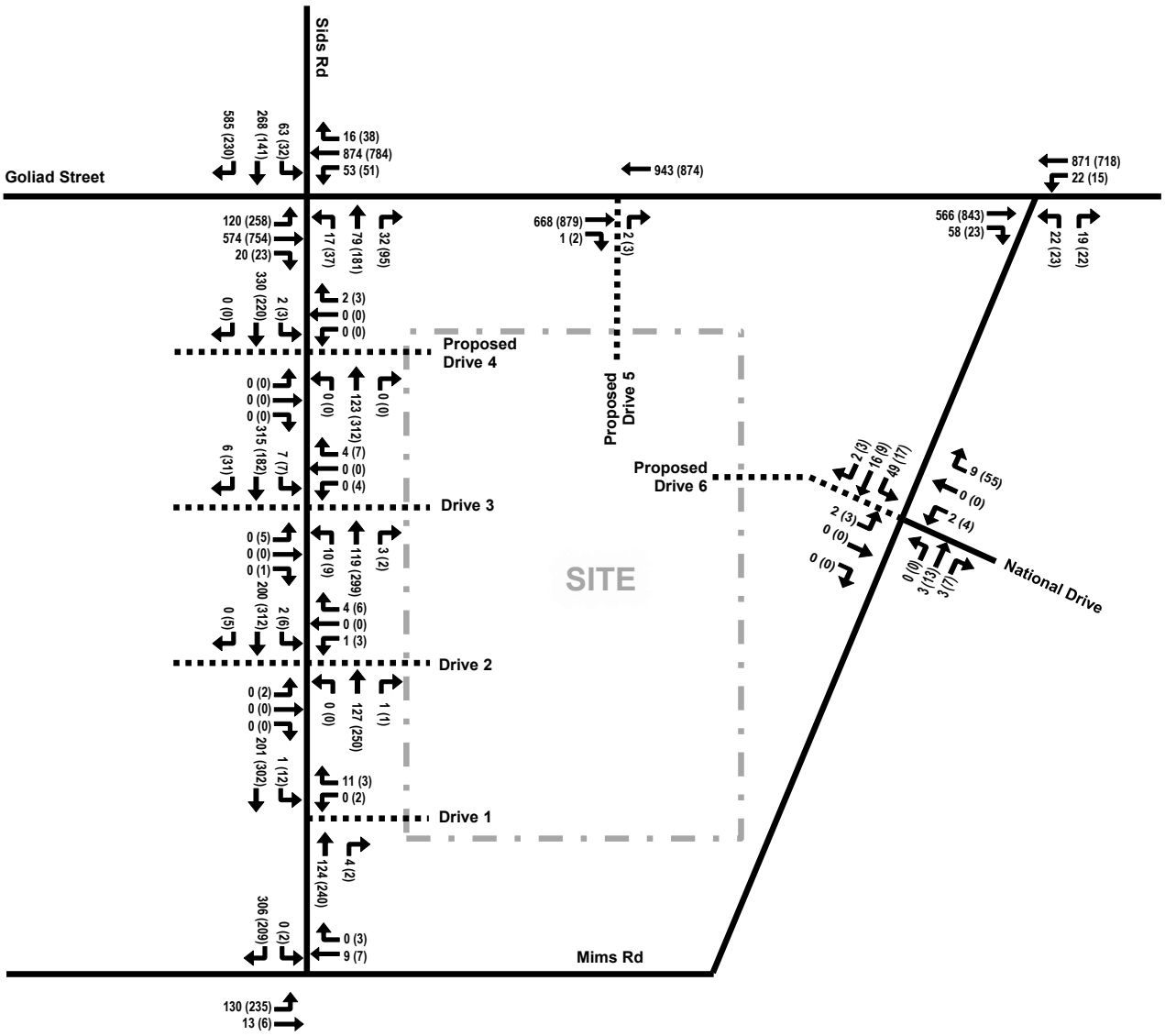


EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

Not To Scale

III. PROJECT TRAFFIC CHARACTERISTICS

A. Site-Generated Traffic

Site-generated traffic estimates are determined through a process known as trip generation. If site specific trip data is unknown, rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific tie interval using the 10th edition of *Trip Generation Manual* published by the Institute of Transportation Engineers (ITE). However, since the specific trip data of the existing site is known that data is a better indication of the expected trip data after the expansion is completed. The existing trip data was grown as a ratio based on the square footage of the existing REC campus and proposed REC campus. An additional 20% trip increase was applied to ensure a conservative analysis.

No reductions were taken for pass-by trips, internal capture, or multimodal use.

Table 1 shows the resulting daily and weekday AM and PM peak hour trip generation for the proposed development, showing new external trips.

Table 1 – Trip Generation

Land Uses	Amount	Units	ITE Code	Daily One-Way Trips	AM Peak Hour One-Way Trips			PM Peak Hour One-Way Trips		
					IN	OUT	TOTAL	IN	OUT	TOTAL
Existing Site (Observed)	*62,750*	*SF*	*170*	*636*[2]	*11*	*13*	*24*	*17*	*18*	*35*
Proposed Expansion (Estimated) [1]	44,800	SF	170	551[2]	8	10	18	13	13	25
Development Totals										
Subtotal Trip Generation Total:				1187[2]	19	23	42	30	31	60
Contingency (20% Increase)				-	4	5	8	6	6	12
Existing Site (Observed)				-636[2]	*-11*	*-13*	*-24*	*-17*	*-18*	*-35*
Total Net New External Vehicle Trips:				***551***[2]	**12**	**15**	**26**	**19**	**19**	**37**

(1) Trip Generation rates based on the existing site's observed inbound and outbound trips.
(2) Trip Generation rates based on ITE Trip Generation, 11th Edition.

B. Trip Distribution and Assignment

The distribution of the site-generated traffic volumes in to and out of the site driveways and onto the street system was based on the area street system characteristics, existing traffic patterns, relative land use density, and the locations of the proposed driveway access to/from the site. The corresponding distributions can be found in **Exhibit 5**. The corresponding inbound and outbound traffic assignment, where the directional distribution is applied using the most probable paths to and from the site can be found in **Exhibit 6**

C. Development of 2024 Background Traffic

In order to obtain 2024 background traffic, the existing traffic counts and historic counts near the site were compared to find expected growth trends within the study area. Based on the recent growth in the area, an annual growth rate of 3.2% was assumed for the background traffic through 2024. To calculate the 2024 background traffic, the existing 2022 traffic counts were grown by their respective growth rates annually for two years. The resulting 2024 background weekday AM and PM peak hour traffic volumes are shown in **Exhibit 7**.

D. Development of 2024 Total Traffic

Site traffic volumes were added to the background volumes to represent the estimated total (background plus site-generated) traffic conditions for the 2024 study year after completion of the proposed development. **Exhibit 8** shows the resulting 2024 weekday AM and PM peak hour total traffic volumes.

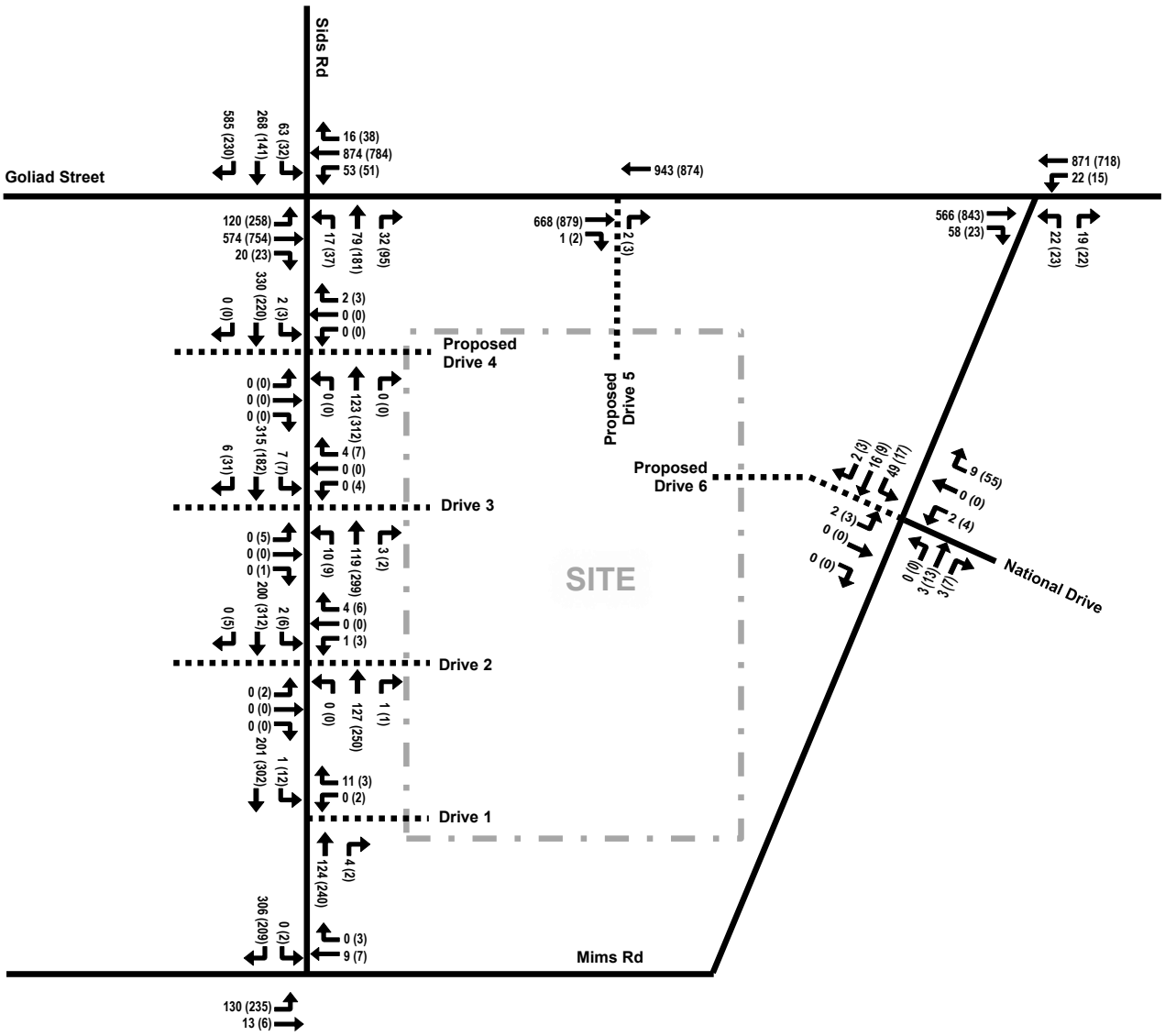


EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

Not To Scale

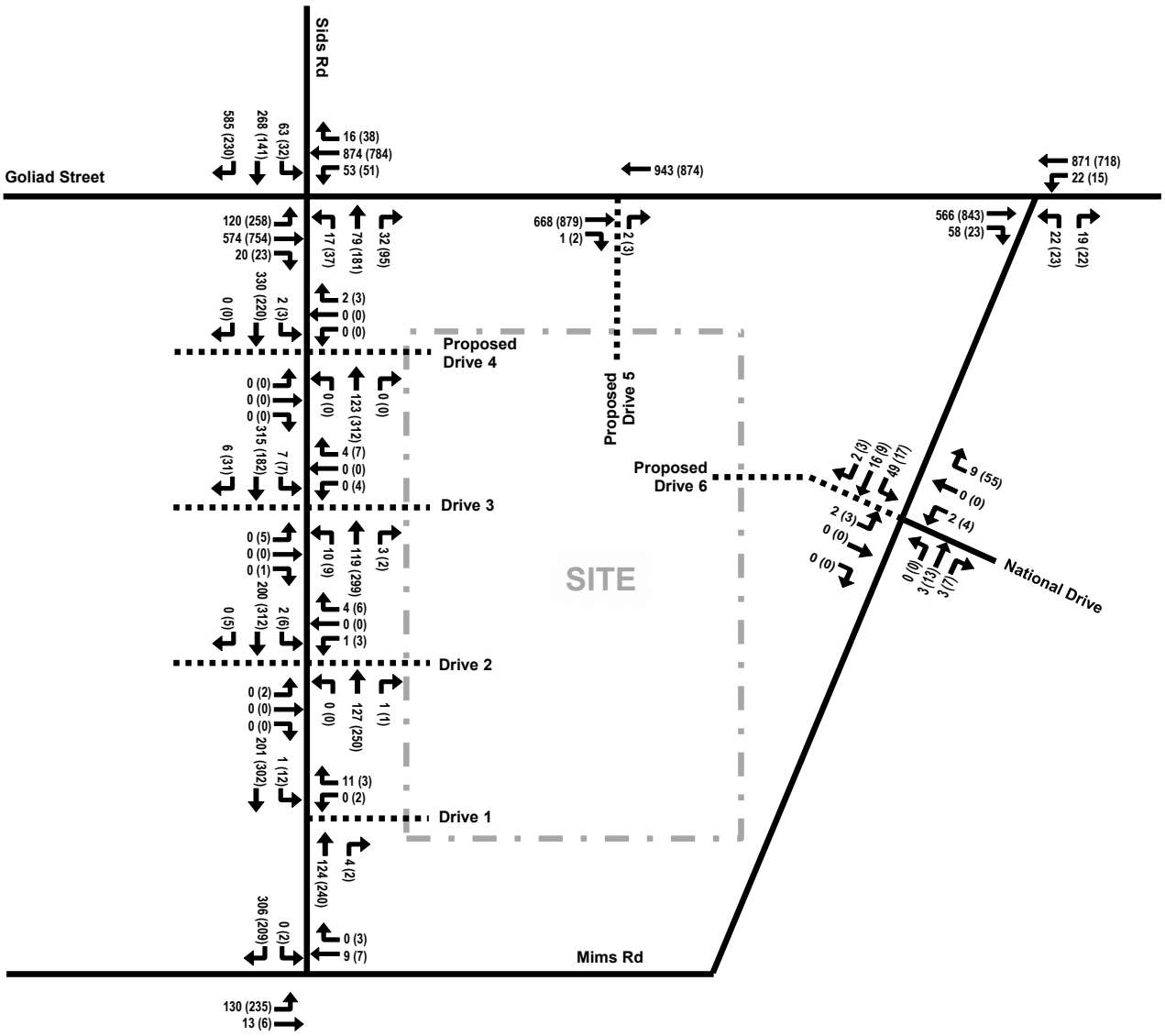


EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

Not To Scale

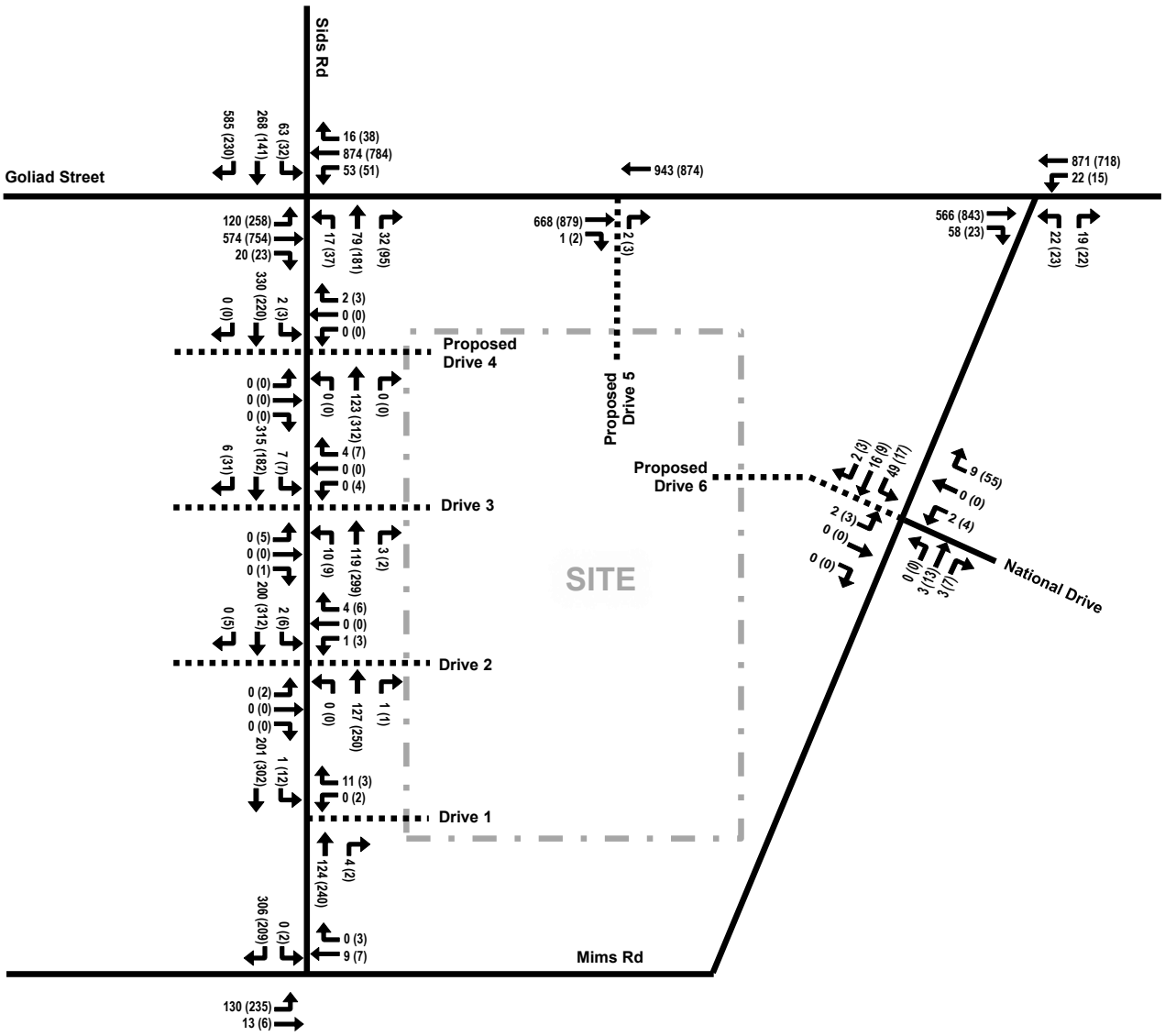


EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

Not To Scale

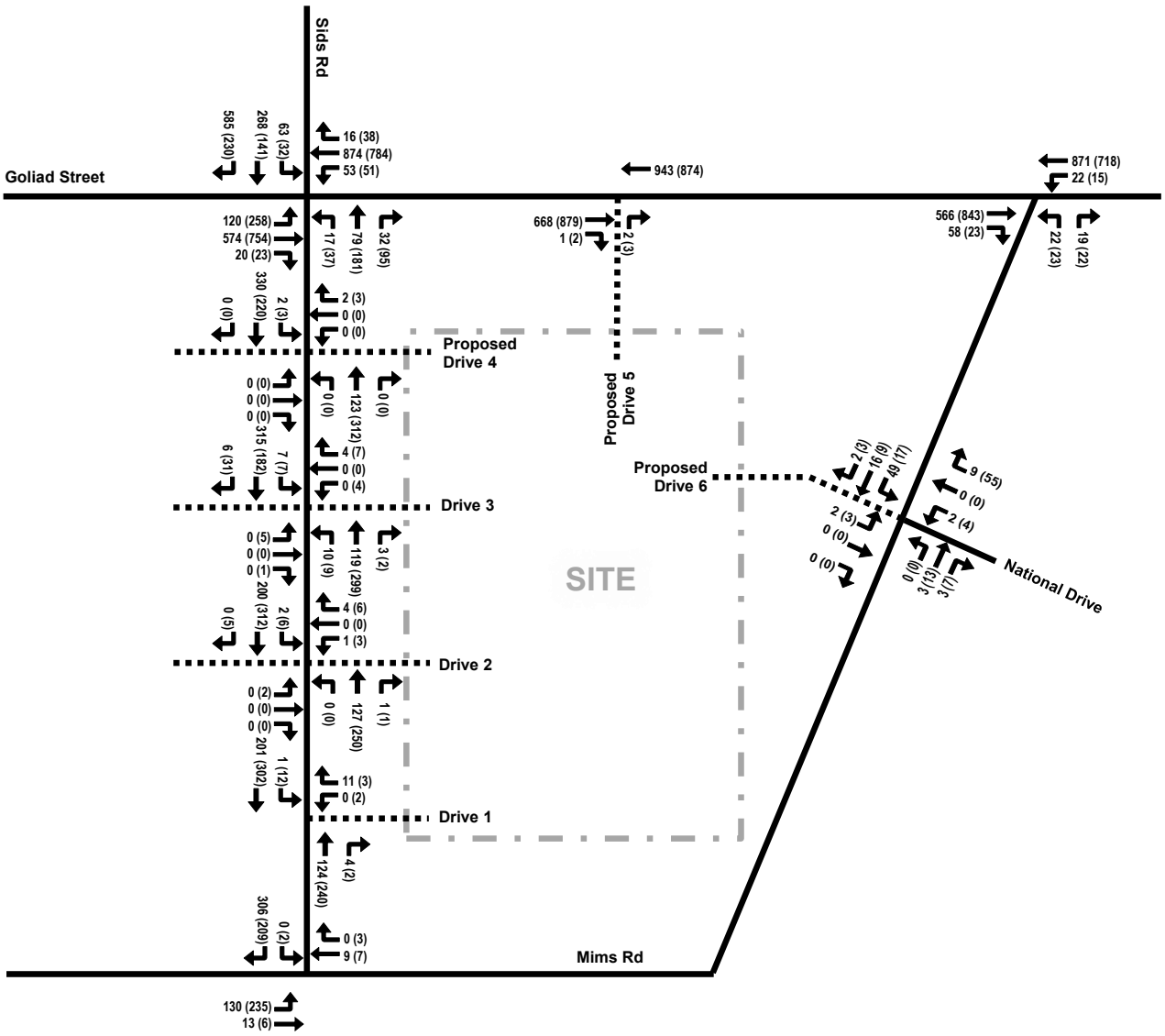


EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

Not To Scale

IV. TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn conducted a traffic operations analysis to determine potential capacity deficiencies in the 2022 & 2024study years at the study intersections. The acknowledged source for determining overall capacity is the current edition of the *Highway Capacity Manual.*

A. Analysis Methodology

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). **Table 2** shows the definition of level of service for signalized and unsignalized intersections.

Table 2 – Level of Service Definitions

Level of Service	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤10	≤10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50

Definitions provided from the Highway Capacity Manual, Special Report 209, Transportation Research Board, 2010.

Study area intersections were analyzed based on average total delay analysis for signalized and unsignalized intersections. For the unsignalized analysis, the level of service (LOS) for a two-way stop-controlled intersection is defined for each movement. Unlike signalized intersections which define LOS for each approach and for the intersection as a whole, LOS for two-way stop-controlled intersections is not defined as a whole.

Signal timings for the signalized intersection were based on the observed signal timing in the field. No timing adjustments were made in future scenarios.

The analyses assumed the lane geometry and intersection control shown in **Exhibit 3**.

The peak hour factors (PHF) for the existing traffic is known from the counts collected at the study intersections and was assumed to remain the same through the analysis. PHF for the site-generated traffic is unknown, so at new driveways it was assumed to be 0.92.

B. Analysis Results

Table 3 show the intersection operational results for the weekday AM and PM peak hours, respectively.

Table 3 – Traffic Operational Results – Weekday AM & PM Peak Hour

INTERSECTION	APPROACH	2021 Existing Traffic		2023 Background Traffic		2023 Background plus Site Traffic		2021 Existing Traffic		2023 Background Traffic		2023 Background plus Site Traffic	
		AM PEAK HOUR		AM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR		PM PEAK HOUR		PM PEAK HOUR	
		DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS
Signalized Intersection													
Sids Road & Goliad Road	EB	24.6	C	24.7	C	24.7	C	34.4	C	34.4	C	36.1	D
	WB	34.0	C	34.2	C	34.1	C	32.2	C	32.2	C	31.8	C
	NB	21.8	C	23.3	C	23.2	C	24.9	C	24.9	C	25.2	C
	SB	17.9	B	20.9	C	23.2	C	12.7	B	12.7	B	13.0	B
	Overall	**25.5**	**C**	**26.7**	**C**	**27.4**	**C**	**29.3**	**C**	**29.3**	**C**	**29.8**	**C**
Unsignalized Intersection													
Mims Road & Sids Road	EBL	7.4	A	7.5	A	7.5	A	7.6	A	7.6	A	7.7	A
	SB	9.8	A	9.9	A	10.0	A	9.3	A	9.3	A	9.3	A
Goliad Road & Mims Road	EB	8.5	A	8.5	A	8.5	A	8.4	A	8.4	A	8.4	A
	NBL	7.3	A	7.3	A	7.3	A	7.3	A	7.3	A	7.3	A
Sids Road & Drive 1	WB	9.0	A	9.0	A	9.0	A	11.3	B	11.3	B	11.0	B
	SBL	-	-	-	-	7.5	A	7.8	A	7.8	A	7.8	A
Sids Road & Drive 2	EB	0.0	A	0.0	A	0.0	A	13.7	B	13.7	B	13.9	B
	WB	9.6	A	9.8	A	9.5	A	11.4	B	11.4	B	11.1	B
	NBL	-	-	-	-	-	-	-	-	-	-	-	-
	SBL	7.5	A	7.5	A	7.5	A	7.8	A	7.8	A	7.8	A
Sids Road & Drive 3	EB	-	-	-	-	-	-	12.8	B	12.8	B	13.1	B
	WB	8.9	A	8.9	A	9.0	A	12.0	B	12.0	B	11.4	B
	NBL	8.0	A	8.0	A	8.0	A	7.7	A	7.7	A	7.7	A
	SBL	7.5	A	7.5	A	7.5	A	7.9	A	7.9	A	7.9	A
Sids Road & Drive 4	WB	-	-	-	-	9.2	A	-	-	-	-	10.3	B
	SBL	-	-	-	-	7.6	A	-	-	-	-	8.0	A
Goliad Road & Drive 5	NBT	-	-	-	-	13.6	B	-	-	-	-	16.6	C
Mims Road & National Drive / Drive 6	EBL	-	-	-	-	-	-	-	-	-	-	-	-
	WBL	-	-	-	-	-	-	7.3	A	7.3	A	7.3	A
	NBT	8.6	A	8.6	A	8.6	A	8.7	A	8.7	A	8.7	A
	SBT	-	-	-	-	9.8	A	-	-	-	-	9.4	A

- No traffic movements in this analysis scenario

C. Traffic Operations

The results in **Table 3** show the intersection operational results for the weekday AM and PM peak hours. After the site-generated traffic is added to the roadway network, each approach operates at the same LOS and negligible increase in delay during both the AM and PM peak hours. The signalized intersection of Goliad Street and Sids Road performs at LOS C in the peak hours representing favorable operations; the analysis demonstrates that the site traffic can be incorporated into the roadway network with very limited disturbances to the existing traffic flow. The existing driveways remain operating with low delays and the proposed driveways are all expected to perform with low delays at LOS B or better. These results indicate favorable operations and that the development is provided the appropriate amount of access.

D. Link Volume Analysis

The volume to capacity ratio (V/C) of Sids Road and Goliad Street was calculated for the 2022 existing traffic and the 2024 background and background plus site traffic scenarios. The daily link capacity for each roadway is taken from the NTCOG model capacity volumes assuming the rural area type, Sids Road, as a secondary arterial, has a capacity of 875 vehicles per hour per lane (vphpl). Goliad Street, as a primary arterial, has a capacity of 925 vehicles per hour per lane (vphpl).

The link analyses displayed in **Table 4** shows that Sids Road currently operates with ample capacity of LOS A/B with current traffic volumes. After the traffic from the background growth and the project site are added to the network, the roadway continues to operate at a LOS A/B through the build-out of the site in 2024. Goliad Street currently operates with acceptable capacity of LOS D in a two-lane configuration with current traffic volumes. After the traffic from the background growth and the project site are added to the network, the roadway continues to operate at a LOS D through the build-out of the site in 2024.

The site as proposed does not have a significant negative impact on the link capacities of the study roadways.

Table 4 – Link Operational Results

Analysis Year	Roadway	Segment	Number of Lanes	Capacity	Background Volume	V/C	LOS	Back+Site Volume	V/C	LOS
2022	Sids Road	Mims Road to Goliad Street	2	17,500	11,423	0.65	D	-	-	-
	Goliad Street	Sids Road to Mims Road	2	17,500	2,339	0.13	A/B	-	-	-
2024	Sids Road	Mims Road to Goliad Street	2	17,500	12,166	0.70	D	12,500	0.71	D
	Goliad Street	Sids Road to Mims Road	2	17,500	2,491	0.14	A/B	2,571	0.15	A/B

E. Right-Turn Lane Analysis

Where justified, the addition of right-turn deceleration lanes can help inbound turning vehicles separate from the through traffic, avoiding conflicts and smoothing traffic flow. The TxDOT *Access Management Manual* sets forth criteria for auxiliary lanes on TxDOT roadways. Per Table 2.3 (Auxiliary Lane Thresholds), a right-turn deceleration lane should be considered on roads with a posted speed less than or equal to 45 MPH if the projected right-turn volume into a driveway is greater than 60 vehicles per hour. **Table 5** shows the driveway locations with right-turn driveway access to the site, and how they compare with the TxDOT threshold. The high inbound volume occurs in the PM peak hour for every driveway in this analysis.

In consideration to these recommendations and TxDOT criterion, a right-turn lane is not recommended at any of the site driveways.

Table 5 – Right-Turn Lane Analysis

Right-Turn Location	Projected Maximum Peak Hour Right-Turn Volume	TxDOT Threshold (Access Management Manual, Table 2-3)	Right-Turn Lane Recommended?
Drive 1 from Sids Road	4 vph	60 vph	No
Drive 2 from Sids Road	1 vph	60 vph	No
Drive 3 from Sids Road	3 vph	60 vph	No
Drive 4 from Sids Road	0 vph	60 vph	No
Drive 5 from Goliad Street	2 vph	50 vph	No
Drive 6 from Mims Road	3 vph	60 vph	No

V.CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this report, the proposed Rayburn Electric Cooperative Campus Expansion development can be successfully incorporated into the surrounding roadway network. The proposed site driveways provide the appropriate level of access for the development. The site-generated traffic does not have a significant or disproportionate effect on the existing vehicle traffic operations.

The following recommendations should be included in the development of the site:

1. Construct Drive 4 to Goliad Street as a right-in/right-out driveway due to not meeting TxDOT driveway access spacing.

Kimley»Horn

TRAFFIC COUNTS AND HISTORICAL DATA

Lineman Building - Rockwall, Texas

Historical Link Volumes and Growth Rates

Goliad Street						
Record	**Year**	**Link Start**	**Link End**	**Source**	**24-Hour Volume**	**Annual Growth Rate**
1	2011	Lochspring Drive	SH 276	TxDOT	20,696	-
2	2013	Lochspring Drive	SH 276	TxDOT	23,328	6.2%
3	2014	Lochspring Drive	SH 276	TxDOT	21,981	-5.8%
4	2015	Lochspring Drive	SH 276	TxDOT	23,046	4.8%
5	2016	Lochspring Drive	SH 276	TxDOT	24,309	5.5%
6	2017	Lochspring Drive	SH 276	TxDOT	26,274	8.1%
7	2018	Lochspring Drive	SH 276	TxDOT	26,568	1.1%
8	2019	Lochspring Drive	SH 276	TxDOT	26,846	1.0%
9	2020	Lochspring Drive	SH 276	TxDOT	26,590	-1.0%
10	2021	Lochspring Drive	SH 276	TxDOT	27,992	5.3%
					Average Growth 2011 - 2021:	**3.0%**

Mims Road						
Record	**Year**	**Link Start**	**Link End**	**Source**	**24-Hour Volume**	**Annual Growth Rate**
1	2009	Goliad Street	Sids Road	TxDOT	1,143	-
2	2014	Goliad Street	Sids Road	TxDOT	1,353	3.4%
					Average Growth 2009 - 2014:	**3.4%**

Average Annual Growth:	**3.2%**

National Data & Surveying Services Intersection Turning Movement Count

Location: Rayburn County Electric Middle Dwy & Sids Rd
City: Rockwall
Control: No Control

Project ID: 22-470030-006
Date: 9/20/2022

Data - Totals

NS/EW Streets:	Rayburn County Electric Middle Dwy				Rayburn County Electric Middle Dwy				Sids Rd				Sids Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	0	0	0	0	0	20	0	0	1	19	0	0	40
6:45 AM	0	0	0	0	0	0	0	0	0	12	0	0	2	17	0	0	31
7:00 AM	0	0	0	0	0	0	0	0	0	14	0	0	1	27	0	0	42
7:15 AM	0	0	1	0	0	0	0	0	0	23	0	0	0	42	0	0	66
7:30 AM	0	0	0	0	0	0	0	0	0	32	0	0	1	47	0	0	80
7:45 AM	1	0	1	0	0	0	0	0	0	38	0	0	1	74	1	0	116
8:00 AM	0	0	1	0	0	0	0	0	0	23	0	0	2	93	2	0	121
8:15 AM	0	0	0	0	0	0	0	0	0	25	0	0	0	77	2	0	104
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	3	0	0	0	0	0	0	187	0	0	8	396	5	0	600
APPROACH %'s :	25.00%	0.00%	75.00%	0.00%					0.00%	100.00%	0.00%	0.00%	1.96%	96.82%	1.22%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	1	0	2	0	0	0	0	0	0	118	0	0	4	291	5	0	421
PEAK HR FACTOR :	0.250	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.776	0.000	0.000	0.500	0.782	0.625	0.000	0.870
	0.375				0.000				0.776				0.773				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	0	0	0	0	0	0	0	0	62	0	0	0	31	0	0	93
4:45 PM	0	0	2	0	1	0	0	0	0	55	0	0	0	51	0	0	109
5:00 PM	1	0	0	0	1	0	0	0	0	59	0	0	0	51	0	0	112
5:15 PM	2	0	0	0	0	0	0	0	0	59	0	0	1	42	0	0	104
5:30 PM	0	0	2	0	0	0	0	0	0	60	0	0	0	43	0	0	105
5:45 PM	0	0	0	0	1	0	0	0	0	46	0	0	0	37	0	0	84
6:00 PM	0	0	0	0	0	0	0	0	0	50	0	0	0	31	0	0	81
6:15 PM	0	0	1	0	0	0	0	0	0	43	0	0	0	37	0	0	81
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	0	5	0	3	0	0	0	0	434	0	0	1	323	0	0	769
APPROACH %'s :	37.50%	0.00%	62.50%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.31%	99.69%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	3	0	4	0	2	0	0	0	0	233	0	0	1	187	0	0	430
PEAK HR FACTOR :	0.375	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.971	0.000	0.000	0.250	0.917	0.000	0.000	0.960
	0.875				0.500				0.971				0.922				

National Data & Surveying Services Intersection Turning Movement Count

Location: Rayburn County Electric West Dwy & Sids Rd
City: Rockwall
Control: No Control

Project ID: 22-470030-005
Date: 9/20/2022

Data - Totals

NS/EW Streets:	Rayburn County Electric West Dwy				Rayburn County Electric West Dwy				Sids Rd				Sids Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	0	0	0	0	0	20	0	0	2	17	0	0	39
6:45 AM	0	0	0	0	0	0	0	0	0	12	0	0	0	17	0	0	29
7:00 AM	0	0	0	0	0	0	0	0	0	15	0	0	1	26	0	0	42
7:15 AM	0	0	0	0	0	0	0	0	0	23	4	0	2	39	0	0	68
7:30 AM	0	0	1	0	0	0	0	0	0	30	0	0	2	46	0	0	79
7:45 AM	0	0	1	0	0	0	0	0	0	37	1	0	2	72	0	0	113
8:00 AM	0	0	0	0	0	0	0	0	0	23	2	0	5	89	0	0	119
8:15 AM	0	0	0	0	0	0	0	0	0	25	0	0	0	76	0	0	101
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	2	0	0	0	0	0	0	185	7	0	14	382	0	0	590
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%					0.00%	96.35%	3.65%	0.00%	3.54%	96.46%	0.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	2	0	0	0	0	0	0	115	3	0	9	283	0	0	412
PEAK HR FACTOR :	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.777	0.375	0.000	0.450	0.795	0.000	0.000	0.866
	0.500								0.776				0.777				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	0	1	0	0	0	0	0	0	58	0	0	0	31	0	0	90
4:45 PM	0	0	0	0	0	0	0	0	0	54	0	0	0	50	0	0	104
5:00 PM	4	0	3	0	0	0	0	0	0	56	0	0	0	52	0	0	115
5:15 PM	0	0	3	0	0	0	0	0	0	56	0	0	0	44	0	0	103
5:30 PM	1	0	3	0	0	0	0	0	0	57	0	0	0	43	0	0	104
5:45 PM	0	0	0	0	0	0	0	0	0	46	0	0	0	37	0	0	83
6:00 PM	0	0	0	0	0	0	0	0	0	50	0	0	0	31	0	0	81
6:15 PM	0	0	0	0	0	0	0	0	0	44	0	0	0	38	0	0	82
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	0	10	0	0	0	0	0	0	421	0	0	0	326	0	0	762
APPROACH %'s :	33.33%	0.00%	66.67%	0.00%					0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	5	0	9	0	0	0	0	0	0	223	0	0	0	189	0	0	426
PEAK HR FACTOR :	0.313	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.978	0.000	0.000	0.000	0.909	0.000	0.000	0.926
	0.500								0.978				0.909				

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 205/S Goliad St & Mims Rd
City: Rockwall
Control: 1-Way Stop(EB)

Project ID: 22-470030-004
Date: 9/20/2022

Data - Totals

NS/EW Streets:	SR 205/S Goliad St				SR 205/S Goliad St				Mims Rd				Mims Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	2	193	0	0	0	90	9	0	8	0	0	0	0	0	0	0	302
6:45 AM	7	202	0	0	0	72	15	0	1	0	0	0	0	0	0	0	297
7:00 AM	5	216	0	0	0	94	10	0	6	0	0	0	0	0	0	0	331
7:15 AM	2	195	0	0	0	119	16	0	4	0	3	0	0	0	0	0	339
7:30 AM	10	201	0	0	0	121	10	0	8	0	3	0	0	0	0	0	353
7:45 AM	1	210	0	1	0	161	15	0	5	0	6	0	0	0	0	0	399
8:00 AM	6	210	0	0	0	128	13	0	4	0	4	0	0	0	0	0	365
8:15 AM	5	171	0	0	0	137	10	0	8	0	5	0	0	0	0	0	336
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	38	1598	0	1	0	922	98	0	44	0	21	0	0	0	0	0	2722
APPROACH %'s :	2.32%	97.62%	0.00%	0.06%	0.00%	90.39%	9.61%	0.00%	67.69%	0.00%	32.31%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	19	816	0	1	0	529	54	0	21	0	16	0	0	0	0	0	1456
PEAK HR FACTOR :	0.475	0.971	0.000	0.250	0.000	0.821	0.844	0.000	0.656	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.912
		0.968				0.828				0.841							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	3	159	0	0	0	194	10	0	7	0	5	0	0	0	0	0	378
4:45 PM	2	154	0	0	0	198	2	0	10	0	7	0	0	0	0	0	373
5:00 PM	2	186	0	0	0	177	5	0	22	0	4	0	0	0	0	0	396
5:15 PM	2	188	0	0	0	165	3	0	7	0	4	0	0	0	0	0	369
5:30 PM	4	155	0	0	0	202	6	0	5	0	10	0	0	0	0	0	382
5:45 PM	2	152	0	0	0	210	9	0	5	0	1	0	0	0	0	0	379
6:00 PM	3	176	0	0	0	211	4	0	5	0	3	0	0	0	0	0	402
6:15 PM	1	144	0	0	0	202	4	0	2	0	0	0	0	0	0	0	353
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	19	1314	0	0	0	1559	43	0	63	0	34	0	0	0	0	0	3032
APPROACH %'s :	1.43%	98.57%	0.00%	0.00%	0.00%	97.32%	2.68%	0.00%	64.95%	0.00%	35.05%	0.00%					
PEAK HR :	05:15 PM - 06:15 PM																TOTAL
PEAK HR VOL :	11	671	0	0	0	788	22	0	22	0	18	0	0	0	0	0	1532
PEAK HR FACTOR :	0.688	0.892	0.000	0.000	0.000	0.934	0.611	0.000	0.786	0.000	0.450	0.000	0.000	0.000	0.000	0.000	0.953
		0.897				0.925				0.667							

National Data & Surveying Services Intersection Turning Movement Count

Location: National Dr & Mims Rd
City: Rockwall
Control: 1-Way Stop(NB)

Project ID: 22-470030-003
Date: 9/27/2022

Data - Totals

NS/EW Streets:	National Dr				National Dr				Mims Rd				Mims Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	5	0	0	0	0	0	0	0	3	0	8	0	0	0	16
6:45 AM	0	0	3	0	0	0	0	0	0	0	0	0	11	0	0	0	14
7:00 AM	1	0	5	0	0	0	0	0	0	0	1	0	5	0	0	0	12
7:15 AM	0	0	4	0	0	0	0	0	0	0	1	0	2	0	0	0	7
7:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4
7:45 AM	1	0	2	0	0	0	0	0	0	0	1	0	5	2	0	0	11
8:00 AM	0	0	2	0	0	0	0	0	0	0	2	0	5	8	0	0	17
8:15 AM	0	0	4	0	0	0	0	0	0	3	0	0	7	5	0	1	20
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	0	25	0	0	0	0	0	0	3	8	0	46	15	0	1	101
APPROACH %'s :	10.71%	0.00%	89.29%	0.00%					0.00%	27.27%	72.73%	0.00%	74.19%	24.19%	0.00%	1.61%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	2	0	8	0	0	0	0	0	0	3	3	0	20	15	0	1	52
PEAK HR FACTOR :	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.375	0.000	0.714	0.469	0.000	0.250	0.650
	0.625								0.500				0.692				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	1	0	10	0	0	0	0	0	0	5	3	0	3	3	0	0	25
4:45 PM	0	0	7	0	0	0	0	0	0	4	2	0	3	2	0	0	18
5:00 PM	1	0	14	0	0	0	0	0	0	1	2	0	5	2	0	0	25
5:15 PM	1	0	8	0	0	0	0	0	0	2	0	0	5	1	0	0	17
5:30 PM	0	0	3	0	0	0	0	0	0	5	2	0	6	2	0	0	18
5:45 PM	0	0	2	0	0	0	0	0	0	3	1	0	7	0	0	0	13
6:00 PM	1	0	7	0	0	0	0	0	0	0	0	0	0	2	0	0	10
6:15 PM	0	0	1	0	0	0	0	0	0	0	1	0	1	1	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	0	52	0	0	0	0	0	0	20	11	0	30	13	0	0	130
APPROACH %'s :	7.14%	0.00%	92.86%	0.00%					0.00%	64.52%	35.48%	0.00%	69.77%	30.23%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	3	0	39	0	0	0	0	0	0	12	7	0	16	8	0	0	85
PEAK HR FACTOR :	0.750	0.000	0.696	0.000	0.000	0.000	0.000	0.000	0.000	0.600	0.583	0.000	0.800	0.667	0.000	0.000	0.850
	0.700								0.594				0.857				

National Data & Surveying Services Intersection Turning Movement Count

Location: Mims Rd & Sids Rd
City: Rockwall
Control: 1-Way Yield(WB)

Project ID: 22-470030-002
Date: 9/20/2022

Data - Totals

NS/EW Streets:	Mims Rd				Mims Rd				Sids Rd				Sids Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	21	1	0	0	0	0	0	0	0	0	19	0	41
6:45 AM	0	0	0	0	13	0	0	0	0	0	0	0	0	0	16	0	29
7:00 AM	0	0	0	0	15	3	0	0	0	0	0	0	0	0	26	0	44
7:15 AM	0	1	1	0	25	1	0	0	0	0	0	0	0	0	39	0	67
7:30 AM	0	2	0	0	30	3	0	0	0	0	0	0	0	0	46	0	81
7:45 AM	0	0	0	0	38	2	0	0	0	0	0	0	0	0	72	0	112
8:00 AM	0	3	0	0	25	3	0	0	0	0	0	0	0	0	89	0	120
8:15 AM	0	2	0	0	27	4	0	0	0	0	0	0	0	0	77	0	110
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	8	1	0	194	17	0	0	0	0	0	0	0	0	384	0	604
APPROACH %'s :	0.00%	88.89%	11.11%	0.00%	91.94%	8.06%	0.00%	0.00%					0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	7	0	0	120	12	0	0	0	0	0	0	0	0	284	0	423
PEAK HR FACTOR :	0.000	0.583	0.000	0.000	0.789	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.798	0.000	0.881
	0.583				0.825								0.798				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	0	0	0	59	3	0	0	0	0	0	0	0	0	31	0	93
4:45 PM	0	1	1	0	51	4	0	0	0	0	0	0	0	0	49	0	106
5:00 PM	0	2	1	0	55	0	0	0	0	0	0	0	2	0	55	0	115
5:15 PM	0	2	1	0	53	1	0	0	0	0	0	0	0	0	43	0	100
5:30 PM	0	3	0	0	58	1	0	0	0	0	0	0	0	0	45	0	107
5:45 PM	0	0	0	0	47	1	0	0	0	0	0	0	0	0	37	1	86
6:00 PM	0	0	1	0	46	1	0	0	0	0	0	0	0	0	31	0	79
6:15 PM	0	3	0	0	46	1	0	0	0	0	0	0	0	0	37	0	87
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	11	4	0	415	12	0	0	0	0	0	0	2	0	328	1	773
APPROACH %'s :	0.00%	73.33%	26.67%	0.00%	97.19%	2.81%	0.00%	0.00%					0.60%	0.00%	99.09%	0.30%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	8	3	0	217	6	0	0	0	0	0	0	2	0	192	0	428
PEAK HR FACTOR :	0.000	0.667	0.750	0.000	0.935	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.873	0.000	0.930
	0.917				0.945								0.851				

National Data & Surveying Services Intersection Turning Movement Count

Location: Rayburn County Electric East Dwy & Sids Rd
City: Rockwall
Control: No Control

Project ID: 22-470030-007
Date: 9/20/2022

Data - Totals

NS/EW Streets:	Rayburn County Electric East Dwy				Rayburn County Electric East Dwy				Sids Rd				Sids Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	0	0	0	0	2	29	0	0	1	15	1	0	48
6:45 AM	0	0	0	0	0	0	0	0	0	16	1	0	1	18	0	0	36
7:00 AM	0	0	0	0	0	0	0	0	0	20	0	0	2	29	1	0	52
7:15 AM	0	0	2	0	0	0	0	0	0	24	0	0	0	41	1	0	68
7:30 AM	0	0	1	0	0	0	0	0	0	32	0	0	1	46	3	0	83
7:45 AM	0	0	0	0	0	0	0	0	0	37	2	0	3	74	2	0	118
8:00 AM	0	0	0	0	0	0	0	0	1	23	0	0	1	96	0	0	121
8:15 AM	0	0	0	0	0	0	0	0	8	18	0	0	0	78	1	0	105
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	3	0	0	0	0	0	11	199	3	0	9	397	9	0	631
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%					5.16%	93.43%	1.41%	0.00%	2.17%	95.66%	2.17%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	1	0	0	0	0	0	9	110	2	0	5	294	6	0	427
PEAK HR FACTOR :	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.281	0.743	0.250	0.000	0.417	0.766	0.500	0.000	0.882
	0.250				0.000				0.776				0.786				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	0	1	0	0	0	0	0	7	60	0	0	0	30	6	0	104
4:45 PM	3	0	0	0	0	0	0	0	3	69	0	0	2	45	14	0	136
5:00 PM	0	0	2	0	0	0	0	0	4	77	0	0	0	42	10	0	135
5:15 PM	0	0	0	0	4	0	0	0	0	70	0	0	1	38	4	0	117
5:30 PM	1	0	1	0	1	1	0	0	1	62	1	0	0	42	1	0	111
5:45 PM	0	0	1	0	0	0	0	0	0	50	0	0	0	37	2	0	90
6:00 PM	1	0	1	0	2	0	0	0	0	52	0	0	0	30	4	0	90
6:15 PM	0	0	0	0	0	0	0	0	0	46	0	0	0	36	1	0	83
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	0	6	0	7	1	0	0	15	486	1	0	3	300	42	0	866
APPROACH %'s :	45.45%	0.00%	54.55%	0.00%	87.50%	12.50%	0.00%	0.00%	2.99%	96.81%	0.20%	0.00%	0.87%	86.96%	12.17%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	4	0	3	0	5	1	0	0	8	278	1	0	3	167	29	0	499
PEAK HR FACTOR :	0.333	0.000	0.375	0.000	0.313	0.250	0.000	0.000	0.500	0.903	0.250	0.000	0.375	0.928	0.518	0.000	0.917
	0.583				0.375				0.886				0.816				

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 205/S Goliad St & SR 276/Sids Rd
City: Rockwall
Control: Signalized

Project ID: 22-470030-001
Date: 9/20/2022

Data - Totals

NS/EW Streets: SR 205/S Goliad St | SR 205/S Goliad St | SR 276/Sids Rd | SR 276/Sids Rd

AM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 AM	0	13	1	0	4	14	1	0	0	1	1	0	0	0	3	0	38
12:15 AM	0	6	1	0	7	17	0	1	0	0	1	0	0	1	1	0	35
12:30 AM	0	4	2	0	3	18	0	0	1	1	0	0	0	1	5	0	35
12:45 AM	0	4	0	0	0	7	0	0	0	0	0	0	0	0	2	0	13
1:00 AM	0	5	0	0	2	6	0	0	0	0	0	0	1	0	1	0	15
1:15 AM	0	8	0	0	4	6	0	0	0	1	0	0	0	0	2	0	21
1:30 AM	0	6	0	0	0	5	1	0	0	0	1	0	0	0	2	0	15
1:45 AM	0	3	0	0	1	8	1	0	0	1	0	0	1	1	3	0	19
2:00 AM	0	7	0	0	1	2	1	0	0	0	1	0	0	0	2	0	14
2:15 AM	0	7	0	0	0	5	0	0	0	0	0	0	0	0	1	0	13
2:30 AM	0	5	0	0	3	6	0	0	0	0	0	0	2	0	0	0	16
2:45 AM	0	9	0	0	1	4	0	0	0	0	0	0	0	0	1	0	15
3:00 AM	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0	0	9
3:15 AM	0	6	0	0	0	2	0	0	0	0	0	0	0	1	2	0	11
3:30 AM	1	7	0	0	2	3	0	0	0	0	0	0	0	0	0	0	13
3:45 AM	0	12	0	0	0	2	0	0	0	1	0	0	0	0	2	0	17
4:00 AM	0	20	0	0	1	9	0	0	0	0	0	0	0	0	4	0	34
4:15 AM	0	24	0	0	0	4	1	0	0	0	0	0	1	1	6	0	37
4:30 AM	0	21	0	0	1	16	1	0	0	0	0	0	0	0	8	0	47
4:45 AM	1	42	0	0	3	12	1	0	0	1	1	0	0	4	13	0	78
5:00 AM	3	54	1	0	3	11	4	0	1	1	1	0	1	2	7	0	89
5:15 AM	2	68	0	0	2	26	2	0	1	2	0	0	2	5	21	0	131
5:30 AM	3	94	1	0	5	28	2	0	1	3	2	0	1	3	15	0	158
5:45 AM	2	111	0	0	3	36	14	0	1	1	1	0	3	13	24	0	209
6:00 AM	3	145	1	0	5	29	5	0	4	5	5	0	4	9	41	0	256
6:15 AM	3	161	2	0	6	45	5	0	3	6	11	0	7	10	39	0	298
6:30 AM	6	210	4	0	9	84	4	0	1	13	14	0	10	9	60	0	424
6:45 AM	6	216	3	0	13	68	3	0	2	7	9	0	14	16	79	0	436
7:00 AM	13	241	3	0	15	115	3	0	3	12	3	0	7	16	95	0	526
7:15 AM	12	212	8	0	20	111	2	0	1	13	13	0	13	34	105	0	544
7:30 AM	9	213	5	0	27	134	5	0	2	23	7	0	13	39	121	0	598
7:45 AM	9	208	2	0	30	130	2	0	4	24	12	0	18	68	129	0	636
8:00 AM	19	211	4	0	32	132	4	1	2	16	4	0	17	82	148	0	672
8:15 AM	11	188	4	0	24	142	6	1	3	8	7	0	11	61	151	0	617
8:30 AM	19	148	7	0	25	109	4	0	5	15	9	0	19	49	132	0	541
8:45 AM	17	173	1	0	32	142	6	0	18	14	8	0	9	42	122	0	584
9:00 AM	9	207	9	0	27	113	3	0	7	14	11	0	7	32	99	0	538
9:15 AM	10	172	2	0	35	117	6	0	7	10	8	0	6	26	89	0	488
9:30 AM	3	162	7	0	52	133	6	0	7	15	8	0	3	28	68	0	492
9:45 AM	5	170	3	0	28	103	5	0	1	16	7	0	1	29	60	0	428
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	166	3577	71	0	426	1959	98	3	75	224	145	0	171	582	1663	0	9160
APPROACH %'s :	4.35%	93.79%	1.86%	0.00%	17.14%	78.80%	3.94%	0.12%	16.89%	50.45%	32.66%	0.00%	7.08%	24.09%	68.83%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	48	820	15	0	113	538	17	2	11	71	30	0	59	250	549	0	2523
PEAK HR FACTOR :	0.632	0.962	0.750	0.000	0.883	0.947	0.708	0.500	0.688	0.740	0.625	0.000	0.819	0.762	0.909	0.000	0.939
	0.943				0.968				0.700				0.868				

NOON

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
10:00 AM	8	192	4	0	23	101	1	0	4	8	10	0	4	14	59	0	428
10:15 AM	8	164	0	0	25	102	6	0	4	10	8	0	4	19	56	0	406
10:30 AM	10	147	4	0	28	124	5	0	2	23	17	0	3	17	60	0	440
10:45 AM	3	163	1	0	25	138	0	0	5	20	10	0	6	17	60	0	448
11:00 AM	7	152	3	0	28	111	4	0	3	14	12	0	7	20	60	0	421
11:15 AM	3	173	3	0	45	147	9	0	3	20	2	0	2	14	52	0	473
11:30 AM	14	171	6	0	35	144	4	0	6	18	16	0	4	17	48	0	483
11:45 AM	4	160	7	0	37	138	3	0	11	17	9	0	5	25	68	0	484
12:00 PM	4	153	5	0	36	188	10	0	8	14	12	0	4	12	72	0	518
12:15 PM	10	193	2	0	38	141	7	0	5	20	18	0	4	26	70	0	534
12:30 PM	11	139	3	0	38	156	5	0	4	25	15	0	8	26	72	1	503
12:45 PM	10	140	6	0	40	140	10	0	8	30	17	0	2	23	53	0	479
1:00 PM	12	146	2	0	43	148	8	0	4	20	9	0	5	15	73	0	485
1:15 PM	10	128	2	0	47	179	10	0	8	23	16	0	3	15	55	0	496
1:30 PM	4	166	5	0	47	147	12	0	4	24	21	0	11	27	56	1	525
1:45 PM	6	144	4	0	39	171	15	0	0	16	16	0	7	24	54	0	496
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	124	2531	57	0	574	2275	109	0	79	302	208	0	79	311	968	2	7619
APPROACH %'s :	4.57%	93.33%	2.10%	0.00%	19.41%	76.91%	3.68%	0.00%	13.41%	51.27%	35.31%	0.00%	5.81%	22.87%	71.18%	0.15%	
PEAK HR :	11:45 AM - 12:45 PM																TOTAL
PEAK HR VOL :	29	645	17	0	149	623	25	0	28	76	54	0	21	89	282	1	2039
PEAK HR FACTOR :	0.659	0.835	0.607	0.000	0.980	0.828	0.625	0.000	0.636	0.760	0.750	0.000	0.656	0.856	0.979	0.250	0.955
	0.843				0.851				0.898				0.918				

PM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:00 PM	10	130	11	0	46	171	7	1	6	27	12	0	3	31	48	0	503
2:15 PM	5	147	8	0	39	159	3	0	7	35	27	0	3	17	52	0	502
2:30 PM	10	127	5	0	49	164	1	0	4	34	18	0	4	18	60	0	494
2:45 PM	13	165	5	0	56	179	2	0	5	24	16	0	7	17	62	0	551
3:00 PM	11	188	5	0	52	166	3	0	2	19	9	0	6	31	47	0	539
3:15 PM	11	136	4	0	65	161	2	0	2	28	17	0	7	22	46	0	501
3:30 PM	6	150	5	0	33	186	4	0	3	21	17	0	6	23	46	0	500
3:45 PM	9	163	9	0	52	156	9	0	4	23	18	0	12	29	53	0	537
4:00 PM	10	142	7	0	58	193	3	0	5	38	21	0	12	25	37	0	551
4:15 PM	13	145	14	0	55	185	3	0	3	21	24	0	8	20	51	0	542
4:30 PM	10	152	12	0	52	191	4	0	2	40	23	0	18	26	49	0	579
4:45 PM	22	178	6	0	53	176	3	0	7	31	29	0	6	40	48	0	599
5:00 PM	13	199	15	0	63	182	6	0	9	43	23	0	6	34	47	0	640
5:15 PM	7	183	8	0	61	141	3	1	9	55	16	0	9	27	52	0	572
5:30 PM	3	176	7	0	65	207	6	0	4	37	21	0	9	28	69	0	632
5:45 PM	9	148	9	0	60	181	2	0	5	29	19	0	26	27	58	0	573
6:00 PM	7	176	10	0	59	206	2	0	5	29	26	0	10	26	50	1	607
6:15 PM	6	156	4	0	48	201	3	0	1	24	22	0	13	23	52	0	553
6:30 PM	9	166	10	0	52	204	1	0	4	31	21	0	9	20	51	0	578
6:45 PM	3	151	13	0	54	221	1	0	3	23	14	0	11	22	35	0	551
7:00 PM	7	136	9	0	48	218	2	0	4	16	17	0	10	15	27	0	509
7:15 PM	9	128	4	0	37	178	1	0	0	15	22	0	11	12	33	0	450
7:30 PM	5	112	6	0	39	209	0	0	1	18	25	0	11	7	32	0	465
7:45 PM	4	103	4	0	35	175	2	0	0	12	11	0	7	9	34	1	397
8:00 PM	5	102	8	0	48	165	2	0	0	12	13	0	5	8	30	0	398
8:15 PM	1	111	5	0	36	162	0	0	0	18	15	0	5	7	23	0	383
8:30 PM	5	108	5	0	37	176	0	0	2	16	12	0	5	6	21	0	393
8:45 PM	2	85	4	0	44	144	0	0	2	12	18	0	5	4	8	0	328
9:00 PM	0	67	3	0	36	114	0	0	1	4	5	0	2	3	11	0	246
9:15 PM	0	41	2	0	30	91	0	0	2	5	10	0	2	6	14	1	204
9:30 PM	2	67	4	0	21	90	1	0	0	5	3	0	2	0	13	0	208
9:45 PM	0	37	0	0	15	70	1	0	0	5	1	0	1	8	7	0	145
10:00 PM	2	39	0	0	10	65	0	0	0	4	3	0	3	1	9	0	136
10:15 PM	2	31	1	0	16	66	1	1	1	3	1	0	2	2	8	0	135
10:30 PM	2	34	7	0	12	41	1	0	2	5	1	0	4	2	7	0	118
10:45 PM	0	21	1	0	14	26	0	0	0	1	5	0	1	1	6	0	76
11:00 PM	0	15	2	0	8	25	0	0	0	1	1	0	3	1	7	0	63
11:15 PM	0	10	0	0	7	25	0	1	0	2	1	0	0	1	2	0	49
11:30 PM	0	8	1	0	7	19	0	0	0	0	0	0	0	0	2	0	37
11:45 PM	0	6	0	0	6	8	0	0	0	0	0	0	0	0	2	0	22
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	233	4439	233	0	1578	5697	79	4	105	766	557	0	264	599	1309	3	15866
APPROACH %'s :	4.75%	90.50%	4.75%	0.00%	21.45%	77.43%	1.07%	0.05%	7.35%	53.64%	39.01%	0.00%	12.14%	27.54%	60.18%	0.14%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	45	736	36	0	242	706	18	1	29	166	89	0	30	129	216	0	2443
PEAK HR FACTOR :	0.511	0.925	0.600	0.000	0.931	0.853	0.750	0.250	0.806	0.755	0.767	0.000	0.833	0.806	0.783	0.000	0.954
	0.900				0.870				0.888				0.884				

Kimley»Horn

Synchro™ Output - 2022 Existing Traffic

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	2	113	538	17	48	820	15	11	71	30	59	250
Future Volume (vph)	2	113	538	17	48	820	15	11	71	30	59	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.956			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1781	0	1770	1863
Flt Permitted		0.127			0.328			0.510			0.687	
Satd. Flow (perm)	0	237	3539	1583	611	3539	1583	950	1781	0	1280	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		18			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			908			822
Travel Time (s)			7.7			15.3			20.6			18.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	2	120	572	18	51	872	16	12	76	32	63	266
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	572	18	51	872	16	12	108	0	63	266
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

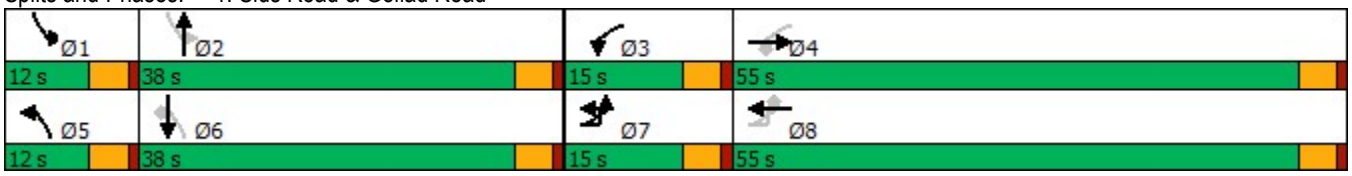
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	549
Future Volume (vph)	549
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	326
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.94
Adj. Flow (vph)	584
Shared Lane Traffic (%)	
Lane Group Flow (vph)	584
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	CI+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		39.3	34.9	34.9	40.5	30.3	30.3	42.3	34.2		39.7	41.1
Actuated g/C Ratio		0.41	0.36	0.36	0.42	0.31	0.31	0.44	0.36		0.41	0.43
v/c Ratio		0.51	0.45	0.03	0.15	0.78	0.03	0.03	0.17		0.11	0.33
Control Delay		23.3	25.7	0.1	15.8	35.7	0.1	17.9	22.2		18.2	22.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		23.3	25.7	0.1	15.8	35.7	0.1	17.9	22.2		18.2	22.8
LOS		C	C	A	B	D	A	B	C		B	C
Approach Delay			24.6			34.0			21.8			17.9
Approach LOS			C			C			C			B
Queue Length 50th (ft)		44	150	0	18	264	0	4	39		22	103
Queue Length 95th (ft)		77	203	0	38	338	0	17	91		55	231
Internal Link Dist (ft)			425			933			828			742
Turn Bay Length (ft)		285			185		265	285			330	
Base Capacity (vph)		272	1897	892	400	1897	892	484	644		569	796
Starvation Cap Reductn		0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio		0.45	0.30	0.02	0.13	0.46	0.02	0.02	0.17		0.11	0.33

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 96.2			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 25.5		Intersection LOS: C	
Intersection Capacity Utilization 82.2%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	41.1
Actuated g/C Ratio	0.43
v/c Ratio	0.68
Control Delay	15.7
Queue Delay	0.0
Total Delay	15.7
LOS	B
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	114
Queue Length 95th (ft)	#379
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	863
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.68

Intersection Summary

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	120	12	8	0	0	284
Future Vol, veh/h	120	12	8	0	0	284
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	136	14	9	0	0	323

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	9	0	-	0	295	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	286	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1611	-	-	-	696	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	763	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1611	-	-	-	637	1073
Mov Cap-2 Maneuver	-	-	-	-	637	-
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	763	-

Approach	EB	WB	SB
HCM Control Delay, s	6.8	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1611	-	-	-	1073
HCM Lane V/C Ratio	0.085	-	-	-	0.301
HCM Control Delay (s)	7.4	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	1.3

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	9	115	3	0	189
Future Vol, veh/h	0	9	115	3	0	189
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	131	3	0	215

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	348	133	0	0	134	0
Stage 1	133	-	-	-	-	-
Stage 2	215	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	649	916	-	-	1451	-
Stage 1	893	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	649	916	-	-	1451	-
Mov Cap-2 Maneuver	649	-	-	-	-	-
Stage 1	893	-	-	-	-	-
Stage 2	821	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	916	1451	-
HCM Lane V/C Ratio	-	-	0.011	-	-
HCM Control Delay (s)	-	-	9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	1	0	2	0	118	0	1	187	0
Future Vol, veh/h	0	0	0	1	0	2	0	118	0	1	187	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	1	0	2	0	136	0	1	215	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	354	353	215	353	353	136	215	0	0	136	0	0
Stage 1	217	217	-	136	136	-	-	-	-	-	-	-
Stage 2	137	136	-	217	217	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	601	572	825	602	572	913	1355	-	-	1448	-	-
Stage 1	785	723	-	867	784	-	-	-	-	-	-	-
Stage 2	866	784	-	785	723	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	599	571	825	601	571	913	1355	-	-	1448	-	-
Mov Cap-2 Maneuver	599	571	-	601	571	-	-	-	-	-	-	-
Stage 1	785	722	-	867	784	-	-	-	-	-	-	-
Stage 2	864	784	-	784	722	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.6	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1355	-	-	-	778	1448	-	-
HCM Lane V/C Ratio	-	-	-	-	0.004	0.001	-	-
HCM Control Delay (s)	0	-	-	0	9.6	7.5	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	1	9	110	2	5	294	6
Future Vol, veh/h	0	0	0	0	0	1	9	110	2	5	294	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	1	10	125	2	6	334	7

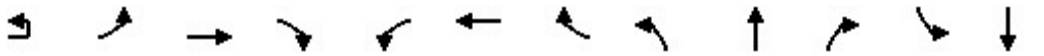
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	497	497	338	496	499	126	341	0	0	127	0	0
Stage 1	350	350	-	146	146	-	-	-	-	-	-	-
Stage 2	147	147	-	350	353	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	483	475	704	484	473	924	1218	-	-	1459	-	-
Stage 1	666	633	-	857	776	-	-	-	-	-	-	-
Stage 2	856	775	-	666	631	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	477	468	704	479	466	924	1218	-	-	1459	-	-
Mov Cap-2 Maneuver	477	468	-	479	466	-	-	-	-	-	-	-
Stage 1	660	630	-	849	769	-	-	-	-	-	-	-
Stage 2	847	768	-	663	628	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.9	0.6	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1218	-	-	-	924	1459	-	-
HCM Lane V/C Ratio	0.008	-	-	-	0.001	0.004	-	-
HCM Control Delay (s)	8	0	-	0	8.9	7.5	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Future Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.948			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1766	0	1770	1863
Flt Permitted		0.155			0.223			0.646			0.458	
Satd. Flow (perm)	0	289	3539	1583	415	3539	1583	1203	1766	0	853	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		22			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			908			822
Travel Time (s)			7.7			15.3			20.6			18.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1	272	792	20	51	825	40	33	186	100	34	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	273	792	20	51	825	40	33	286	0	34	144
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	230
Future Volume (vph)	230
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	242
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Adj. Flow (vph)	242
Shared Lane Traffic (%)	
Lane Group Flow (vph)	242
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

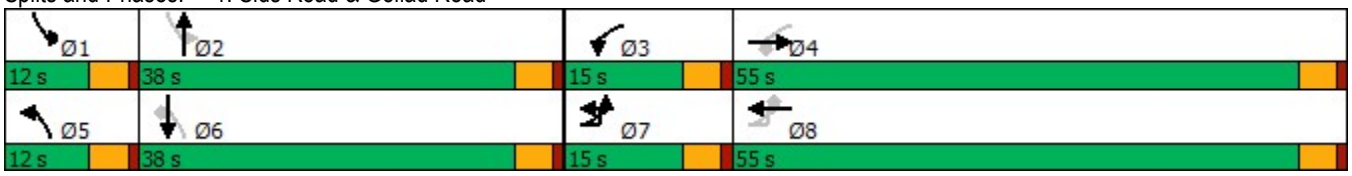


Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		39.1	37.0	37.0	41.3	28.4	28.4	38.0	34.1		38.0	34.1
Actuated g/C Ratio		0.42	0.40	0.40	0.44	0.30	0.30	0.41	0.37		0.41	0.37
v/c Ratio		0.94	0.56	0.03	0.18	0.77	0.07	0.06	0.43		0.08	0.21
Control Delay		62.5	25.7	0.1	15.9	34.8	0.3	17.4	25.8		17.6	24.7
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		62.5	25.7	0.1	15.9	34.8	0.3	17.4	25.8		17.6	24.7
LOS		E	C	A	B	C	A	B	C		B	C
Approach Delay			34.4			32.2			24.9			12.7
Approach LOS			C			C			C			B
Queue Length 50th (ft)		112	220	0	17	245	0	11	126		11	63
Queue Length 95th (ft)		#287	294	0	38	317	0	32	234		33	127
Internal Link Dist (ft)			425			933			828			742
Turn Bay Length (ft)		285			185		265	285			330	
Base Capacity (vph)		291	1951	915	345	1951	915	539	659		424	681
Starvation Cap Reductn		0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio		0.94	0.41	0.02	0.15	0.42	0.04	0.06	0.43		0.08	0.21

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 93.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 29.3		Intersection LOS: C	
Intersection Capacity Utilization 70.3%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	34.1
Actuated g/C Ratio	0.37
v/c Ratio	0.33
Control Delay	4.9
Queue Delay	0.0
Total Delay	4.9
LOS	A
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	56
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	732
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.33

Intersection Summary

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	231	6	7	3	2	205
Future Vol, veh/h	231	6	7	3	2	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	248	6	8	3	2	220

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	11	0	-	0	512	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	502	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1608	-	-	-	522	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	608	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1608	-	-	-	441	1071
Mov Cap-2 Maneuver	-	-	-	-	441	-
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	608	-

Approach	EB	WB	SB
HCM Control Delay, s	7.5	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1608	-	-	-	1056
HCM Lane V/C Ratio	0.154	-	-	-	0.211
HCM Control Delay (s)	7.6	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.5	-	-	-	0.8

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	238	0	10	302
Future Vol, veh/h	2	2	238	0	10	302
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	259	0	11	328

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	609	259	0	0	259	0
Stage 1	259	-	-	-	-	-
Stage 2	350	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	458	780	-	-	1306	-
Stage 1	784	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	453	780	-	-	1306	-
Mov Cap-2 Maneuver	453	-	-	-	-	-
Stage 1	784	-	-	-	-	-
Stage 2	706	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	573	1306	-
HCM Lane V/C Ratio	-	-	0.008	0.008	-
HCM Control Delay (s)	-	-	11.3	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	0	3	0	4	0	248	0	4	310	5
Future Vol, veh/h	2	0	0	3	0	4	0	248	0	4	310	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	3	0	4	0	258	0	4	323	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	594	592	326	592	594	258	328	0	0	258	0	0
Stage 1	334	334	-	258	258	-	-	-	-	-	-	-
Stage 2	260	258	-	334	336	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	417	419	715	418	418	781	1232	-	-	1307	-	-
Stage 1	680	643	-	747	694	-	-	-	-	-	-	-
Stage 2	745	694	-	680	642	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	414	417	715	417	416	781	1232	-	-	1307	-	-
Mov Cap-2 Maneuver	414	417	-	417	416	-	-	-	-	-	-	-
Stage 1	680	640	-	747	694	-	-	-	-	-	-	-
Stage 2	741	694	-	677	639	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	11.4	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1232	-	-	414	568	1307	-	-
HCM Lane V/C Ratio	-	-	-	0.005	0.013	0.003	-	-
HCM Control Delay (s)	0	-	-	13.7	11.4	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	1	4	0	3	9	296	1	3	178	31
Future Vol, veh/h	5	0	1	4	0	3	9	296	1	3	178	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	1	4	0	3	10	322	1	3	193	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	560	559	210	560	576	323	227	0	0	323	0	0
Stage 1	216	216	-	343	343	-	-	-	-	-	-	-
Stage 2	344	343	-	217	233	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	439	438	830	439	428	718	1341	-	-	1237	-	-
Stage 1	786	724	-	672	637	-	-	-	-	-	-	-
Stage 2	671	637	-	785	712	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	433	433	830	435	423	718	1341	-	-	1237	-	-
Mov Cap-2 Maneuver	433	433	-	435	423	-	-	-	-	-	-	-
Stage 1	779	722	-	666	631	-	-	-	-	-	-	-
Stage 2	662	631	-	782	710	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	12	0.2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1341	-	-	471	523	1237	-	-
HCM Lane V/C Ratio	0.007	-	-	0.014	0.015	0.003	-	-
HCM Control Delay (s)	7.7	0	-	12.8	12	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Synchro™ Output - 2024 Background Traffic

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	2	120	573	18	51	874	16	12	76	32	63	266
Future Volume (vph)	2	120	573	18	51	874	16	12	76	32	63	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.956			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1781	0	1770	1863
Flt Permitted		0.119			0.310			0.485			0.682	
Satd. Flow (perm)	0	222	3539	1583	577	3539	1583	903	1781	0	1270	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		17			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			908			822
Travel Time (s)			7.7			15.3			20.6			18.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	2	128	610	19	54	930	17	13	81	34	67	283
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	130	610	19	54	930	17	13	115	0	67	283
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

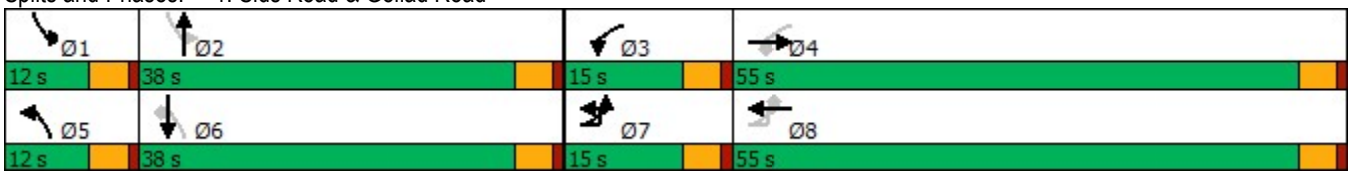
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	585
Future Volume (vph)	585
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	316
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.94
Adj. Flow (vph)	622
Shared Lane Traffic (%)	
Lane Group Flow (vph)	622
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		41.8	37.2	37.2	43.0	32.6	32.6	42.4	34.2		39.7	41.2
Actuated g/C Ratio		0.42	0.38	0.38	0.44	0.33	0.33	0.43	0.35		0.40	0.42
v/c Ratio		0.55	0.46	0.03	0.16	0.80	0.03	0.03	0.18		0.12	0.36
Control Delay		25.0	25.4	0.1	15.6	35.9	0.1	19.2	23.7		19.4	24.5
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		25.0	25.4	0.1	15.6	35.9	0.1	19.2	23.7		19.4	24.5
LOS		C	C	A	B	D	A	B	C		B	C
Approach Delay			24.7			34.2			23.3			20.9
Approach LOS			C			C			C			C
Queue Length 50th (ft)		47	162	0	19	290	0	5	45		25	119
Queue Length 95th (ft)		85	217	0	40	366	0	18	100		60	255
Internal Link Dist (ft)			425			933			828			742
Turn Bay Length (ft)		285			185		265	285			330	
Base Capacity (vph)		265	1850	872	393	1850	872	455	628		552	776
Starvation Cap Reductn		0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio		0.49	0.33	0.02	0.14	0.50	0.02	0.03	0.18		0.12	0.36

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 98.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 26.7		Intersection LOS: C	
Intersection Capacity Utilization 86.3%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	41.2
Actuated g/C Ratio	0.42
v/c Ratio	0.74
Control Delay	19.5
Queue Delay	0.0
Total Delay	19.5
LOS	B
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	158
Queue Length 95th (ft)	#465
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	844
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.74

Intersection Summary

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	128	13	9	0	0	303
Future Vol, veh/h	128	13	9	0	0	303
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	145	15	10	0	0	344

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	10	0	-	0	315	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	305	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1610	-	-	-	678	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	748	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1610	-	-	-	616	1071
Mov Cap-2 Maneuver	-	-	-	-	616	-
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	748	-

Approach	EB	WB	SB
HCM Control Delay, s	6.8	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1610	-	-	-	1071
HCM Lane V/C Ratio	0.09	-	-	-	0.321
HCM Control Delay (s)	7.5	0	-	-	9.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	1.4

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	123	3	0	201
Future Vol, veh/h	0	10	123	3	0	201
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	140	3	0	228

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	370	142	0	0	143	0
Stage 1	142	-	-	-	-	-
Stage 2	228	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	630	906	-	-	1440	-
Stage 1	885	-	-	-	-	-
Stage 2	810	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	630	906	-	-	1440	-
Mov Cap-2 Maneuver	630	-	-	-	-	-
Stage 1	885	-	-	-	-	-
Stage 2	810	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	906	1440	-
HCM Lane V/C Ratio	-	-	0.013	-	-
HCM Control Delay (s)	-	-	9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	1	0	2	0	126	0	1	199	0
Future Vol, veh/h	0	0	0	1	0	2	0	126	0	1	199	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	1	0	2	0	145	0	1	229	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	377	376	229	376	376	145	229	0	0	145	0	0
Stage 1	231	231	-	145	145	-	-	-	-	-	-	-
Stage 2	146	145	-	231	231	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	580	555	810	581	555	902	1339	-	-	1437	-	-
Stage 1	772	713	-	858	777	-	-	-	-	-	-	-
Stage 2	857	777	-	772	713	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	578	554	810	580	554	902	1339	-	-	1437	-	-
Mov Cap-2 Maneuver	578	554	-	580	554	-	-	-	-	-	-	-
Stage 1	772	712	-	858	777	-	-	-	-	-	-	-
Stage 2	855	777	-	771	712	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.8	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1339	-	-	-	761	1437	-	-
HCM Lane V/C Ratio	-	-	-	-	0.005	0.001	-	-
HCM Control Delay (s)	0	-	-	0	9.8	7.5	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	0	0	0	1	10	117	2	5	313	6
Future Vol, veh/h	0	0	0	0	0	1	10	117	2	5	313	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	1	11	133	2	6	356	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	529	529	360	528	531	134	363	0	0	135	0	0
Stage 1	372	372	-	156	156	-	-	-	-	-	-	-
Stage 2	157	157	-	372	375	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	460	455	684	461	454	915	1196	-	-	1449	-	-
Stage 1	648	619	-	846	769	-	-	-	-	-	-	-
Stage 2	845	768	-	648	617	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	454	448	684	456	447	915	1196	-	-	1449	-	-
Mov Cap-2 Maneuver	454	448	-	456	447	-	-	-	-	-	-	-
Stage 1	642	616	-	838	761	-	-	-	-	-	-	-
Stage 2	836	760	-	645	614	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.9	0.6	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1196	-	-	-	915	1449	-	-
HCM Lane V/C Ratio	0.01	-	-	-	0.001	0.004	-	-
HCM Control Delay (s)	8	0	-	0	8.9	7.5	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Future Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.948			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1766	0	1770	1863
Flt Permitted		0.155			0.223			0.646			0.458	
Satd. Flow (perm)	0	289	3539	1583	415	3539	1583	1203	1766	0	853	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		22			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			908			822
Travel Time (s)			7.7			15.3			20.6			18.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1	272	792	20	51	825	40	33	186	100	34	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	273	792	20	51	825	40	33	286	0	34	144
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

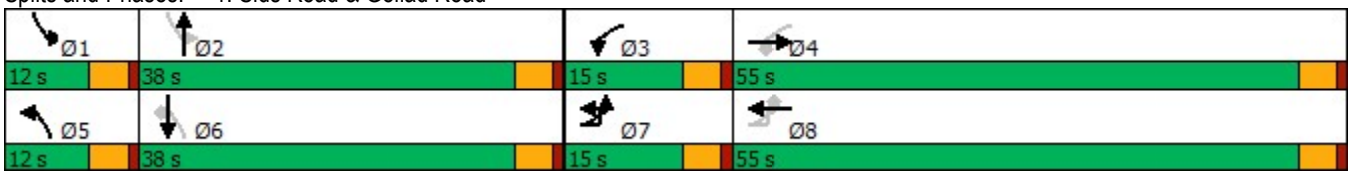
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	230
Future Volume (vph)	230
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	242
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Adj. Flow (vph)	242
Shared Lane Traffic (%)	
Lane Group Flow (vph)	242
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		39.1	37.0	37.0	41.3	28.4	28.4	38.0	34.1		38.0	34.1
Actuated g/C Ratio		0.42	0.40	0.40	0.44	0.30	0.30	0.41	0.37		0.41	0.37
v/c Ratio		0.94	0.56	0.03	0.18	0.77	0.07	0.06	0.43		0.08	0.21
Control Delay		62.5	25.7	0.1	15.9	34.8	0.3	17.4	25.8		17.6	24.7
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		62.5	25.7	0.1	15.9	34.8	0.3	17.4	25.8		17.6	24.7
LOS		E	C	A	B	C	A	B	C		B	C
Approach Delay			34.4			32.2			24.9			12.7
Approach LOS			C			C			C			B
Queue Length 50th (ft)		112	220	0	17	245	0	11	126		11	63
Queue Length 95th (ft)		#287	294	0	38	317	0	32	234		33	127
Internal Link Dist (ft)			425			933			828			742
Turn Bay Length (ft)		285			185		265	285			330	
Base Capacity (vph)		291	1951	915	345	1951	915	539	659		424	681
Starvation Cap Reductn		0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio		0.94	0.41	0.02	0.15	0.42	0.04	0.06	0.43		0.08	0.21

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 93.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 29.3		Intersection LOS: C	
Intersection Capacity Utilization 70.3%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	34.1
Actuated g/C Ratio	0.37
v/c Ratio	0.33
Control Delay	4.9
Queue Delay	0.0
Total Delay	4.9
LOS	A
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	56
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	732
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.33

Intersection Summary

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	231	6	7	3	2	205
Future Vol, veh/h	231	6	7	3	2	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	248	6	8	3	2	220

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	11	0	-	0	512	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	502	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1608	-	-	-	522	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	608	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1608	-	-	-	441	1071
Mov Cap-2 Maneuver	-	-	-	-	441	-
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	608	-

Approach	EB	WB	SB
HCM Control Delay, s	7.5	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1608	-	-	-	1056
HCM Lane V/C Ratio	0.154	-	-	-	0.211
HCM Control Delay (s)	7.6	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.5	-	-	-	0.8

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	238	0	10	302
Future Vol, veh/h	2	2	238	0	10	302
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	259	0	11	328

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	609	259	0	0	259	0
Stage 1	259	-	-	-	-	-
Stage 2	350	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	458	780	-	-	1306	-
Stage 1	784	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	453	780	-	-	1306	-
Mov Cap-2 Maneuver	453	-	-	-	-	-
Stage 1	784	-	-	-	-	-
Stage 2	706	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	573	1306	-
HCM Lane V/C Ratio	-	-	0.008	0.008	-
HCM Control Delay (s)	-	-	11.3	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	0	3	0	4	0	248	0	4	310	5
Future Vol, veh/h	2	0	0	3	0	4	0	248	0	4	310	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	3	0	4	0	258	0	4	323	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	594	592	326	592	594	258	328	0	0	258	0	0
Stage 1	334	334	-	258	258	-	-	-	-	-	-	-
Stage 2	260	258	-	334	336	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	417	419	715	418	418	781	1232	-	-	1307	-	-
Stage 1	680	643	-	747	694	-	-	-	-	-	-	-
Stage 2	745	694	-	680	642	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	414	417	715	417	416	781	1232	-	-	1307	-	-
Mov Cap-2 Maneuver	414	417	-	417	416	-	-	-	-	-	-	-
Stage 1	680	640	-	747	694	-	-	-	-	-	-	-
Stage 2	741	694	-	677	639	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	11.4	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1232	-	-	414	568	1307	-	-
HCM Lane V/C Ratio	-	-	-	0.005	0.013	0.003	-	-
HCM Control Delay (s)	0	-	-	13.7	11.4	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	1	4	0	3	9	296	1	3	178	31
Future Vol, veh/h	5	0	1	4	0	3	9	296	1	3	178	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	1	4	0	3	10	322	1	3	193	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	560	559	210	560	576	323	227	0	0	323	0	0
Stage 1	216	216	-	343	343	-	-	-	-	-	-	-
Stage 2	344	343	-	217	233	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	439	438	830	439	428	718	1341	-	-	1237	-	-
Stage 1	786	724	-	672	637	-	-	-	-	-	-	-
Stage 2	671	637	-	785	712	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	433	433	830	435	423	718	1341	-	-	1237	-	-
Mov Cap-2 Maneuver	433	433	-	435	423	-	-	-	-	-	-	-
Stage 1	779	722	-	666	631	-	-	-	-	-	-	-
Stage 2	662	631	-	782	710	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	12	0.2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1341	-	-	471	523	1237	-	-
HCM Lane V/C Ratio	0.007	-	-	0.014	0.015	0.003	-	-
HCM Control Delay (s)	7.7	0	-	12.8	12	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Synchro™ Output - 2024 Background Plus Site Traffic

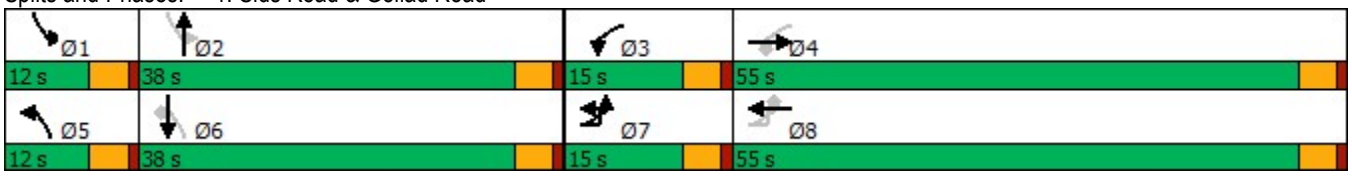
Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	2	120	574	21	53	874	16	17	79	32	63	269
Future Volume (vph)	2	120	574	21	53	874	16	17	79	32	63	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.957			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1783	0	1770	1863
Flt Permitted		0.118			0.311			0.472			0.678	
Satd. Flow (perm)	0	220	3539	1583	579	3539	1583	879	1783	0	1263	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		17			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			919			822
Travel Time (s)			7.7			15.3			20.9			18.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	2	128	611	22	56	930	17	18	84	34	67	286
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	130	611	22	56	930	17	18	118	0	67	286
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	585
Future Volume (vph)	585
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	313
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.94
Adj. Flow (vph)	622
Shared Lane Traffic (%)	
Lane Group Flow (vph)	622
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	CI+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		41.8	37.2	37.2	43.0	32.6	32.6	41.5	34.2		39.7	39.1
Actuated g/C Ratio		0.42	0.38	0.38	0.44	0.33	0.33	0.42	0.35		0.40	0.40
v/c Ratio		0.55	0.46	0.03	0.17	0.80	0.03	0.04	0.19		0.12	0.39
Control Delay		25.2	25.5	0.1	15.6	35.9	0.1	19.1	23.8		19.4	26.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		25.2	25.5	0.1	15.6	35.9	0.1	19.1	23.8		19.4	26.8
LOS		C	C	A	B	D	A	B	C		B	C
Approach Delay			24.7			34.1			23.2			23.2
Approach LOS			C			C			C			C

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 98.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 27.4		Intersection LOS: C	
Intersection Capacity Utilization 86.3%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	39.1
Actuated g/C Ratio	0.40
v/c Ratio	0.76
Control Delay	21.9
Queue Delay	0.0
Total Delay	21.9
LOS	C
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	130	611	22	56	930	17	18	118	67	286	622
v/c Ratio	0.55	0.46	0.03	0.17	0.80	0.03	0.04	0.19	0.12	0.39	0.76
Control Delay	25.2	25.5	0.1	15.6	35.9	0.1	19.1	23.8	19.4	26.8	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.2	25.5	0.1	15.6	35.9	0.1	19.1	23.8	19.4	26.8	21.9
Queue Length 50th (ft)	47	162	0	19	290	0	7	47	25	120	160
Queue Length 95th (ft)	86	217	0	41	366	0	23	103	60	260	#471
Internal Link Dist (ft)		425			933			839		742	
Turn Bay Length (ft)	285			185		265	285		330		
Base Capacity (vph)	265	1850	872	394	1850	872	440	629	549	737	815
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.33	0.03	0.14	0.50	0.02	0.04	0.19	0.12	0.39	0.76

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	8.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	131	13	9	0	0	306
Future Vol, veh/h	131	13	9	0	0	306
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	15	10	0	0	348

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	10	0	-	0	323	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	313	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1610	-	-	-	671	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	741	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1610	-	-	-	609	1071
Mov Cap-2 Maneuver	-	-	-	-	609	-
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	741	-

Approach	EB	WB	SB
HCM Control Delay, s	6.8	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1610	-	-	-	1071
HCM Lane V/C Ratio	0.092	-	-	-	0.325
HCM Control Delay (s)	7.5	0	-	-	10
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1.4

Intersection	
Int Delay, s/veh	8.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	58	22	0	0	0
Future Vol, veh/h	0	58	22	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	400	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	64	24	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	49	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	48	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	960	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	974	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	946	1084	1622	-	-	-
Mov Cap-2 Maneuver	946	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	974	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	7.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.015	-	0.059	-	-
HCM Control Delay (s)	7.3	-	8.5	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	124	4	1	201
Future Vol, veh/h	0	11	124	4	1	201
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	13	141	5	1	228

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	374	144	0	0	146	0
Stage 1	144	-	-	-	-	-
Stage 2	230	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	627	903	-	-	1436	-
Stage 1	883	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	626	903	-	-	1436	-
Mov Cap-2 Maneuver	626	-	-	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	807	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	903	1436	-
HCM Lane V/C Ratio	-	-	0.014	0.001	-
HCM Control Delay (s)	-	-	9	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	1	0	4	0	128	1	2	200	0
Future Vol, veh/h	0	0	0	1	0	4	0	128	1	2	200	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	1	0	5	0	147	1	2	230	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	384	382	230	382	382	148	230	0	0	148	0	0
Stage 1	234	234	-	148	148	-	-	-	-	-	-	-
Stage 2	150	148	-	234	234	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	574	551	809	576	551	899	1338	-	-	1434	-	-
Stage 1	769	711	-	855	775	-	-	-	-	-	-	-
Stage 2	853	775	-	769	711	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	570	550	809	575	550	899	1338	-	-	1434	-	-
Mov Cap-2 Maneuver	570	550	-	575	550	-	-	-	-	-	-	-
Stage 1	769	710	-	855	775	-	-	-	-	-	-	-
Stage 2	849	775	-	767	710	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.5	0	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1338	-	-	-	808	1434	-	-
HCM Lane V/C Ratio	-	-	-	-	0.007	0.002	-	-
HCM Control Delay (s)	0	-	-	0	9.5	7.5	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	0	0	0	4	10	120	3	8	316	6
Future Vol, veh/h	0	0	0	0	0	4	10	120	3	8	316	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	5	11	136	3	9	359	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	543	542	363	541	544	138	366	0	0	139	0	0
Stage 1	381	381	-	160	160	-	-	-	-	-	-	-
Stage 2	162	161	-	381	384	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	451	447	682	452	446	910	1193	-	-	1445	-	-
Stage 1	641	613	-	842	766	-	-	-	-	-	-	-
Stage 2	840	765	-	641	611	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	442	439	682	446	438	910	1193	-	-	1445	-	-
Mov Cap-2 Maneuver	442	439	-	446	438	-	-	-	-	-	-	-
Stage 1	635	608	-	834	758	-	-	-	-	-	-	-
Stage 2	827	757	-	636	606	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9	0.6	0.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1193	-	-	-	910	1445	-	-
HCM Lane V/C Ratio	0.01	-	-	-	0.005	0.006	-	-
HCM Control Delay (s)	8	0	-	0	9	7.5	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	668	1	0	943	0	3
Future Vol, veh/h	668	1	0	943	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	726	1	0	1025	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	727
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	424
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	424
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	424	-	-	-
HCM Lane V/C Ratio	0.008	-	-	-
HCM Control Delay (s)	13.6	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕				↕			↕			↕	
Traffic Vol, veh/h	0	3	3	1	49	16	2	2	0	9	3	0	0
Future Vol, veh/h	0	3	3	1	49	16	2	2	0	9	3	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	65	65	65	65	65	65	65	65	65	65	65	65	65
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	5	2	75	25	3	3	0	14	5	0	0

Major/Minor	Major1			Major2				Minor1			Minor2		
Conflicting Flow All	28	0	0	-	10	0	0	185	190	8	192	191	27
Stage 1	-	-	-	-	-	-	-	8	8	-	177	181	-
Stage 2	-	-	-	-	-	-	-	177	182	-	15	10	-
Critical Hdwy	4.12	-	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1585	-	-	-	1610	-	-	776	705	1074	768	704	1048
Stage 1	-	-	-	-	-	-	-	1013	889	-	825	750	-
Stage 2	-	-	-	-	-	-	-	825	749	-	1005	887	-
Platoon blocked, %		-	-			-	-						
Mov Cap-1 Maneuver	1585	-	-	~ -52	~ -52	-	-	776	705	1074	758	704	1048
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	776	705	-	758	704	-
Stage 1	-	-	-	-	-	-	-	1013	889	-	825	750	-
Stage 2	-	-	-	-	-	-	-	825	749	-	992	887	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0		8.6	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1004	1585	-	-	+	-	-	758
HCM Lane V/C Ratio	0.017	-	-	-	-	-	-	0.006
HCM Control Delay (s)	8.6	0	-	-	-	-	-	9.8
HCM Lane LOS	A	A	-	-	-	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	-	-	-	0

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	124	0	2	331
Future Vol, veh/h	0	3	124	0	2	331
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	182	0	3	487

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	675	182	0	0	182	0
Stage 1	182	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	419	861	-	-	1393	-
Stage 1	849	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	418	861	-	-	1393	-
Mov Cap-2 Maneuver	418	-	-	-	-	-
Stage 1	849	-	-	-	-	-
Stage 2	612	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	861	1393	-
HCM Lane V/C Ratio	-	-	0.005	0.002	-
HCM Control Delay (s)	-	-	9.2	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

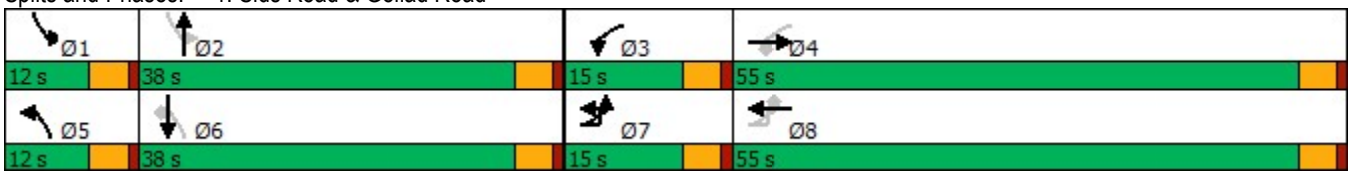
Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	258	754	23	51	784	38	38	182	95	32	141
Future Volume (vph)	1	258	754	23	51	784	38	38	182	95	32	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.949			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1768	0	1770	1863
Flt Permitted		0.152			0.209			0.641			0.451	
Satd. Flow (perm)	0	283	3539	1583	389	3539	1583	1194	1768	0	840	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		22			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			919			822
Travel Time (s)			7.7			15.3			20.9			18.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1	272	794	24	54	825	40	40	192	100	34	148
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	273	794	24	54	825	40	40	292	0	34	148
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	230
Future Volume (vph)	230
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	242
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Adj. Flow (vph)	242
Shared Lane Traffic (%)	
Lane Group Flow (vph)	242
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		39.7	35.1	35.1	40.8	29.0	29.0	38.0	34.1		38.0	34.1
Actuated g/C Ratio		0.42	0.37	0.37	0.43	0.31	0.31	0.40	0.36		0.40	0.36
v/c Ratio		0.95	0.60	0.04	0.20	0.75	0.07	0.08	0.45		0.08	0.22
Control Delay		64.4	27.5	0.1	16.2	34.3	0.3	17.6	26.2		17.7	25.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		64.4	27.5	0.1	16.2	34.3	0.3	17.6	26.2		17.7	25.1
LOS		E	C	A	B	C	A	B	C		B	C
Approach Delay			36.1			31.8			25.2			13.0
Approach LOS			D			C			C			B

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 93.9			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 29.8		Intersection LOS: C	
Intersection Capacity Utilization 70.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	34.1
Actuated g/C Ratio	0.36
v/c Ratio	0.33
Control Delay	5.0
Queue Delay	0.0
Total Delay	5.0
LOS	A
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	273	794	24	54	825	40	40	292	34	148	242
v/c Ratio	0.95	0.60	0.04	0.20	0.75	0.07	0.08	0.45	0.08	0.22	0.33
Control Delay	64.4	27.5	0.1	16.2	34.3	0.3	17.6	26.2	17.7	25.1	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.4	27.5	0.1	16.2	34.3	0.3	17.6	26.2	17.7	25.1	5.0
Queue Length 50th (ft)	114	222	0	18	246	0	13	130	11	65	0
Queue Length 95th (ft)	#290	295	0	40	317	0	37	240	33	130	56
Internal Link Dist (ft)		425			933			839		742	
Turn Bay Length (ft)	285			185		265	285		330		
Base Capacity (vph)	288	1934	908	335	1934	908	532	656	417	675	728
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.41	0.03	0.16	0.43	0.04	0.08	0.45	0.08	0.22	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	235	6	7	3	2	210
Future Vol, veh/h	235	6	7	3	2	210
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	253	6	8	3	2	226

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	11	0	-	0	522	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	512	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1608	-	-	-	515	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	602	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1608	-	-	-	434	1071
Mov Cap-2 Maneuver	-	-	-	-	434	-
Stage 1	-	-	-	-	853	-
Stage 2	-	-	-	-	602	-

Approach	EB	WB	SB
HCM Control Delay, s	7.5	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1608	-	-	-	1056
HCM Lane V/C Ratio	0.157	-	-	-	0.216
HCM Control Delay (s)	7.7	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.6	-	-	-	0.8

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	23	23	0	0	0
Future Vol, veh/h	0	23	23	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	400	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	24	24	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	49	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	48	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	960	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	974	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	946	1084	1622	-	-	-
Mov Cap-2 Maneuver	946	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	974	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	7.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.015	-	0.022	-	-
HCM Control Delay (s)	7.3	-	8.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	3	240	2	12	302
Future Vol, veh/h	2	3	240	2	12	302
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	261	2	13	328

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	616	262	0	0	263	0
Stage 1	262	-	-	-	-	-
Stage 2	354	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	454	777	-	-	1301	-
Stage 1	782	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	449	777	-	-	1301	-
Mov Cap-2 Maneuver	449	-	-	-	-	-
Stage 1	782	-	-	-	-	-
Stage 2	701	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	601	1301	-
HCM Lane V/C Ratio	-	-	0.009	0.01	-
HCM Control Delay (s)	-	-	11	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	0	3	0	6	0	250	1	6	312	5
Future Vol, veh/h	2	0	0	3	0	6	0	250	1	6	312	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	3	0	6	0	260	1	6	325	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	604	601	328	601	603	261	330	0	0	261	0	0
Stage 1	340	340	-	261	261	-	-	-	-	-	-	-
Stage 2	264	261	-	340	342	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	410	414	713	412	413	778	1229	-	-	1303	-	-
Stage 1	675	639	-	744	692	-	-	-	-	-	-	-
Stage 2	741	692	-	675	638	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	405	412	713	410	411	778	1229	-	-	1303	-	-
Mov Cap-2 Maneuver	405	412	-	410	411	-	-	-	-	-	-	-
Stage 1	675	635	-	744	692	-	-	-	-	-	-	-
Stage 2	735	692	-	671	634	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.9	11.1	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1229	-	-	405	599	1303	-	-
HCM Lane V/C Ratio	-	-	-	0.005	0.016	0.005	-	-
HCM Control Delay (s)	0	-	-	13.9	11.1	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	1	4	0	8	9	299	2	7	182	31
Future Vol, veh/h	5	0	1	4	0	8	9	299	2	7	182	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	1	4	0	9	10	325	2	8	198	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	582	578	215	578	594	326	232	0	0	327	0	0
Stage 1	231	231	-	346	346	-	-	-	-	-	-	-
Stage 2	351	347	-	232	248	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	424	427	825	427	418	715	1336	-	-	1233	-	-
Stage 1	772	713	-	670	635	-	-	-	-	-	-	-
Stage 2	666	635	-	771	701	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	414	420	825	421	411	715	1336	-	-	1233	-	-
Mov Cap-2 Maneuver	414	420	-	421	411	-	-	-	-	-	-	-
Stage 1	765	708	-	664	629	-	-	-	-	-	-	-
Stage 2	652	629	-	765	696	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.1	11.4	0.2	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1336	-	-	451	580	1233	-	-
HCM Lane V/C Ratio	0.007	-	-	0.014	0.022	0.006	-	-
HCM Control Delay (s)	7.7	0	-	13.1	11.4	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	879	2	0	874	0	3
Future Vol, veh/h	879	2	0	874	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	955	2	0	950	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	956
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	313
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	313
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	16.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	313	-	-	-
HCM Lane V/C Ratio	0.01	-	-	-
HCM Control Delay (s)	16.6	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	13	7	17	9	3	4	0	55	3	0	0
Future Vol, veh/h	0	13	7	17	9	3	4	0	55	3	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	15	8	20	11	4	5	0	65	4	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	15	0	0	23	0	0	72	74	19	105	76	13
Stage 1	-	-	-	-	-	-	19	19	-	53	53	-
Stage 2	-	-	-	-	-	-	53	55	-	52	23	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1603	-	-	1592	-	-	919	816	1059	875	814	1067
Stage 1	-	-	-	-	-	-	1000	880	-	960	851	-
Stage 2	-	-	-	-	-	-	960	849	-	961	876	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1603	-	-	1592	-	-	910	805	1059	814	803	1067
Mov Cap-2 Maneuver	-	-	-	-	-	-	910	805	-	814	803	-
Stage 1	-	-	-	-	-	-	1000	880	-	960	840	-
Stage 2	-	-	-	-	-	-	948	838	-	902	876	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	4.3	8.7	9.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1047	1603	-	-	1592	-	-	814
HCM Lane V/C Ratio	0.066	-	-	-	0.013	-	-	0.004
HCM Control Delay (s)	8.7	0	-	-	7.3	0	-	9.4
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	313	0	3	220
Future Vol, veh/h	0	3	313	0	3	220
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	368	0	4	259

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	635	368	0	0	368	0
Stage 1	368	-	-	-	-	-
Stage 2	267	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	443	677	-	-	1191	-
Stage 1	700	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	441	677	-	-	1191	-
Mov Cap-2 Maneuver	441	-	-	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	775	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	677	1191	-
HCM Lane V/C Ratio	-	-	0.005	0.003	-
HCM Control Delay (s)	-	-	10.3	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

DEVELOPMENT APPLICATION

City of Rockwall
Planning and Zoning Department
385 S. Goliad Street
Rockwall, Texas 75087

STAFF USE ONLY

PLANNING & ZONING CASE NO.

NOTE: *THE APPLICATION IS NOT CONSIDERED ACCEPTED BY THE CITY UNTIL THE PLANNING DIRECTOR AND CITY ENGINEER HAVE SIGNED BELOW.*

DIRECTOR OF PLANNING:

CITY ENGINEER:

PLEASE CHECK THE APPROPRIATE BOX BELOW TO INDICATE THE TYPE OF DEVELOPMENT REQUEST [SELECT ONLY ONE BOX]:

PLATTING APPLICATION FEES:
- ☐ MASTER PLAT ($100.00 + $15.00 ACRE) [1]
- ☐ PRELIMINARY PLAT ($200.00 + $15.00 ACRE) [1]
- ☐ FINAL PLAT ($300.00 + $20.00 ACRE) [1]
- ☐ REPLAT ($300.00 + $20.00 ACRE) [1]
- ☐ AMENDING OR MINOR PLAT ($150.00)
- ☐ PLAT REINSTATEMENT REQUEST ($100.00)

SITE PLAN APPLICATION FEES:
- ☑ SITE PLAN ($250.00 + $20.00 ACRE) [1]
- ☐ AMENDED SITE PLAN/ELEVATIONS/LANDSCAPING PLAN ($100.00)

ZONING APPLICATION FEES:
- ☐ ZONING CHANGE ($200.00 + $15.00 ACRE) [1]
- ☐ SPECIFIC USE PERMIT ($200.00 + $15.00 ACRE) [1 & 2]
- ☐ PD DEVELOPMENT PLANS ($200.00 + $15.00 ACRE) [1]

OTHER APPLICATION FEES:
- ☐ TREE REMOVAL ($75.00)
- ☐ VARIANCE REQUEST/SPECIAL EXCEPTIONS ($100.00) [2]

NOTES:
[1]: IN DETERMINING THE FEE, PLEASE USE THE EXACT ACREAGE WHEN MULTIPLYING BY THE PER ACRE AMOUNT. FOR REQUESTS ON LESS THAN ONE ACRE, ROUND UP TO ONE (1) ACRE.
[2]: A ***$1,000.00*** FEE WILL BE ADDED TO THE APPLICATION FEE FOR ANY REQUEST THAT INVOLVES CONSTRUCTION WITHOUT OR NOT IN COMPLIANCE TO AN APPROVED BUILDING PERMIT.

PROPERTY INFORMATION [PLEASE PRINT]

ADDRESS	950 Sids Road, Rockwall, Texas				
SUBDIVISION	Rayburn Country Addition	LOT		BLOCK	
GENERAL LOCATION					

ZONING, SITE PLAN AND PLATTING INFORMATION [PLEASE PRINT]

CURRENT ZONING	AG, C and HC	CURRENT USE	Rayburn Electric's Headquarters		
PROPOSED ZONING	AG, C and HC	PROPOSED USE	Rayburn Electric's Headquarters		
ACREAGE	99.849	LOTS [CURRENT]	Four (4)	LOTS [PROPOSED]	Four (4)

☑ ***SITE PLANS AND PLATS:*** *BY CHECKING THIS BOX YOU ACKNOWLEDGE THAT DUE TO THE PASSAGE OF HB3167 THE CITY NO LONGER HAS FLEXIBILITY WITH REGARD TO ITS APPROVAL PROCESS, AND FAILURE TO ADDRESS ANY OF STAFF'S COMMENTS BY THE DATE PROVIDED ON THE DEVELOPMENT CALENDAR WILL RESULT IN THE DENIAL OF YOUR CASE.*

OWNER/APPLICANT/AGENT INFORMATION [PLEASE PRINT/CHECK THE PRIMARY CONTACT/ORIGINAL SIGNATURES ARE REQUIRED]

☐ OWNER	Rayburn Country Electric Coop.	☐ APPLICANT	R-Delta Engineers, Inc.
CONTACT PERSON	Stephen Geiger	CONTACT PERSON	Frank A. Polma, P.E.
ADDRESS	950 Sids Road	ADDRESS	618 Main Street
CITY, STATE & ZIP	Rockwall, Texas, 75087	CITY, STATE & ZIP	Garland, Texas, 75040
PHONE	(469) 402-2112	PHONE	(972) 494-5031
E-MAIL	sgeiger@rayburnelectric.com	E-MAIL	fapolma@rdelta.com

NOTARY VERIFICATION [REQUIRED]

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED Stephen Geiger [*OWNER*] THE UNDERSIGNED, WHO STATED THE INFORMATION ON THIS APPLICATION TO BE TRUE AND CERTIFIED THE FOLLOWING:

"I HEREBY CERTIFY THAT I AM THE OWNER FOR THE PURPOSE OF THIS APPLICATION; ALL INFORMATION SUBMITTED HEREIN IS TRUE AND CORRECT; AND THE APPLICATION FEE OF $ 2,246.98 *, TO COVER THE COST OF THIS APPLICATION, HAS BEEN PAID TO THE CITY OF ROCKWALL ON THIS THE* 14th *DAY OF* October *, 2022. BY SIGNING THIS APPLICATION, I AGREE THAT THE CITY OF ROCKWALL (I.E. "CITY") IS AUTHORIZED AND PERMITTED TO PROVIDE INFORMATION CONTAINED WITHIN THIS APPLICATION TO THE PUBLIC. THE CITY IS ALSO AUTHORIZED AND PERMITTED TO REPRODUCE ANY COPYRIGHTED INFORMATION SUBMITTED IN CONJUNCTION WITH THIS APPLICATION, IF SUCH REPRODUCTION IS ASSOCIATED OR IN RESPONSE TO A REQUEST FOR PUBLIC INFORMATION."*

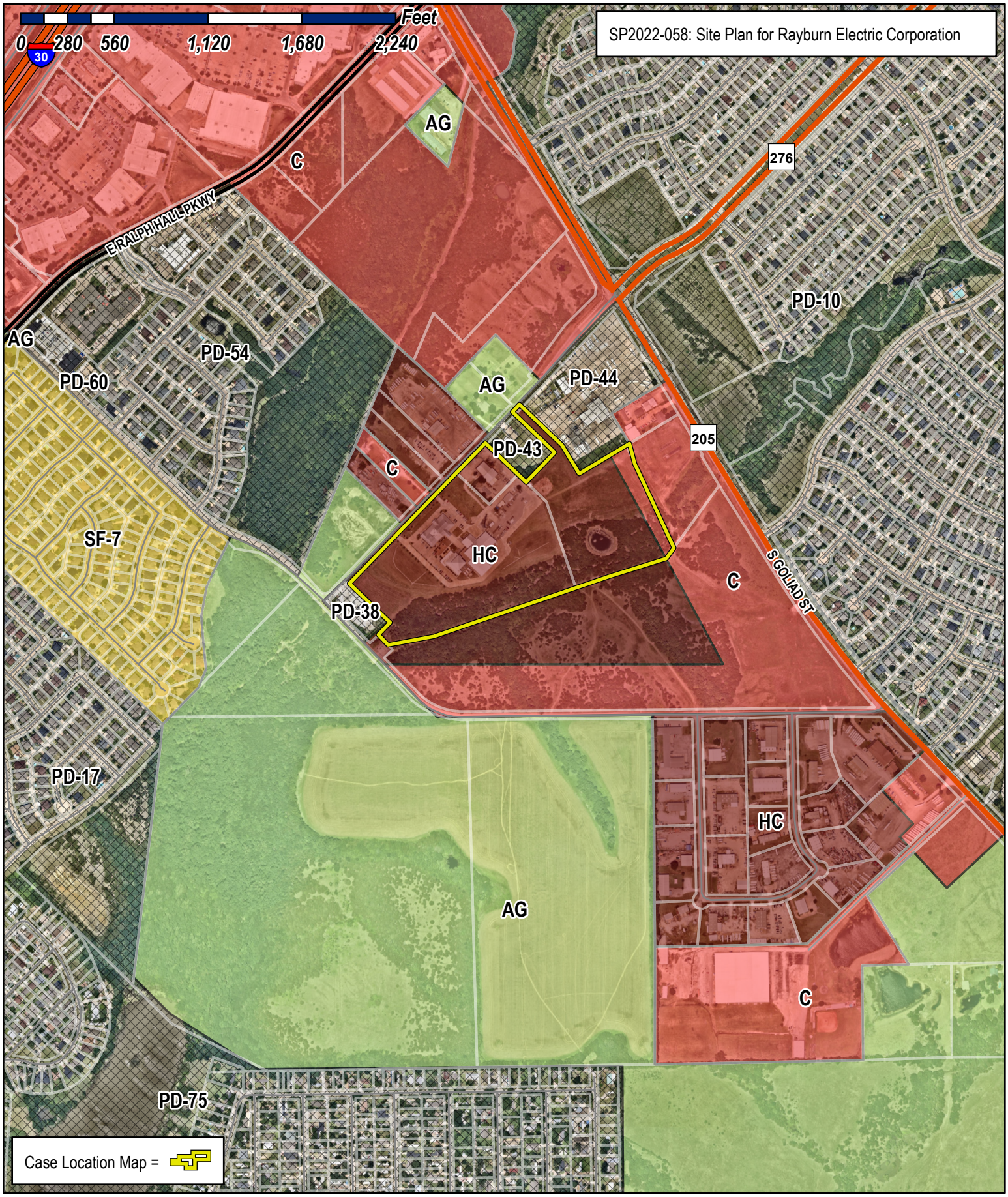
GIVEN UNDER MY HAND AND SEAL OF OFFICE ON THIS THE 12 *DAY OF* October *, 2022*

OWNER'S SIGNATURE Stephanie Hunt

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS Stephanie Hunt

STEPHANIE HUNT
Notary Public, State of Texas
Comm. Expires 09-01-2024
Notary ID 11508120

MY COMMISSION EXPIRES



City of Rockwall

Planning & Zoning Department
385 S. Goliad Street
Rockwall, Texas 75032
(P): (972) 771-7745
(W): www.rockwall.com

The City of Rockwall GIS maps are continually under development and therefore subject to change without notice. While we endeavor to provide timely and accurate information, we make no guarantees. The City of Rockwall makes no warranty, express or implied, including warranties of merchantability and fitness for a particular purpose. Use of the information is the sole responsibility of the user.

r.delta ENGINEERS

October 14, 2022

City of Rockwall, Texas
385 S. Goliad Street
Rockwall, Texas 75087

ATTENTION: **Mr. Henry Lee, AICP**
Planner

SUBJECT: **REC Campus Expansion – Case #SP2022-041**
Variance Requests

Dear Mr. Lee,

Pursuant to submittal of the project Site Plan and supporting documents and on behalf of Rayburn Country Electric Cooperative (REC); we request consideration of the following requests for variances to the City's development requirements and Unified Development Code (UDC):

- Above Ground Fuel Tank Screening: Subsection 01.05 of the UDC requires screening utilizing walls matching the main structure. The proposed fuel storage tank is internal to the site and not visible from any public right-of-way. We request that this requirement be waived since walls would serve purpose screening the fuel storage tank from public view.
- Mims Road Reconstruction: City Engineering comments on the Preliminary Plat indicate that the Owner must reconstruct Mims Road as a 29-foot wide paving section. REC requests that this requirement be deferred until such time as development of Lot 3. Block A occurs. At this time REC proposes only to connect one access drive to Mims Road. The access drive will be private, gated, and used for property maintenance access purposes.
- Driveway Spacing Variance: A variance to the minimum spacing requirement is requested for the proposed Access Drive connection to State Highway 205. Preliminary discussions with the Texas Department of Transportation indicate they would permit the reduced driveway spacing if the driveway connection is constructed in the "right in" "right out" configuration shown on the Site Plan. The proposed access drive connection to State Highway 205 will be gated and is intended mainly for egress of the REC Mobile Substation.

- Outdoor Storage Area Screening Variance: A partial variance for screening of the proposed gravel laydown yard from SH 205 is requested due to its distance from the roadway. We request that only canopy trees along a portion of the proposed access drive be required to screen the outdoor storage area as shown in the Landscape Plans in lieu of a masonry wall or the full landscape screening.

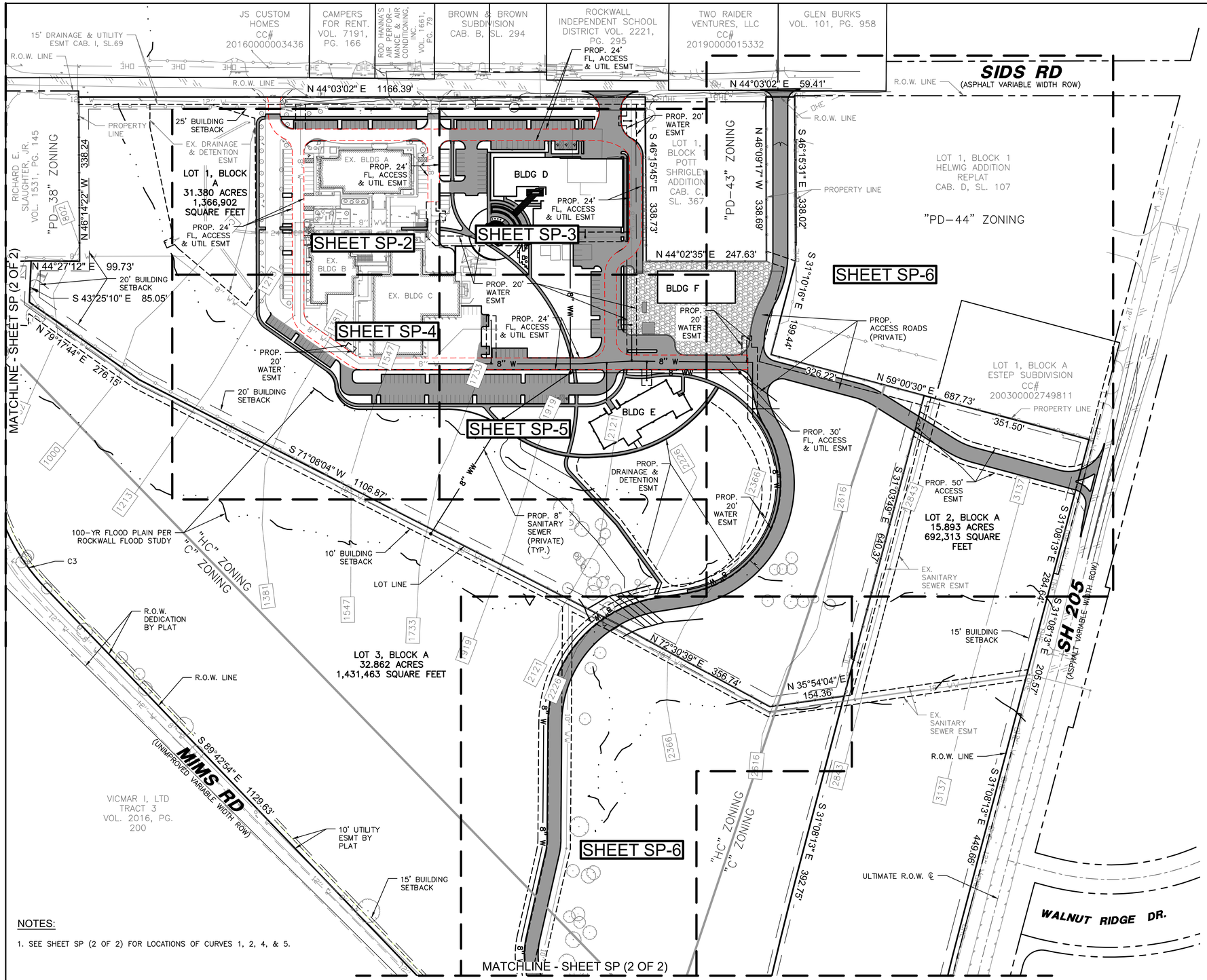
We greatly appreciate your consideration of these variance requests.

Best Regards,

R-DELTA ENGINEERS, INC.
TBPE Firm No. F-001515

Frank A. Polma, P.E.
President

Cc: Mr. Stephen Geiger, P.E. – Rayburn Electric Cooperative



LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
TPED	EX. TELEPHONE PEDESTAL
WV	EX. WATER VALVE
EB	EX. ELECTRIC BOX
FH	EX. FIRE HYDRANT
CMP	EX. CORRUGATED METAL PIPE
X" W	EX. WATER MAIN PIPE
X" WW	EX. WASTE WATER MAIN PIPE
XX" CMP	EXISTING CORRUGATED METAL PIPE & SIZE
	EXISTING WROUGHT IRON FENCE
	EXISTING CHAIN LINK FENCE
PP	EXISTING POWER POLE
OHE	EXISTING OVERHEAD ELECTRIC
	EXISTING GUY WIRE
	EXISTING FLOOD LIGHT
	EDGE OF ASPHALT
	PROPOSED WROUGHT IRON FENCE
	100-YR FLOOD PLAIN-ROCKWALL
	BFR - CONSTRUCT BARRIER FREE RAMP WITH TRUNCATED DOMED PANELS PER CITY DETAILS. NO EXTRA PAY ITEM FOR MONOLITHIC CURBS.
	ACCESSIBLE AISLE STRIPING
1000	CROSS-SECTION LOCATION- CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT
	PROPOSED GRAVEL SURFACING

GRAPHIC SCALE IN FEET
SCALE: 1" = 100'

EXISTING SITE PARKING DATA

PUBLIC SPACES	ACCESSIBLE SPACES	TOTAL
125	5	130

PROPOSED SITE PARKING DATA

PUBLIC SPACES	ACCESSIBLE SPACES	TOTAL
262	9	271

SITE INFORMATION:

EXISTING ZONING: HEAVY COMMERCIAL (HC), COMMERCIAL (C), & AGRICULTURAL (AG)

PROPOSED ZONING: NO CHANGE

PROPOSED USE: EXPANSION OF EXISTING SITE TO INCLUDE 2 NEW OFFICE BUILDINGS, TRUCK WAREHOUSE, AND LAYDOWN STORAGE WAREHOUSE

TOTAL AREA LOT 1: 1,366,902 SQ FT 31.38 AC
TOTAL AREA LOTS 1-4: 4,146,392 SQ FT 95.19 AC

LOT 1 "HC" ZONING

MAXIMUM BUILDING HEIGHT: 60 FT
MAXIMUM LOT COVERAGE: 60%
MAXIMUM FLOOR AREA RATIO: 4:1
MAXIMUM IMPERVIOUS PARKING: 90-95%

PROPOSED MAX. BUILDING D HEIGHT: 40'
PROPOSED MAX. BUILDING E HEIGHT: 46'-4"
PROPOSED MAX. BUILDING F HEIGHT: 26'-8"
PROPOSED LOT COVERAGE: 106,281/1,366,902 = 7.8%
PROPOSED FLOOR AREA RATIO: 113,260/1,366,902 = 0.08:1
PROPOSED IMPERVIOUS PARKING: 67,476/1,366,902 = 4.9%

EXISTING PARKING:
EXISTING WAREHOUSE 23,520 SQ FT (1:1000) = 24 SPACES
EXISTING OFFICE 31,530 SQ FT (1:300) = 106 SPACES
REMOVED OFFICE 7,700 SQ FT (1:300) = -26 SPACES

EXISTING REQUIRED PARKING = 104 SPACES

REQUIRED PARKING:
PROPOSED WAREHOUSE D 12,750 SQ FT (1:1000) = 13 SPACES
PROPOSED OFFICE D 19,600 SQ FT (1:300) = 66 SPACES
PROPOSED OFFICE E 23,000 SQ FT (1:300) = 77 SPACES
PROPOSED WAREHOUSE F 10,560 SQ FT (1:1000) = 11 SPACES

TOTAL REQUIRED PARKING = 271 SPACES
TOTAL PROVIDED PARKING = 271 SPACES

NOTES:

1. SEE SHEET SP (2 OF 2) FOR LOCATIONS OF CURVES 1, 2, 4, & 5.

BOUNDARY CURVE DATA					
CURVE	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	11°11'01"	5,779.71'	1,128.15'	S 36°43'43" E	1,126.36'
C2	46°17'44"	450.00'	363.60'	N 66°34'02" W	353.79'
C3	36°44'03"	482.50'	309.35'	S 61°47'11" E	304.08'
C4	129°16'42"	40.00'	90.25'	S 23°55'53" W	72.29'
C5	7°41'42"	6,142.03'	824.89'	N 34°59'04" W	824.27'

APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ___ day of _____, 202_.

WITNESS OUR HANDS, this ___ day of _____, 202_.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

PAVEMENT INFORMATION:

ALL PAVEMENTS BELOW HAVE #3 BARS 24" O.C.E.W.

PAVEMENT TYPE	THICKNESS (INCHES)	28-DAY (PSI)	MIN. CEMENT (SACKS/CY) MACHINE	HAND
FIRE LANE	6"	3,600	6.0	6.5
DRIVEWAYS	6"	3,600	6.0	6.5
BARRIER FREE RAMPS	6"	3,600	6.0	6.5
DUMPSTER PADS	7"	3,600	6.0	6.5
SIDEWALKS	4"	3,000	N/A	5.5
PARKING LOT/ DRIVE AISLES	5"	3,000	5.0	5.5

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1-4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

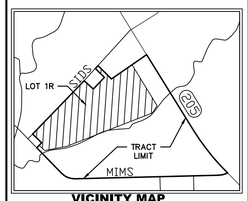
OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
TBPE No. F-1515

Rayburn Electric COOPERATIVE

STATE OF TEXAS
BRIAN PAUL PATRICK
80844
REGISTERED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BRIAN PAUL PATRICK, P.E. 80844 ON 10/14/2022. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.



VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21

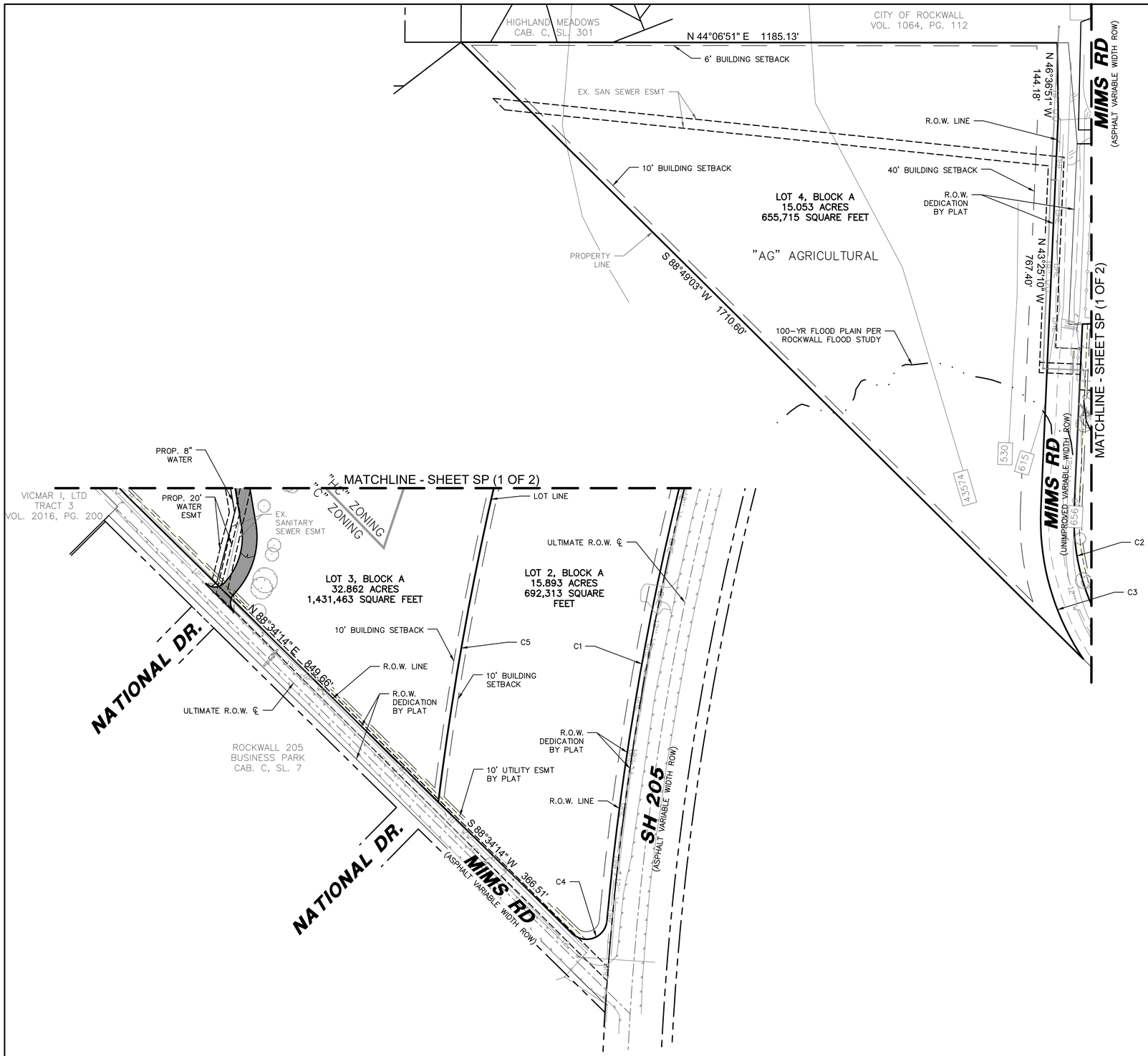
DATE
10/14/2022

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
SITE PLAN

CASE# SP2022-041

SHEET NO.
SP (1 OF 2)



LEGEND

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SSMH	EX. SANITARY SEWER MANHOLE
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FH	EX. FIRE HYDRANT
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X" W	EX. WATER MAIN PIPE
X" WW	EX. WASTE WATER MAIN PIPE
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	EXISTING WROUGHT IRON FENCE
	EXISTING CHAIN LINK FENCE
PP	EXISTING POWER POLE
OHE	EXISTING OVERHEAD ELECTRIC
	EXISTING GUY WIRE
	EXISTING FLOOD LIGHT
	EDGE OF ASPHALT
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1000	CROSS-SECTION LOCATION- CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT

GRAPHIC SCALE IN FEET
SCALE: 1" = 100'

NOTES:

1. SEE SHEET SP (2 OF 2) FOR BOUNDARY CURVE DATA.

SITE INFORMATION:

SEE SP (1 OF 2)

PAVEMENT INFORMATION:

SEE SP (1 OF 2)

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1-4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

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LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
TBPE No. F-1515

STATE OF TEXAS
BRIAN PAUL PATRICK
80844
REGISTERED
PROFESSIONAL ENGINEER

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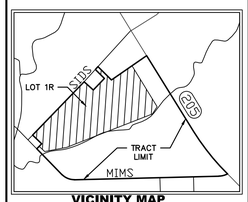


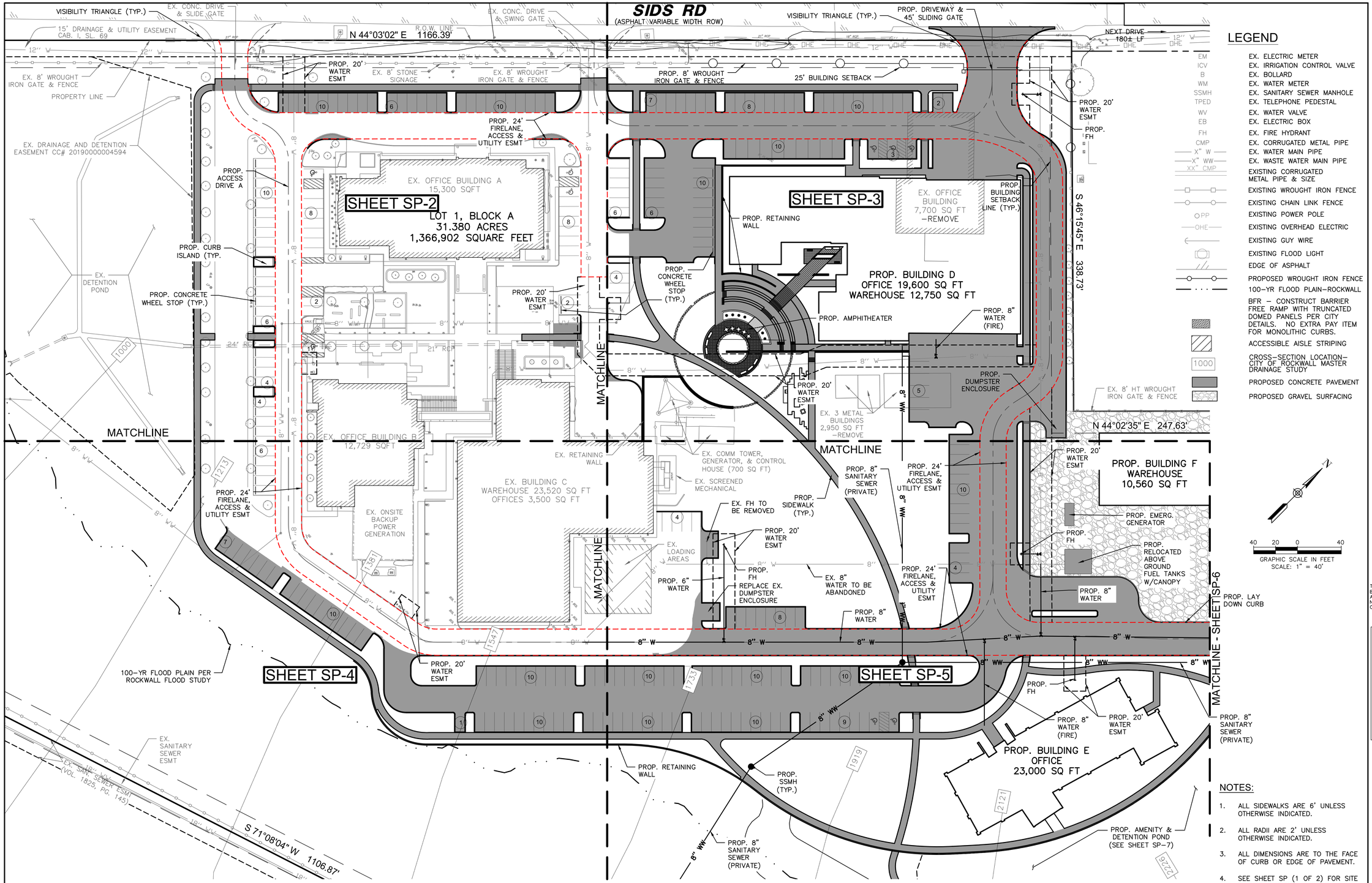
VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21
DATE
10/14/2022
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SITE PLAN
CASE# SP2022-041

SHEET NO.
SP (2 OF 2)



LEGEND

- EX. ELECTRIC METER
- EX. IRRIGATION CONTROL VALVE
- EX. BOLLARD
- EX. WATER METER
- EX. SANITARY SEWER MANHOLE
- EX. TELEPHONE PEDESTAL
- EX. WATER VALVE
- EX. ELECTRIC BOX
- EX. FIRE HYDRANT
- EX. CORRUGATED METAL PIPE
- EX. WATER MAIN PIPE
- EX. WASTE WATER MAIN PIPE
- EXISTING CORRUGATED METAL PIPE & SIZE
- EXISTING WROUGHT IRON FENCE
- EXISTING CHAIN LINK FENCE
- EXISTING POWER POLE
- EXISTING OVERHEAD ELECTRIC
- EXISTING GUY WIRE
- EXISTING FLOOD LIGHT
- EDGE OF ASPHALT
- PROPOSED WROUGHT IRON FENCE
- 100-YR FLOOD PLAIN–ROCKWALL
- BFR – CONSTRUCT BARRIER FREE RAMP WITH TRUNCATED DOMED PANELS PER CITY DETAILS. NO EXTRA PAY ITEM FOR MONOLITHIC CURBS.
- ACCESSIBLE AISLE STRIPING
- CROSS-SECTION LOCATION– CITY OF ROCKWALL MASTER DRAINAGE STUDY
- PROPOSED CONCRETE PAVEMENT
- PROPOSED GRAVEL SURFACING

NOTES:

1. ALL SIDEWALKS ARE 6' UNLESS OTHERWISE INDICATED.
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4. SEE SHEET SP (1 OF 2) FOR SITE INFORMATION AND PARKING INFORMATION.

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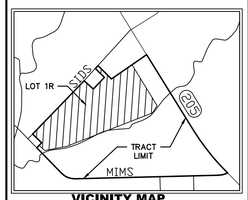

VICINITY MAP
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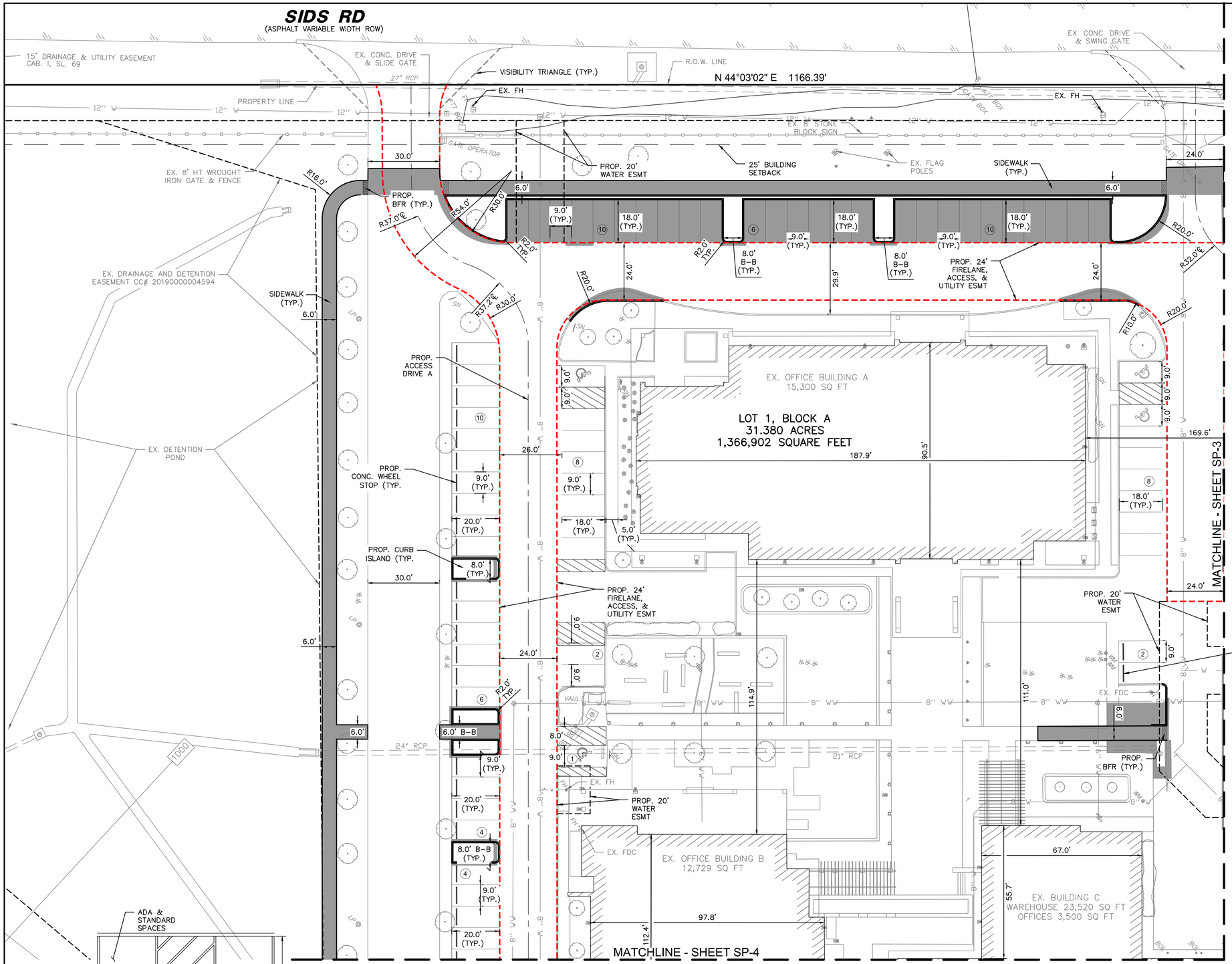
CASE# SP2022-041

SHEET NO.
SP-1



GRAPHIC SCALE IN FEET
SCALE: 1" = 20'

LEGEND

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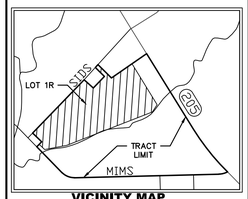

VICINITY MAP
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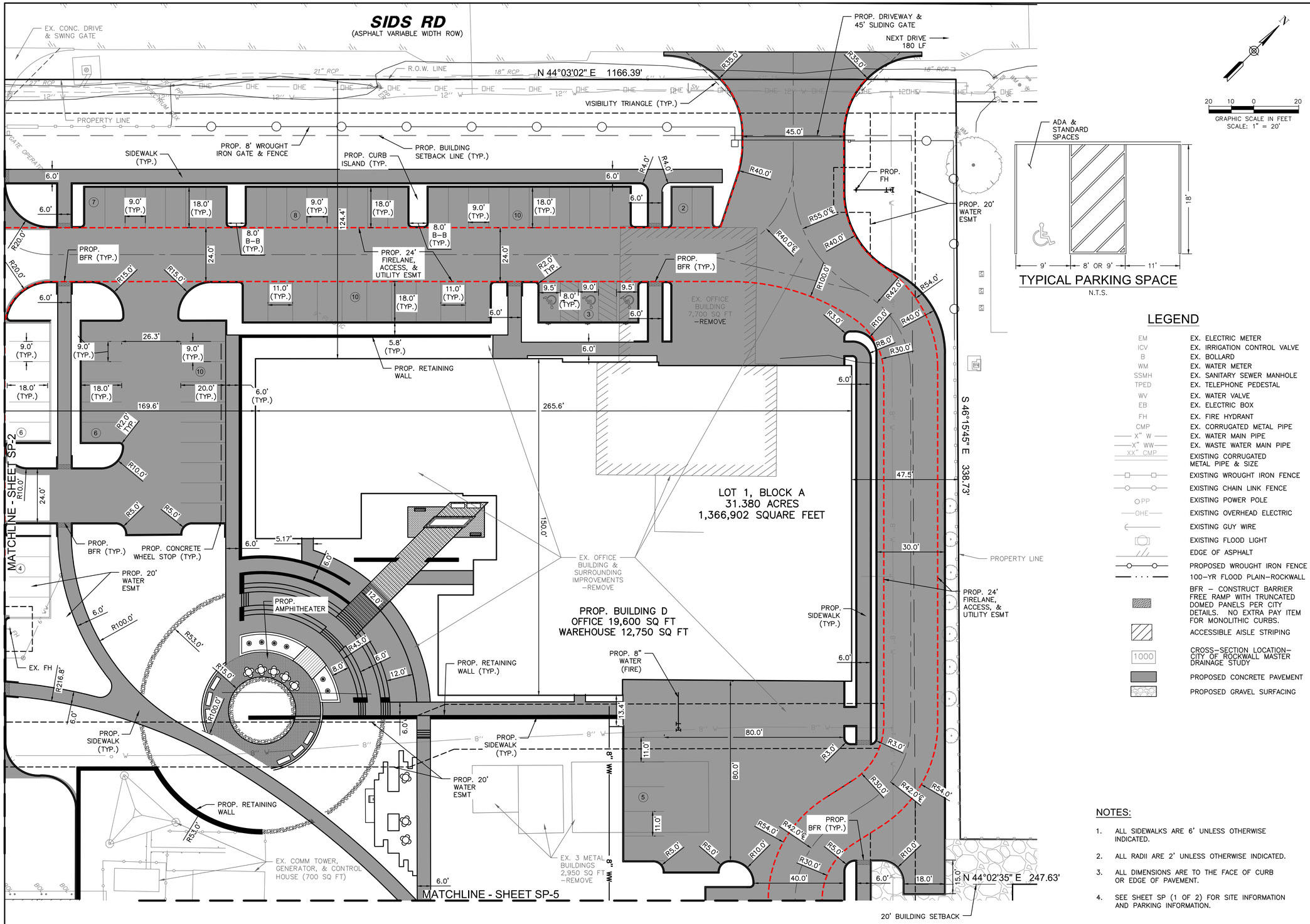
SHEET NO.
SP-2



TYPICAL PARKING SPACE
N.T.S.

LEGEND

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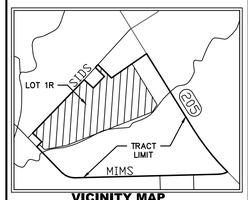

VICINITY MAP
NTS

REVISION

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PROJECT NUMBER
3036.21

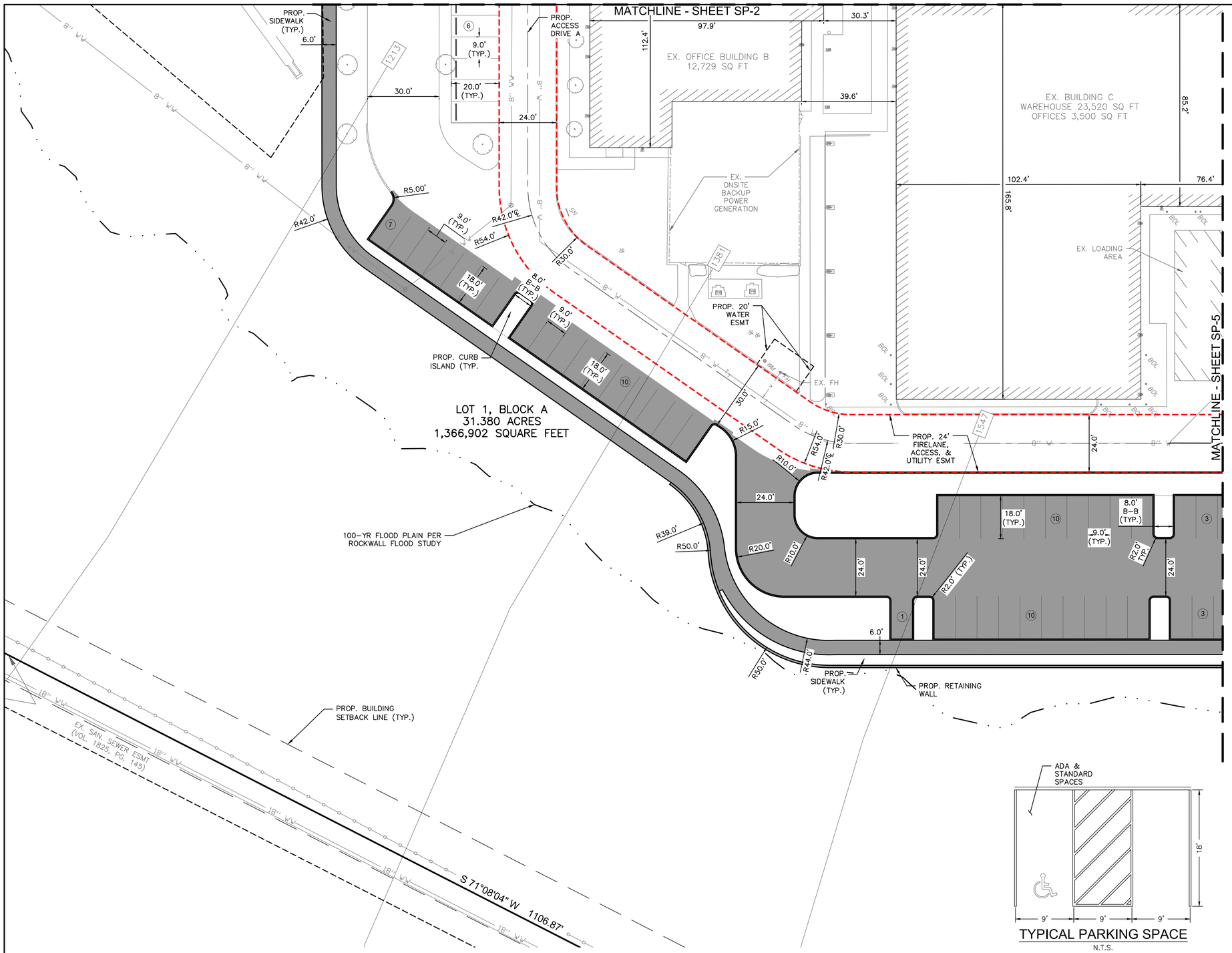
DATE
10/14/2022

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
SITE PLAN

CASE# SP2022-041

SHEET NO.
SP-3



LEGEND

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TYPICAL PARKING SPACE
N.T.S.

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
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469-402-2100

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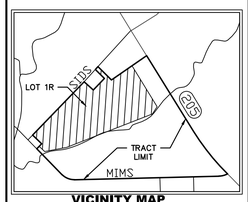

VICINITY MAP
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SITE PLAN
CASE# SP2022-041

SHEET NO.
SP-4

MATCHLINE - SHEET SP-3

MATCHLINE - SHEET SP-4

MATCHLINE - SHEET SP-6

EX. BUILDING C
WAREHOUSE 23,520 SQ FT
OFFICES 3,500 SQ FT

PROP. BUILDING F
WAREHOUSE
10,560 SQ FT

PROP. BUILDING E
OFFICE
23,000 SQ FT

LOT 1, BLOCK A
31.380 ACRES
1,366,902 SQUARE FEET

PROP. ACCESS DRIVE A

PROP. ACCESS DRIVE B

PROP. 24' FIRELANE, ACCESS, & UTILITY ESMT

PROP. 8" SANITARY SEWER (PRIVATE)

PROP. SIDEWALK (TYP.)

SIDEWALK (TYP.)

PROP. CURB ISLAND (TYP.

PROP. OUTSIDE STORAGE

PROP. EMERG. GENERATOR

PROP. 20' WATER ESMT

PROP. RELOCATED ABOVE GROUND FUEL TANKS W/ CANOPY

PROP. FH

EX. 8" WATER TO BE ABANDONED

REPLACE EX. DUMPSTER ENCLOSURE

EX. LOADING AREA

PROP. BFR (TYP.)

PROP. SSMH (TYP.)

PROP. RETAINING WALL

PROP. AMENITY & DETENTION POND (SEE SHEET SP-7)

PROP. DRAINAGE & DETENTION ESMT (SEE SHEET SP-7)

100-YR FLOOD PLAIN PER ROCKWALL FLOOD STUDY

LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
TPED	EX. TELEPHONE PEDESTAL
WV	EX. WATER VALVE
EB	EX. ELECTRIC BOX
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X" W	EX. WATER MAIN PIPE
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	EX. WROUGHT IRON FENCE
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	EDGE OF ASPHALT
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GRAPHIC SCALE IN FEET
SCALE: 1" = 20'

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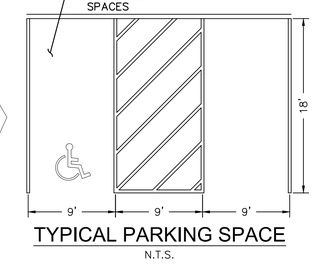

TYPICAL PARKING SPACE
N.T.S.

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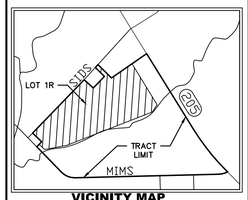

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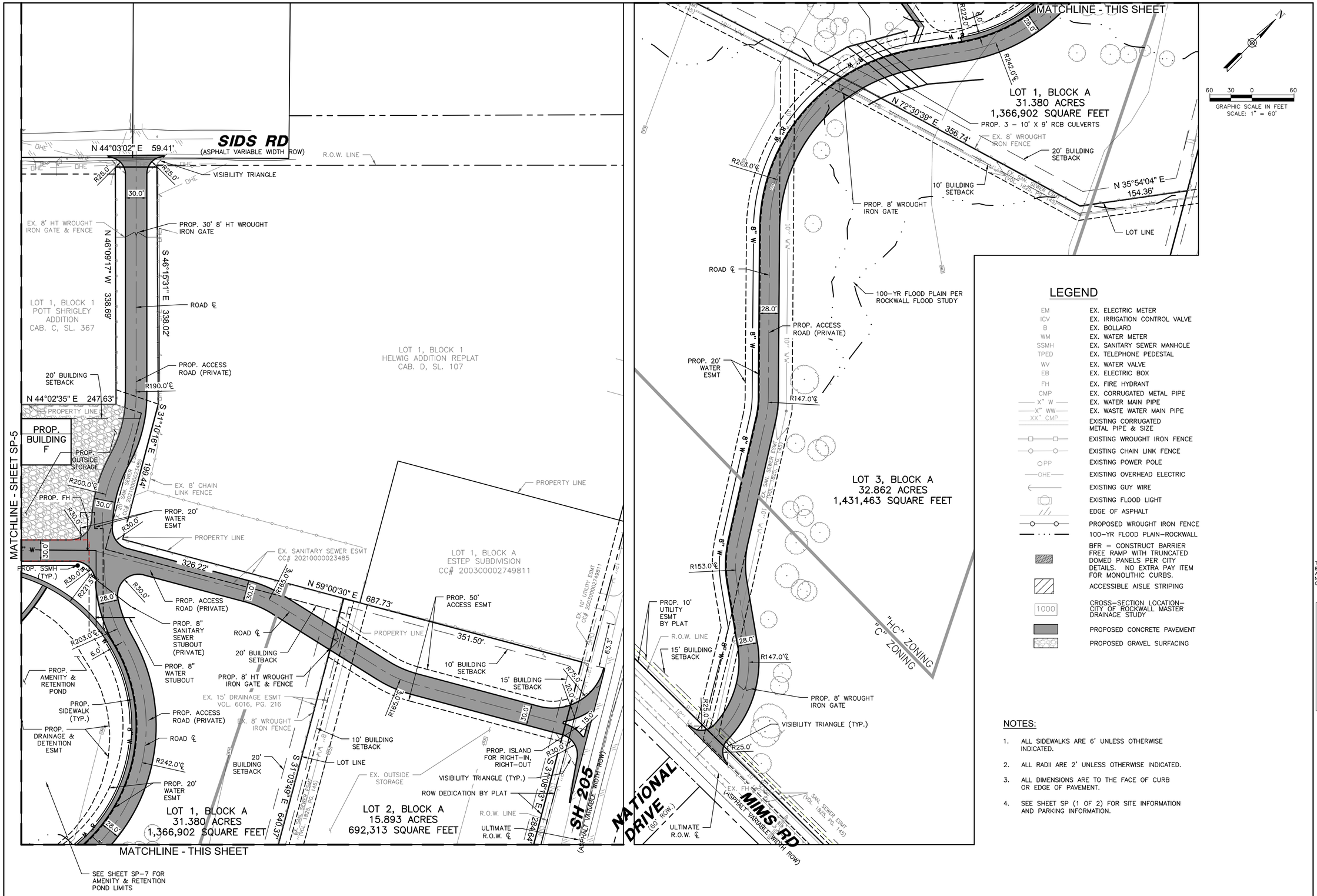
SHEET TITLE
SITE PLAN

CASE# SP2022-041

SHEET NO.
SP-5



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R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
TBPE No. F-1515

Rayburn Electric COOPERATIVE

STATE OF TEXAS
BRIAN PAUL PATRICK
80844
REGISTERED
PROFESSIONAL ENGINEER

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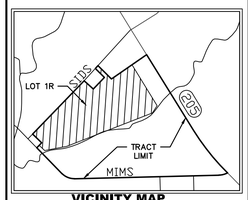


VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21

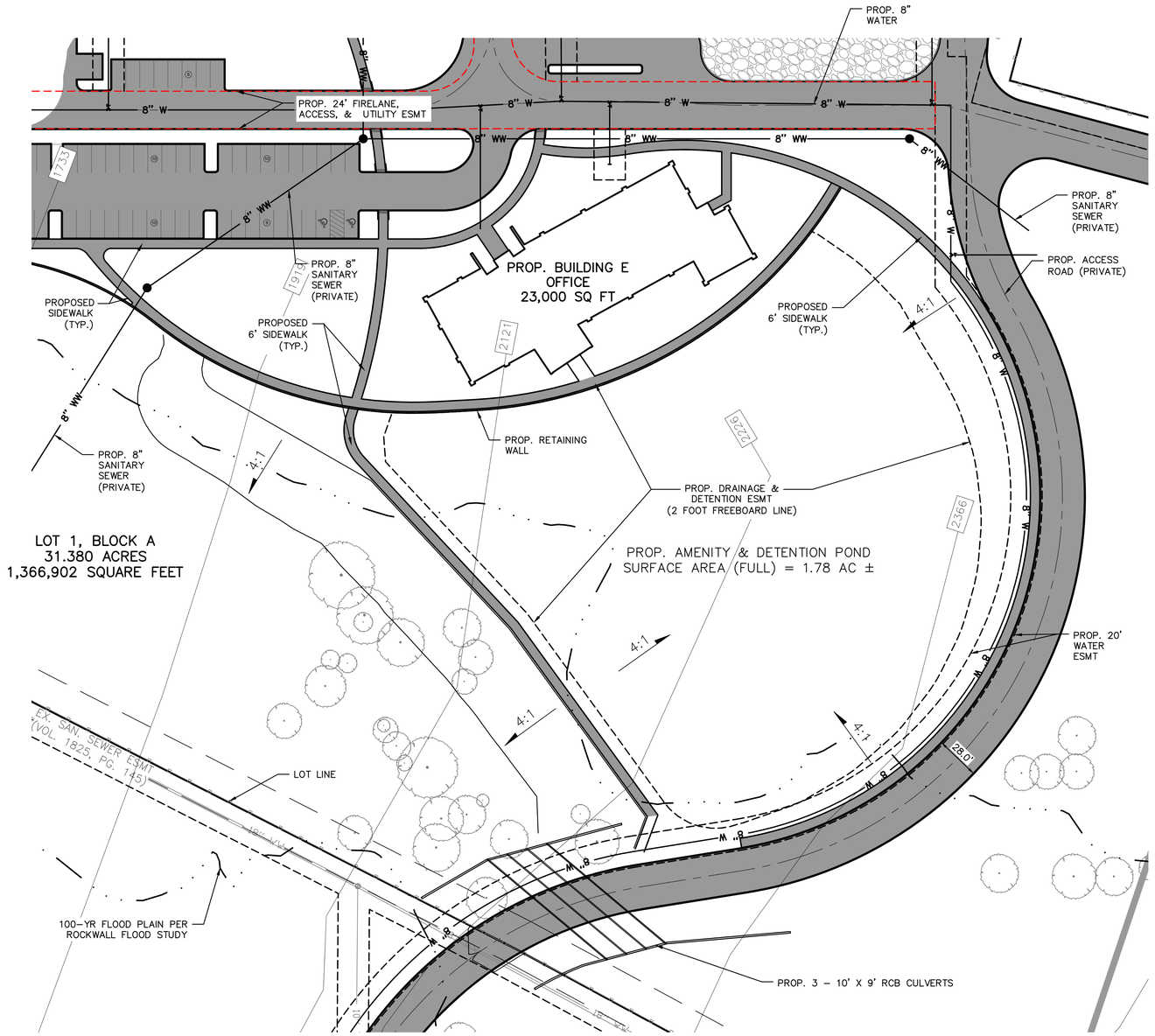
DATE
10/14/2022

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
SITE PLAN

CASE# SP2022-041

SHEET NO.
SP-6



40 20 0 40

GRAPHIC SCALE IN FEET
SCALE: 1" = 40'

LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
TPED	EX. TELEPHONE PEDESTAL
WV	EX. WATER VALVE
EB	EX. ELECTRIC BOX
FH	EX. FIRE HYDRANT
CMP	EX. CORRUGATED METAL PIPE
X" W	EX. WATER MAIN PIPE
X" WW	EX. WASTE WATER MAIN PIPE
XX" CMP	EX. CORRUGATED METAL PIPE & SIZE
	EX. WROUGHT IRON FENCE
	EX. CHAIN LINK FENCE
PP	EX. POWER POLE
OHE	EX. OVERHEAD ELECTRIC
	EX. GUY WIRE
	EX. FLOOD LIGHT
	EDGE OF ASPHALT
	PROP. WROUGHT IRON FENCE
	100-YR FLOOD PLAIN-ROCKWALL
	BFR - CONSTRUCT BARRIER FREE RAMP WITH TRUNCATED DOMED PANELS PER CITY DETAILS. NO EXTRA PAY ITEM FOR MONOLITHIC CURBS.
	ACCESSIBLE AISLE STRIPING
1000	CROSS-SECTION LOCATION-CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT

NOTES:

1. ALL SIDEWALKS ARE 6' UNLESS OTHERWISE INDICATED.
2. ALL RADII ARE 2' UNLESS OTHERWISE INDICATED.
3. ALL DIMENSIONS ARE TO THE FACE OF CURB OR EDGE OF PAVEMENT.
4. SEE SHEET SP (1 OF 2) FOR SITE INFORMATION AND PARKING INFORMATION.

HKS

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260 EAST DAVIS STREET, SUITE 100
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MEP ENGINEERS
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4925 GREENVILLE AVENUE, SUITE 415
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OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

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TBPE No. F-1515

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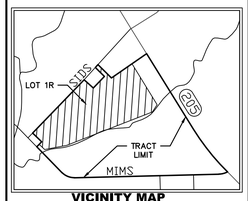


VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21
DATE
10/14/2022
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SITE PLAN
CASE# SP2022-041

SHEET NO.
SP-7

ELEVATION MATERIAL CALCULATIONS

MATERIAL:	AMOUNT (SF):	AMOUNT%:
**NORTH		
PORTLAND CEMENT PLASTER (PCP01)	460	16
WOOD SIDING (WD01)	160	6
STONE VENEER (ST01)	607	21
GLAZING (GL01)	710	24
TILT UP CONCRETE PANELS (PC01)	975	33
TOTAL:	2,912*	100
SOUTH		
PORTLAND CEMENT PLASTER (PCP01)	547	14
WOOD SIDING (WD01)	0	0
STONE VENEER (ST01)	635	16
GLAZING (GL01)	1,374	34
TILT UP CONCRETE PANELS (PC01)	1,457	36
TOTAL:	4,013*	100
EAST		
PORTLAND CEMENT PLASTER (PCP01)	54	1
WOOD SIDING (WD01)	0	0
STONE VENEER (ST01)	120	3
GLAZING (GL01)	475	11
TILT UP CONCRETE PANELS (PC01)	3540	85
TOTAL:	4189	100
WEST		
PORTLAND CEMENT PLASTER (PCP01)	1465	31
WOOD SIDING (WD01)	154	3
STONE VENEER (ST01)	680	14
GLAZING (GL01)	950	19
TILT UP CONCRETE PANELS (PC01)	1,629	33
TOTAL:	4878	100

** Designates elevations adjacent to Public ROW

EXTERIOR MATERIALS LEGEND

ST01:
a. STONE TYPE: LIMESTONE
b. STONE NAME: LEUDERS CHOPPED BUFF
c. GROUT/SEALANT COLOR: MATCH EXISTING
d. LOCATION: EXTERIOR STONE MASONRY VENEER

AMF01:
a. MATERIAL TYPE: ALUMINIUM
b. FINISH TYPE: ANODIZED
c. ANODIZED COLOR: DARK BRONZE
d. COATING COLOR: MATCH EXISTING
e. LOCATION: MULLIONS

AMF02:
a. MATERIAL TYPE: STEEL
b. FINISH TYPE: HIGH-PERFORMANCE ORGANIC FLUOROPOLYMER
c. COATING COLOR: MATCH PT02
d. LOCATION: EXPOSED TRELLIS COLUMNS

AMF03:
a. MATERAL TYPE: STEEL
b. COATING COLOR: MATCH EXISTING ROOF, BERRIDGE PREWEATHERED GALVALUME
c. MATTE FINISH
d. LOCATION: STANDING SEAM METAL ROOF

WD01:
a. SPECIES AND CUT: WESTERN RED CEDAR
b. FINISH: CLEAR MATTE FINISH
c. LOCATION: WOOD BEAM CLADDING. EXTERIOR SOFFITS, INTERIOR CEILINGS AND TRIM.

CSM01:
a. MATERIAL TYPE: CAST STONE
b. COLOR: NATURAL
c. AGGREGATE:
d. EXPOSED TEXTURE FINISH: [SMOOTH] [HONED] [SAND TEXTURE]
e. LOCATION: WAINSCOT SILL @ STONE, PARAPET CAP

PCP01:
a. MATERIAL TYPE: PORTLAND CEMENT PLASTER
b. COLOR: MATCH SW 9111 ANTLER VELVET

PC01:
a. MATERIAL TYPE: TILT UP CONCRETE PANELS
b. COLOR: MATCH SW 9111 ANTLER VELVET

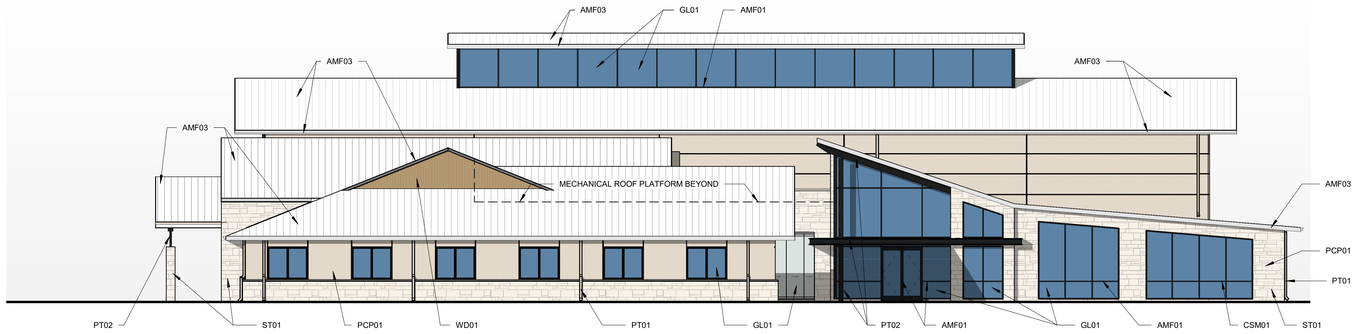
PT01:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: GUTTERS AND DOWNSPOUTS

PT02:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: EXPOSED STRUCTURAL STEEL & ENTRY CANOPIES

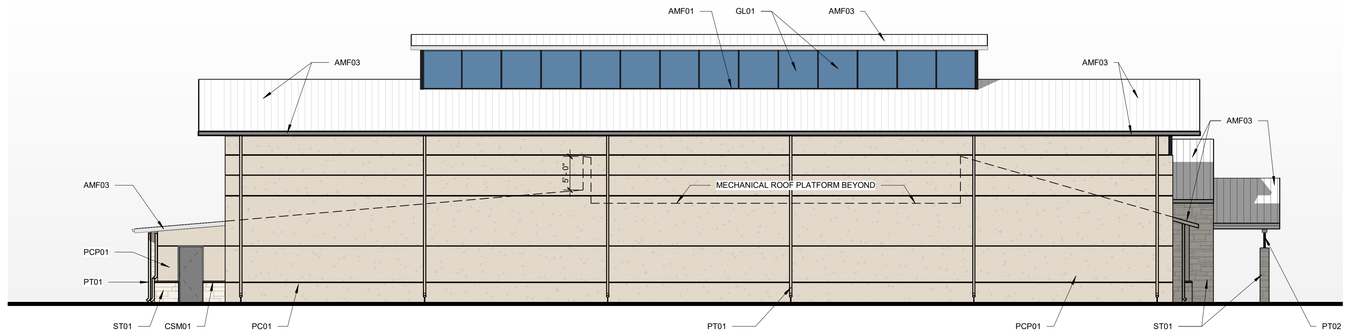
GL01: INSULATING COATED GLASS - VISION
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: CLEAR HS; 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE.
3) AIR SPACE: 1/2"; ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS

GL02: INSULATING COATED GLASS - SPANDREL
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: SPANDREL 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE.
3) AIR SPACE: 1/2"; ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS
COLOR: V908 GRAY

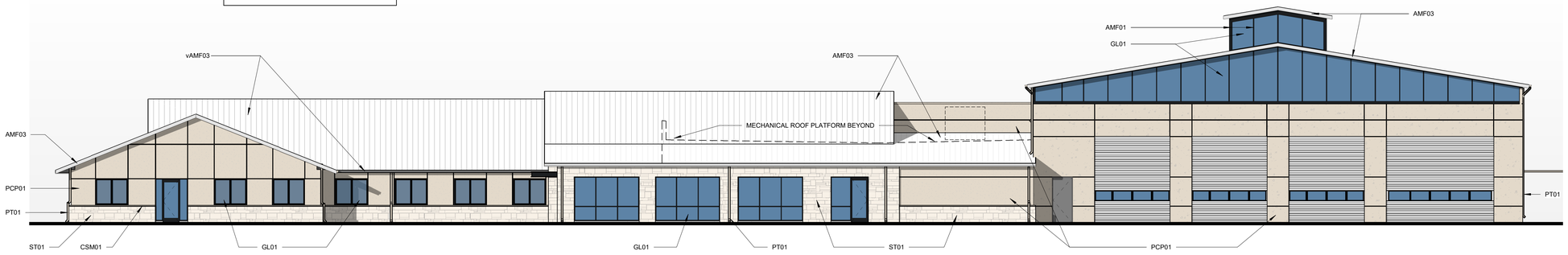
CMU01:
a. MANUFACTURER: FEATHERLITE
b. SPLIT FACE MASONRY BLOCK
c. COLOR: CREAM



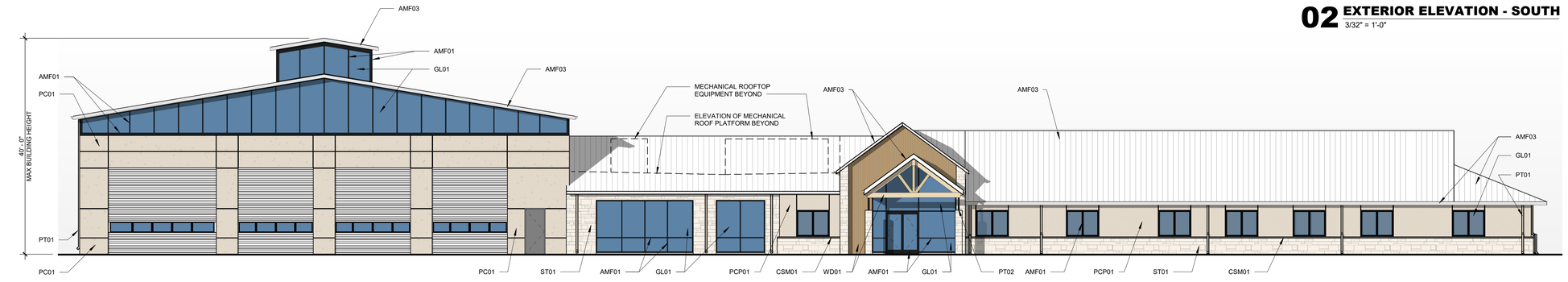
04 EXTERIOR ELEVATION - WEST
3/32" = 1'-0"



03 EXTERIOR ELEVATION - EAST
3/32" = 1'-0"



02 EXTERIOR ELEVATION - SOUTH
3/32" = 1'-0"



01 EXTERIOR ELEVATION - NORTH
3/32" = 1'-0"

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618 MAIN STREET
GARLAND, TEXAS 75040

Rayburn Electric COOPERATIVE

INTERIM REVIEW ONLY

These documents are incomplete, and are released for interim review only and are not intended for regulatory approval, permit, or construction purposes.

Architect:
Arch. Reg. No.:
Date:

KEY PLAN

REVISION
NO. DESCRIPTION DATE

HKS PROJECT NUMBER
25370.000
DATE
10/14/22
ISSUE

SHEET TITLE
EXTERIOR ELEVATIONS - BUILDING D
SHEET NO.
PA5.01

PLOT DATE: 10/14/2022 12:33:31 PM TEMPLATE VERSION: 21.0.0.20200831

ELEVATION MATERIAL CALCULATIONS

MATERIAL:		AMOUNT (SF):	AMOUNT%:
NORTH			
	PORTLAND CEMENT PLASTER (PCP01)	270	4
	WOOD SIDING (WD01)	180	2
	STONE VENEER (ST01)	2560	34
	GLAZING (GL01)	4366	60
	TOTAL:	7376*	100
SOUTH			
	PORTLAND CEMENT PLASTER (PCP01)	270	4
	WOOD SIDING (WD01)	93	1
	STONE VENEER (ST01)	2473	34
	GLAZING (GL01)	4421	61
	TOTAL:	7257	100
EAST			
	PORTLAND CEMENT PLASTER (PCP01)	110	3
	WOOD SIDING (WD01)	56	2
	STONE VENEER (ST01)	1683	53
	GLAZING (GL01)	1313	42
	TOTAL:	3162	100
WEST			
	PORTLAND CEMENT PLASTER (PCP01)	110	3
	WOOD SIDING (WD01)	56	2
	STONE VENEER (ST01)	1750	55
	GLAZING (GL01)	1273	40
	TOTAL:	3189	100

** Designates elevations adjacent to Public ROW

EXTERIOR MATERIALS LEGEND

ST01:
a. STONE TYPE: LIMESTONE
b. STONE NAME: LEUDERS CHOPPED BUFF
c. GROUT/SEALANT COLOR: MATCH EXISTING
d. LOCATION: EXTERIOR STONE MASONRY VENEER

AMF01:
a. MATERIAL TYPE: ALUMINIUM
b. FINISH TYPE: ANODIZED
c. ANODIZED COLOR: DARK BRONZE
d. COATING COLOR: MATCH EXISTING
e. LOCATION: MULLIONS

AMF02:
a. MATERIAL TYPE: STEEL
b. FINISH TYPE: HIGH-PERFORMANCE ORGANIC FLUOROPOLYMER
c. COATING COLOR: MATCH PT02
d. LOCATION: EXPOSED TRELLIS COLUMNS

AMF03:
a. MATERIAL TYPE: STEEL
b. COATING COLOR: MATCH EXISTING ROOF, BERRIDGE PREWEATHERED GALVALUME
c. MATTE FINISH
d. LOCATION: STANDING SEAM METAL ROOF

WD01:
a. SPECIES AND CUT: WESTERN RED CEDAR
b. FINISH: CLEAR MATTE FINISH
c. LOCATION: WOOD BEAM CLADDING. EXTERIOR SOFFITS, INTERIOR CEILINGS AND TRIM.

CSM01:
a. MATERIAL TYPE: CAST STONE
b. COLOR: NATURAL
c. AGGREGATE:
d. EXPOSED TEXTURE FINISH: [SMOOTH] [HONED] [SAND TEXTURE]
e. LOCATION: WAINSCOT SILL @ STONE, PARAPET CAP

PCP01:
a. MATERIAL TYPE: PORTLAND CEMENT PLASTER
b. COLOR: MATCH SW 9111 ANTLER VELVET

PC01:
a. MATERIAL TYPE: TILT UP CONCRETE PANELS
b. COLOR: MATCH SW 9111 ANTLER VELVET

PT01:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: GUTTERS AND DOWNSPOUTS

PT02:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: EXPOSED STRUCTURAL STEEL & ENTRY CANOPIES

GL01: INSULATING COATED GLASS - VISION
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: CLEAR HS; 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE
3) AIR SPACE: 1/2"; ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS

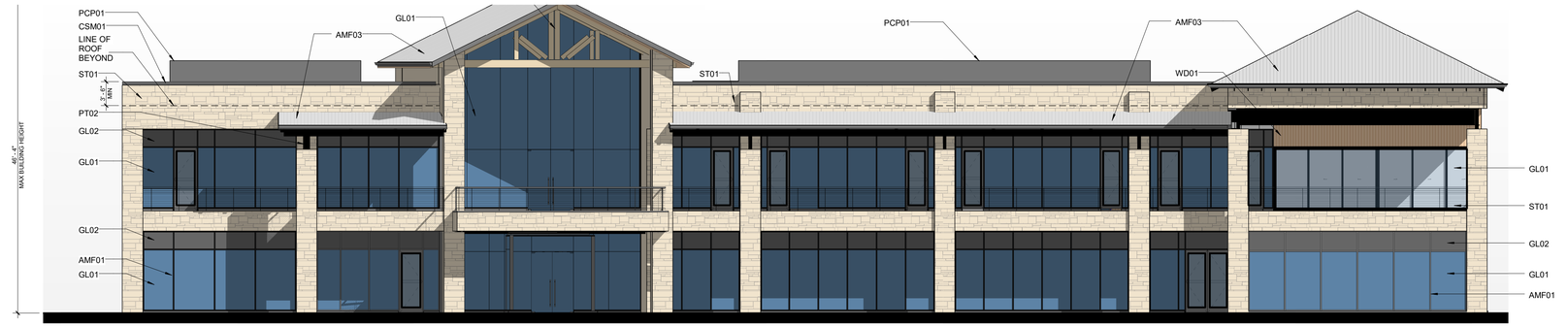
GL02: INSULATING COATED GLASS - SPANDREL
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: SPANDREL 1/4" THICK GLASS WITH COATING NO.2 SURFACE
3) AIR SPACE: 1/2"; ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS
COLOR: V908 GRAY

CMU01:
a. MANUFACTURER: FEATHERLITE
b. SPLIT FACE MASONRY BLOCK
c. COLOR: CREAM

04 EXTERIOR ELEVATION - WEST SD
1/8" = 1'-0"

03 EXTERIOR ELEVATION - EAST SD
1/8" = 1'-0"

02 EXTERIOR ELEVATION - NORTH SD
1/8" = 1'-0



01 EXTERIOR ELEVATION - SOUTH SD
1/8" = 1'-0"

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Arch. Reg. No.: _____
Date: _____

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000

DATE
10/14/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
EXTERIOR ELEVATIONS - BUILDING E

SHEET NO.
PA5.02

VVVVPLOT DATE:
TEMPLATE VERSION:

ELEVATION MATERIAL CALCULATIONS

MATERIAL:	AMOUNT (SF):	AMOUNT%:
**NORTH		
CMU SPLIT FACE (CMU01)	2720	100
TOTAL:	2,720*	100
SOUTH		
ALL OPEN		
EAST		
CMU SPLIT FACE (CMU01)	1394	100
TOTAL:	1394	100
WEST		
CMU SPLIT FACE (CMU01)	1394	100
TOTAL:	1394	100

** Designates elevations adjacent to Public ROW

EXTERIOR MATERIALS LEGEND

ST01:
a. STONE TYPE: LIMESTONE
b. STONE NAME: LEUDERS CHOPPED BUFF
c. GROUT/SEALANT COLOR: MATCH EXISTING
d. LOCATION: EXTERIOR STONE MASONRY VENEER

AMF01:
a. MATERIAL TYPE: ALUMINIUM
b. FINISH TYPE: ANODIZED
c. ANODIZED COLOR: DARK BRONZE
d. COATING COLOR: MATCH EXISTING
e. LOCATION: MULLIONS

AMF02:
a. MATERIAL TYPE: STEEL
b. FINISH TYPE: HIGH-PERFORMANCE ORGANIC FLUOROPOLYMER
c. COATING COLOR: MATCH PT02
d. LOCATION: EXPOSED TRELLIS COLUMNS

AMF03:
a. MATERIAL TYPE: STEEL
b. COATING COLOR: MATCH EXISTING ROOF, BERRIDGE PREWEATHERED GALVALUME
c. MATTE FINISH
d. LOCATION: STANDING SEAM METAL ROOF

WD01:
a. SPECIES AND CUT: WESTERN RED CEDAR
b. FINISH: CLEAR MATTE FINISH
c. LOCATION: WOOD BEAM CLADDING. EXTERIOR SOFFITS, INTERIOR CEILINGS AND TRIM.

CSM01:
a. MATERIAL TYPE: CAST STONE
b. COLOR: NATURAL
c. AGGREGATE:
d. EXPOSED TEXTURE FINISH: [SMOOTH] [HONED] [SAND TEXTURE]
e. LOCATION: WAINSCOT SILL @ STONE, PARAPET CAP

PCP01:
a. MATERIAL TYPE: PORTLAND CEMENT PLASTER
b. COLOR: MATCH SW 9111 ANTLER VELVET

PC01:
a. MATERIAL TYPE: TILT UP CONCRETE PANELS
b. COLOR: MATCH SW 9111 ANTLER VELVET

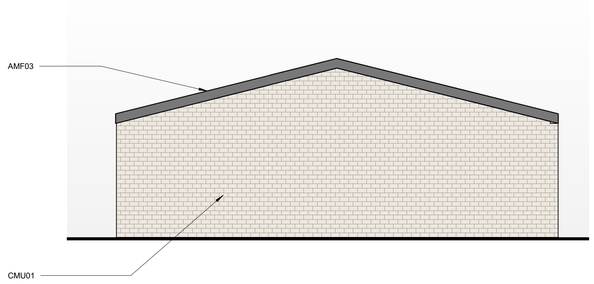
PT01:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: GUTTERS AND DOWNSPOUTS

PT02:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: EXPOSED STRUCTURAL STEEL & ENTRY CANOPIES

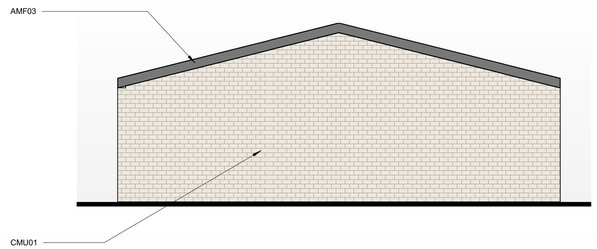
GL01: INSULATING COATED GLASS - VISION
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: CLEAR HS; 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE.
3) AIR SPACE: 1/2", ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS

GL02: INSULATING COATED GLASS - SPANDREL
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: SPANDREL 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE.
3) AIR SPACE: 1/2", ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS COLOR: V908 GRAY

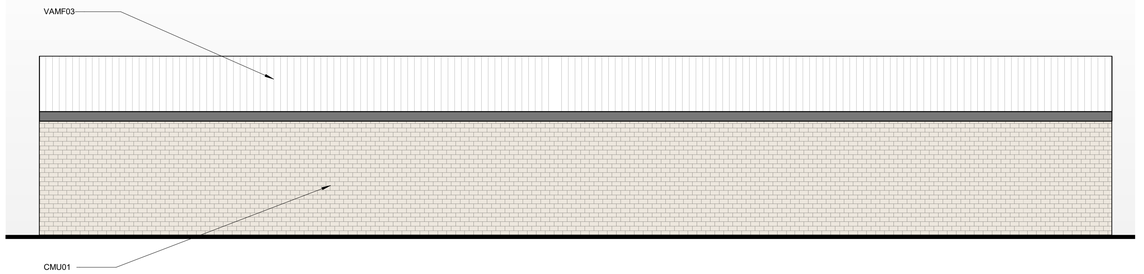
CMU01:
a. MANUFACTURER: FEATHERLITE
b. SPLIT FACE MASONRY BLOCK
c. COLOR: CREAM



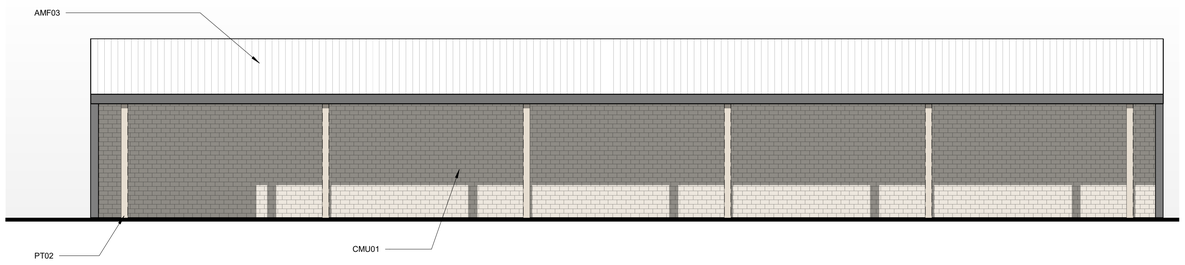
04 EXTERIOR ELEVATION - BUILDING F EAST
3/32" = 1'-0"



03 EXTERIOR ELEVATION - BUILDING F WEST
3/32" = 1'-0"



02 EXTERIOR ELEVATION - BUILDING F NORTH
3/32" = 1'-0"



01 EXTERIOR ELEVATION - BUILDING F SOUTH
3/32" = 1'-0"

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HKS

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GARLAND, TEXAS 75040

Rayburn Electric COOPERATIVE

INTERIM REVIEW ONLY

These documents are incomplete, and are released for interim review only and are not intended for regulatory approval, permit, or construction purposes.

Architect:
Arch. Reg. No.:
Date:

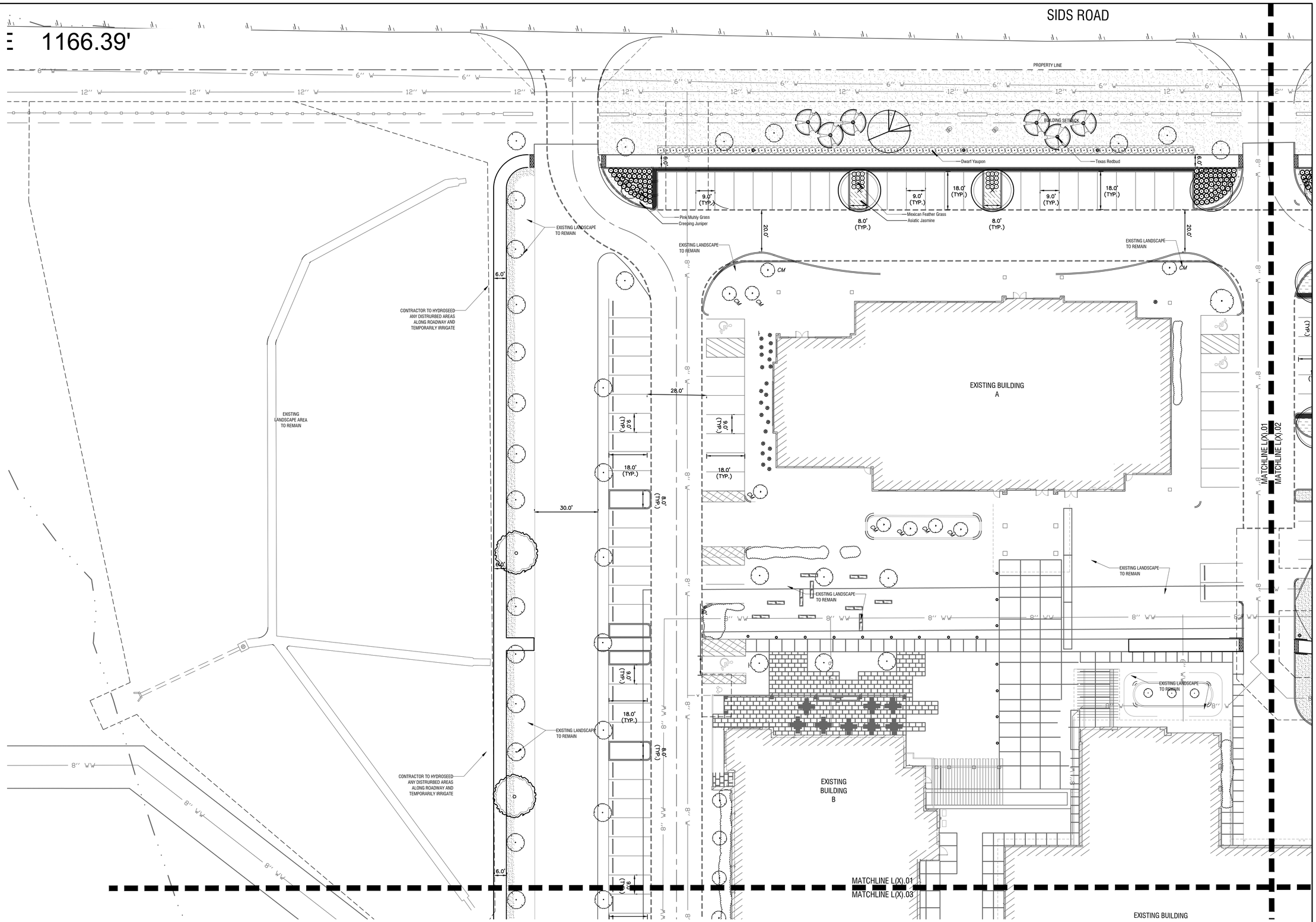
KEY PLAN

REVISION
NO. DESCRIPTION DATE

HKS PROJECT NUMBER
25370.000
DATE
10/14/2022
ISSUE

SHEET TITLE
EXTERIOR ELEVATIONS - BUILDING F
SHEET NO.
PA5.03

PLOT DATE: 10/14/2022 7:55:59 PM TEMPLATE VERSION: 21.0.0.20200831



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Kimley»Horn
P.L.A. LANDON R. HUCKINS
L.A. No. 3480 Date 10/14/2022

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REVISION

NO.	DESCRIPTION	DATE

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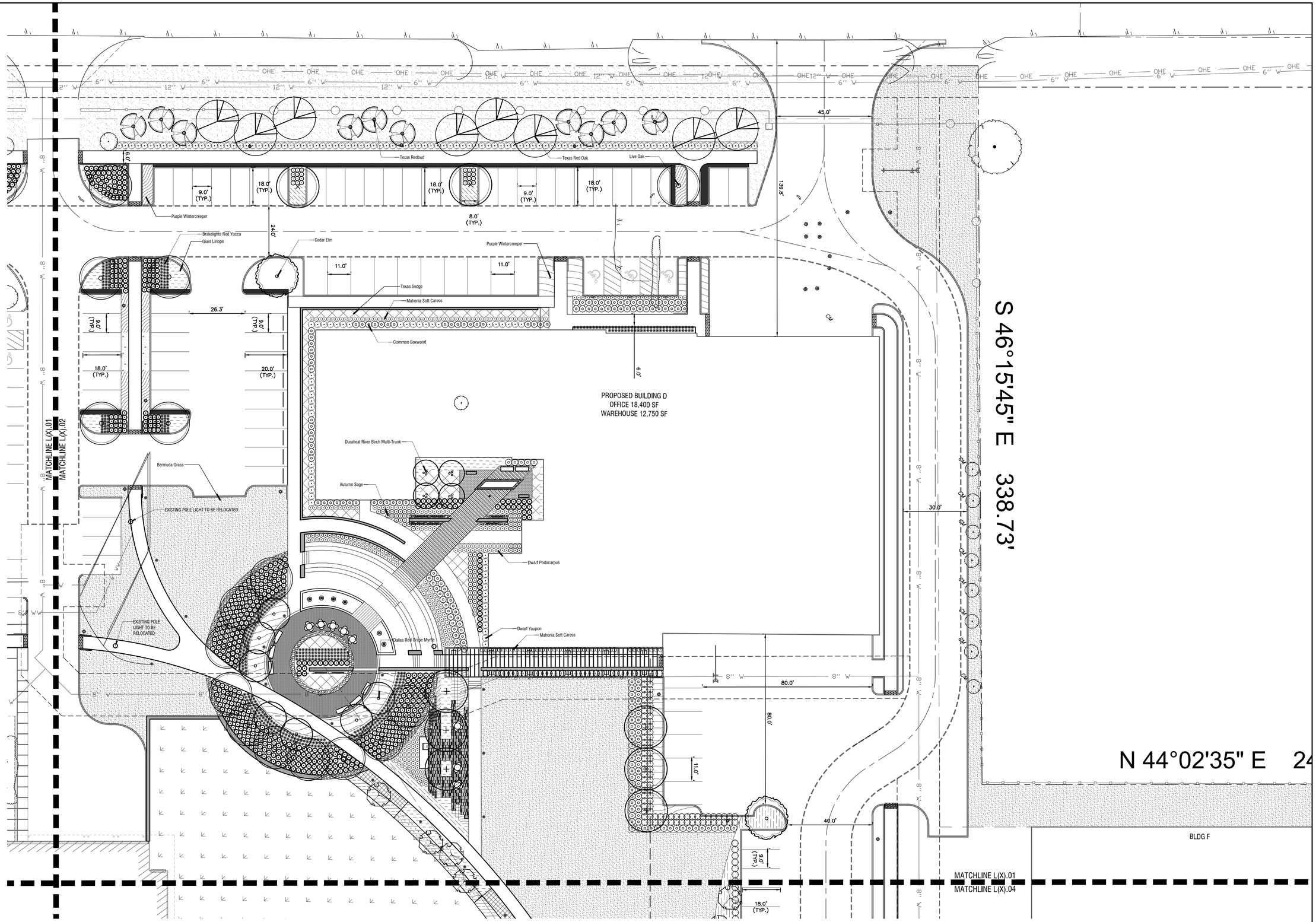
10/14/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L5.01



Landscape Plan
Scale: 1" = 20' - 0"

A

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SHEET TITLE
LANDSCAPE PLAN

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L5.02

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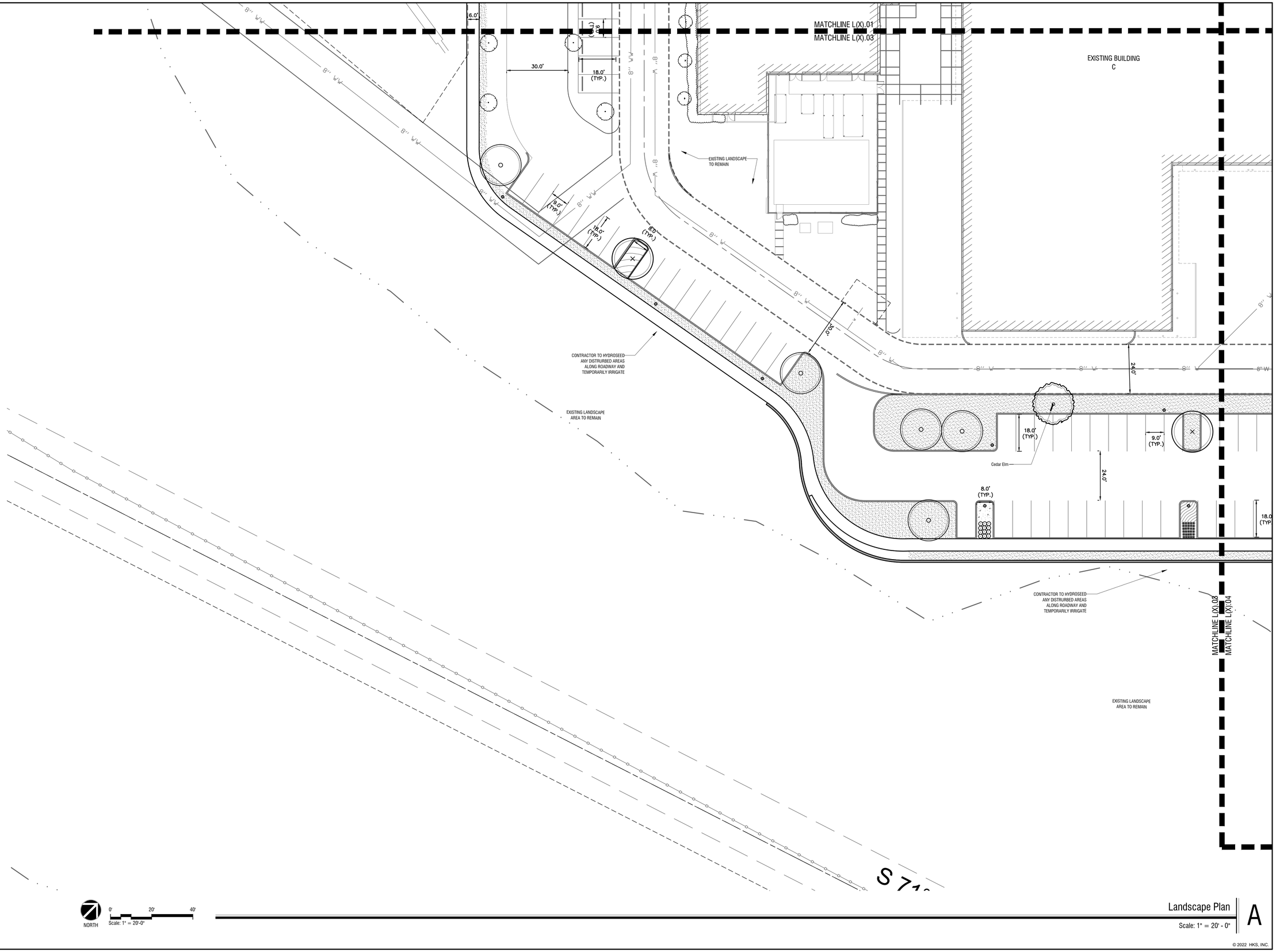

NORTH

0' 20' 40'

Scale: 1" = 20'-0"

Landscape Plan

Scale: 1" = 20' - 0"

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SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L5.03

MATCHLINE L(X).01
MATCHLINE L(X).04

18.0' (TYP.)
9.0' (TYP.)
18.0' (TYP.)
Lacebark Elm
8" W
EXISTING POLE LIGHT TO BE RELOCATED
9.0' (TYP.)
18.0' (TYP.)
11.0'
Purple Wintercreeper
24.0'
35.0'
8.0' (TYP.)
18.0' (TYP.)
9.0' (TYP.)
Yaupon Holly
Fountain Grass
Mexican Feather Grass
Littoral Planting Upland Mix
PROPOSED BUILDING E
31,350 SF (OFFICE)
Little Gem Dwarf Southern Magnolia
CONTRACTOR TO HYDROSEED ANY DISTURBED AREAS ALONG ROADWAY AND TEMPORARILY IRRIGATE
Littoral Planting Upland Mix
PROPOSED DETENTION POND

MATCHLINE L(X).03
MATCHLINE L(X).04
MATCHLINE L(X).04
MATCHLINE L(X).05
MATCHLINE L(X).04
MATCHLINE L(X).06

NORTH
0' 20' 40'
Scale: 1" = 20'-0"

Landscape Plan
Scale: 1" = 20' - 0"
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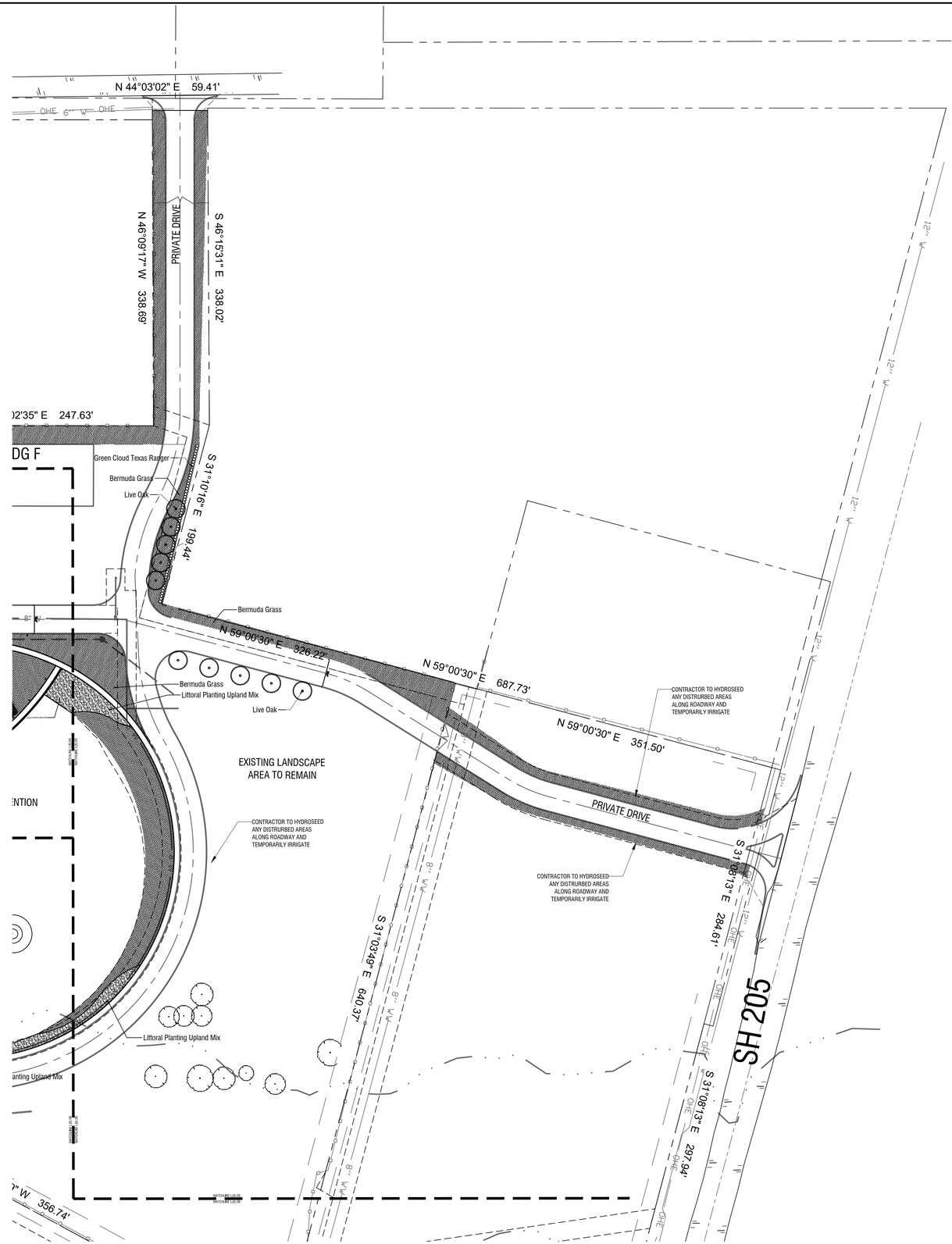

NORTH

0' 60' 120'

Scale: 1" = 60'-0"

Landscape Plan

Scale: 1" = 60' - 0"

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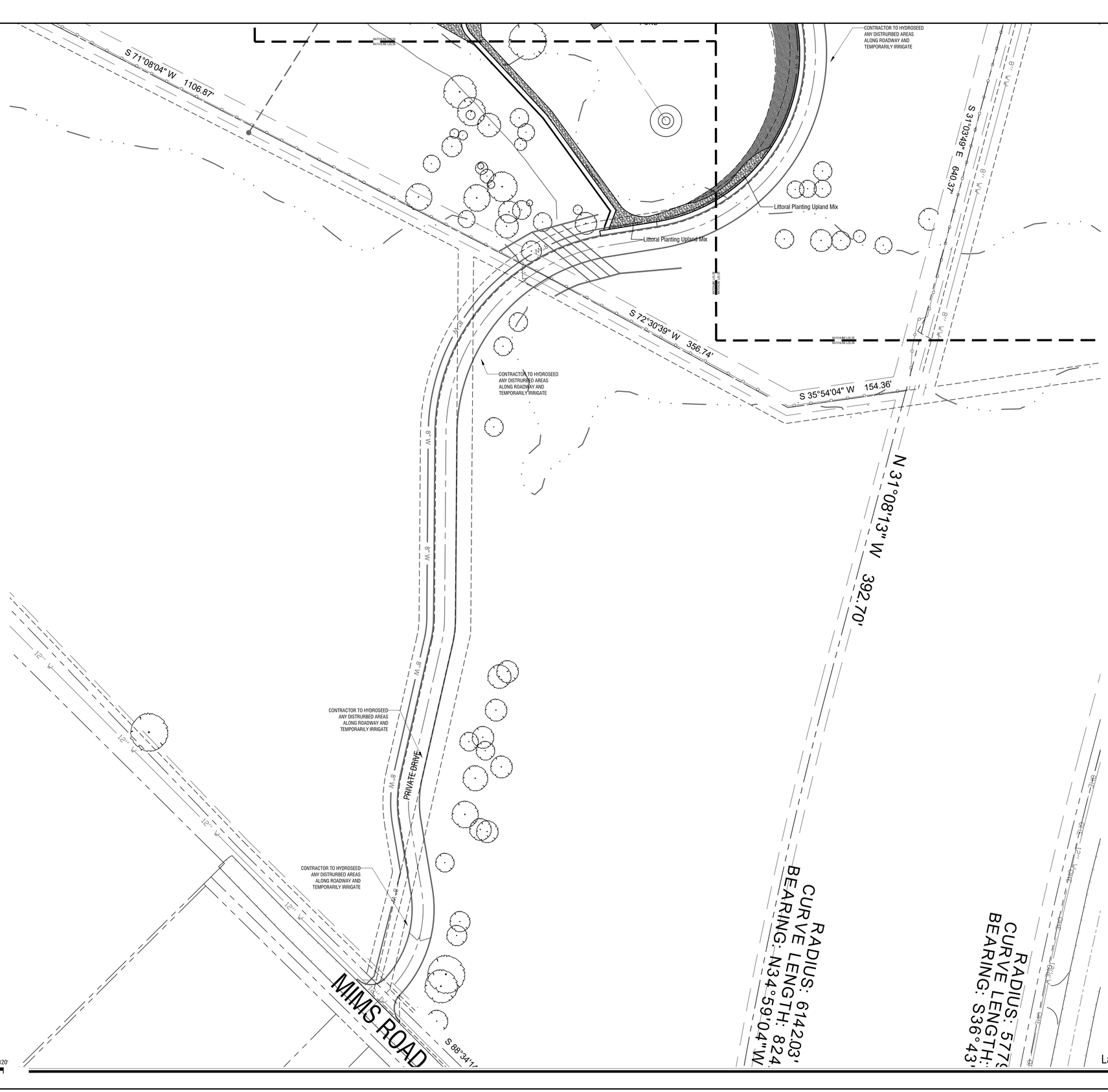

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SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L5.06

Rayburn Co-Op - Rockwall Code Calculations Chart		
Site Data	**AC**	**SF**
Total Site Area	31.38	1,366,902
Surface Parking Spaces	271	
Site Landscape Area	**Required (% / SF)**	**Provided (% / SF)**
15% of site to be landscaped (Heavy Commercial zoning district)*	15%	16%
**includes Existing Landscape Area to Remain*	205,035	214,086
Street Frontage	**Required**	**Provided**
Sids Road - 832 LF(773 LF Frontage + 59.41 LF of Drive connection)		
10' Buffer	YES	YES
1 Canopy Tree/ 50 LF (Min. 4" Cal.)	17	17 (8 Existing)
1 Accent Tree/ 50LF (4' ht. Min.)	17	17
Continuous row of shrubs (min. 30" ht.- 3 Gal.)	YES	YES
SH 205 - Drive connection 200LF		
1 Canopy Tree/ 50 LF (Min. 4" Cal.)	N/A	N/A
Mims Road - Drive connection 76 LF		
1 Canopy Tree/ 50 LF (Min. 4" Cal.)	N/A	N/A
Parking Lot	**Required**	**Provided**
1 Large Canopy Tree/ 10 parking spaces	27	35
One tree within 80' of each parking space	YES	YES
Headlight Screening (min. 2' ht. berm with evergreen shrubs)	YES	YES
Total Trees	**Required**	**Provided**
Total Canopy Trees		74
Total Trees Existing		33
Total Trees		148

EXISTING SITE PARKING DATA

PUBLIC SPACES	ACCESSIBLE SPACES	TOTAL
125	5	130

PROPOSED SITE PARKING DATA

PUBLIC SPACES	ACCESSIBLE SPACES	TOTAL
262	9	271

SITE INFORMATION:

EXISTING ZONING: HEAVY COMMERCIAL (HC), COMMERCIAL (C), & AGRICULTURAL (AG)

PROPOSED ZONING: NO CHANGE

PROPOSE USE: EXPANSION OF EXISTING SITE TO INCLUDE 2 NEW OFFICE BUILDINGS, TRUCK WAREHOUSE, AND LAYDOWN STORAGE WAREHOUSE

TOTAL AREA LOT 1: 1,366,902 SQ FT 31.38 AC
TOTAL AREA LOTS 1–4: 4,146,392 SQ FT 95.19 AC

LOT 1 "HC" ZONING

MAXIMUM BUILDING HEIGHT: 60 FT
MAXIMUM LOT COVERAGE: 60%
MAXIMUM FLOOR AREA RATIO: 4:1
MAXIMUM IMPERVIOUS PARKING: 90–95%

PROPOSED MAX. BUILDING HEIGHT: 40 FT (BUILDING D)
PROPOSED LOT COVERAGE: 106,281/1,366,902 = 7.8%
PROPOSED FLOOR AREA RATIO: 113,260/1,366,902 = 0.08:1
PROPOSED IMPERVIOUS PARKING: 67,476/1,366,902 = 4.9%

EXISTING PARKING:
EXISTING WAREHOUSE 23,520 SQ FT (1:1000) = 24 SPACES
EXISTING OFFICE 31,530 SQ FT (1:300) = 106 SPACES
REMOVED OFFICE 7,700 SQ FT (1:300) = –26 SPACES

EXISTING REQUIRED PARKING = 104 SPACES

REQUIRED PARKING:
PROPOSED WAREHOUSE D 12,750 SQ FT (1:1000) = 13 SPACES
PROPOSED OFFICE D 19,600 SQ FT (1:300) = 66 SPACES
PROPOSED OFFICE E 23,000 SQ FT (1:300) = 77 SPACES
PROPOSED WAREHOUSE F 10,560 SQ FT (1:1000) = 11 SPACES

TOTAL REQUIRED PARKING = 271 SPACES
TOTAL PROVIDED PARKING = 271 SPACES

PLANT SCHEDULE

TREES	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	QTY	REMARKS
	Cedar Elm / Ulmus crassifolia	4" cal	12`-14`	As Shown	13	B&B, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, STRONG CENTRAL LEADER
	Duraheat River Birch Multi-Trunk / Betula nigra `Duraheat`	65 gal	10`-12` ht		11	CONTAINER, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, MULTI-TRUNK (3-5 TRUNKS)
	Lacebark Elm / Ulmus parvifolia	4" cal	14`-16`	As Shown	15	B&B, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, STRONG CENTRAL LEADER
	Live Oak / Quercus virginana	4" cal	12`-14` ht	As Shown	28	B&B, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, STRONG CENTRAL LEADER
	Texas Red Oak / Quercus texana	4" cal	12`-14` ht	As Shown	9	B&B, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, STRONG CENTRAL LEADER

ORNAMENTAL TREES	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	QTY	REMARKS
	Dallas Red Crape Myrtle / Lagerstroemia indica 'Dallas Red'	65 gal	10`-12`		7	CONTAINER, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED
	Little Gem Dwarf Southern Magnolia / Magnolia grandiflora 'Little Gem'	65 gal	8`-10` ht	As Shown	3	CONTAINER, NURSERY GROWN, MATCHED, FULL TO BASE, WELL-BRANCHED, STRONG CENTRAL LEADER
	Texas Redbud / Cercis canadensis texensis	45 gal	8`-10`	As Shown	16	CONTAINER, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED
	Yaupon Holly / Ilex vomitoria	45 Gal.	8`-10`	As Shown	22	CONTAINER, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, MULTI-TRUNK (3 MIN.), TREE FORM

SHRUBS	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	QTY	REMARKS
	Autumn Sage / Salvia greggii	3 gal	12" h X 18" w	24" OC	169	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Brakelights Red Yucca / Hesperaloe parviflora `Brakelights` TM	3 gal	12" h X 12" w	18" OC	949	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Common Boxwood / Buxus sempervirens	3 gal	24" h x 24" w	36" OC	289	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Dwarf Podocarpus / Podocarpus macrophyllus `Pringles`	3 gal	24" h x 18" w	24" OC	257	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Dwarf Yaupon / Ilex vomitoria `Nana`	3 gal min.	24" h x 24" w	36" OC	235	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Green Cloud Texas Ranger / Leucophyllum frutescens `Green Cloud` TM	3 gal min.	24" h x 24" w	36" OC	305	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Mahonia Soft Caress / Mahonia eurybracteata `Soft Caress`	3 gal	18" h X 18" w	24" OC	125	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Mexican Feather Grass / Nassella tenuissima	3 gal min.	12" h X 12" w	24" OC	125	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Pink Muhly Grass / Muhlenbergia capillaris	3 gal	18" h X 18" w	30" OC	711	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED

SHRUB AREAS	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	SPACING	QTY	REMARKS
	Littoral Planting Upland Mix	SEED				10,493 sf	
	Fountain Grass / Cenchrus advena	3 gal	12" Ht. x 12" W	24" OC	24" o.c.	304	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Little Spire Russian Sage / Perovskia atriplicifolia 'Little Spire'	1 gal	12" Ht. x 12" W	24" O.C.	24" o.c.	266	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Switch Grass / Panicum virgatum	3 gal	18" Ht. 12" Spr.	36" O.C.	36" o.c.	118	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED

GROUND COVERS	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	QTY	
	Hydroseed	HYDROMULCH			27,926 sf	REFER TO SPECIFICATIONS
	Asiatic Jasmine / Trachelospermum asiaticum	1 gal	8"h x 8"w	18" o.c.	1,050	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Bermuda Grass / Cynodon dactylon	sod			130,384 sf	REFER TO SPECIFICATIONS
	Creeping Juniper / Juniperus horizontalis	1 gal	8"h x 8"w	18" o.c.	232	
	Giant Liriope / Liriope gigantea	1 gal	12" h x 12" w	18" o.c.	1,056	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Little Bluestem Grass / Schizachyrium scoparium	3 gal	24" h x 18" w	24" o.c.	170	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Purple Wintercreeper / Euonymus fortunei 'Coloratus'	1 gal	8"h x 8"w	18" o.c.	1,251	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Texas Sedge / Carex texensis	1 gal	12" h x 12" w	18" o.c.	1,079	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED

NOTE: PLANT QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. IN THE CASE OF A DISCREPANCY, THE DRAWING SHALL TAKE PRECEDENCE.

NOTE: PLANTS ARE SPECIFIED BY HEIGHT, SPREAD AND CONTAINER SIZE. ALL PLANTINGS ARE EXPECTED TO MEET ALL SPECIFICATIONS PROVIDED.

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CITY SITE PLAN SUBMITTAL
SHEET TITLE
PLANTING SCHEDULE

SHEET NO.
L5.07

PLOT DATE:
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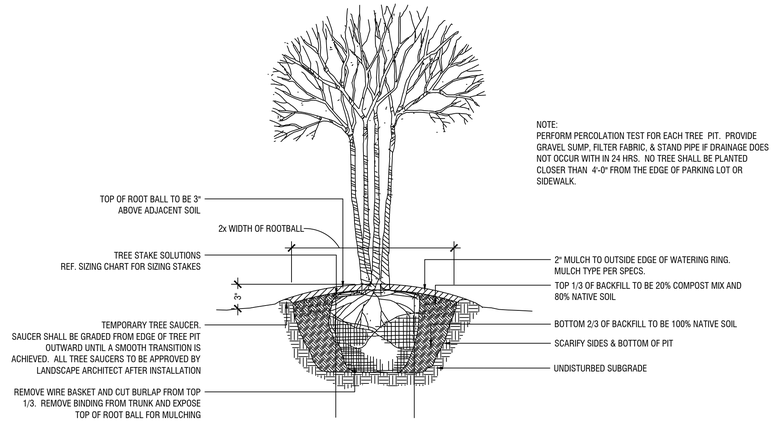
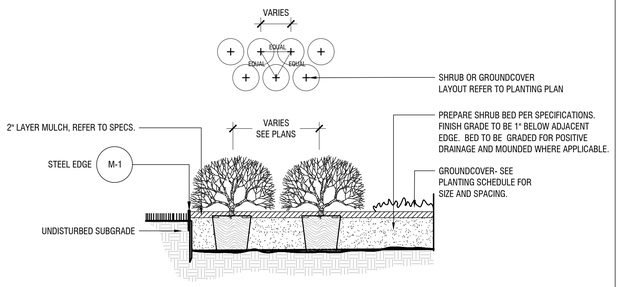


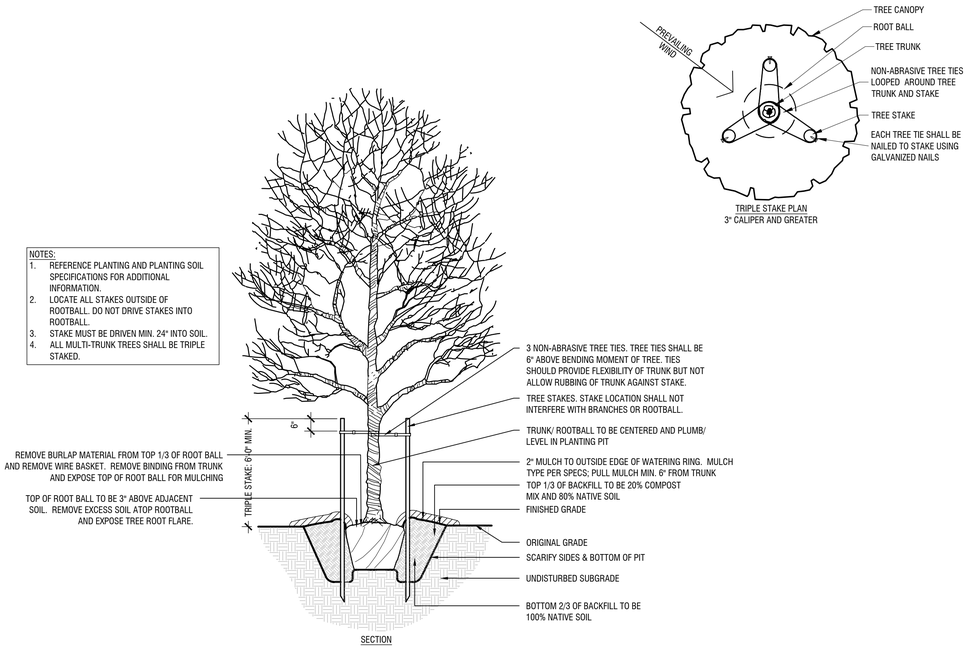
Multi-trunk / Ornamental Tree — B

Scale: 1/2" = 1'-0"



Shrubs & Groundcover — D

Scale: 1/2" = 1'-0"



Canopy Tree (Above Grade Stakes) — A

Scale: 1/2"=1'-0"

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Kimley»Horn
P.L.A. LANDON R. HUCKINS
L.A. No. 3480 Date 10/14/2022

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

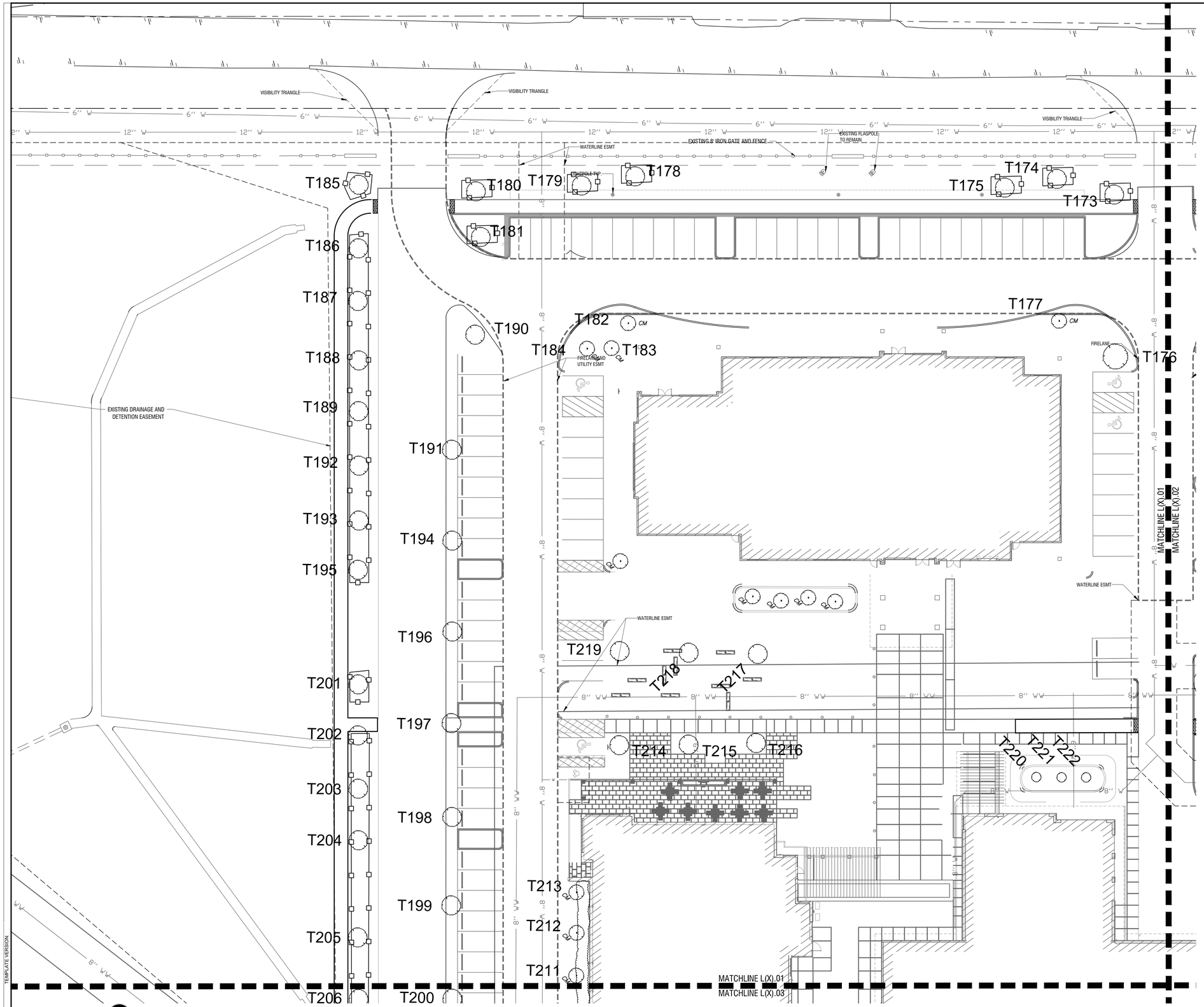
HKS PROJECT NUMBER
25370.000

DATE
10/14/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
PLANTING DETAILS

SHEET NO.
L5.08



LEGEND

- T40 — EXISTING TREE TAG NUMBER
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCING

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
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MCKINNEY, TX 75069

STRUCTURAL ENGINEER
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DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER
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950 SIDS ROAD
ROCKWALL, TX 75087

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R - DELTA ENGINEERS, INC.
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NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000
DATE
10/14/22
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
TREESCAPE PLAN

SHEET NO.
L7.01

Treescape Plan
Scale: 1" = 20' - 0"
A

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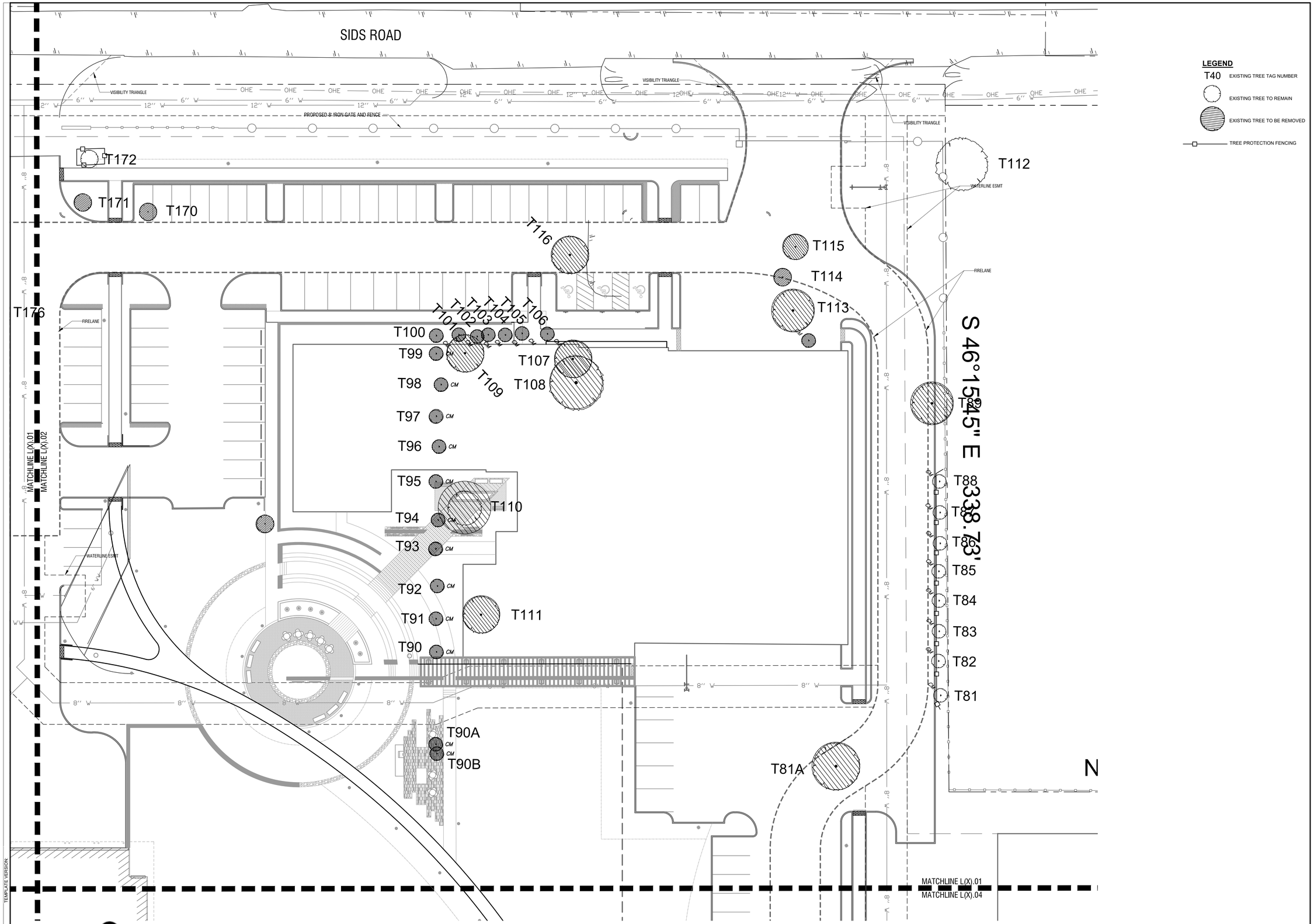
PLOT DATE:
TEMPLATE VERSION:



LEGEND

- T40 — EXISTING TREE TAG NUMBER
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCING

Treescape Plan

Scale: 1" = 20' - 0"

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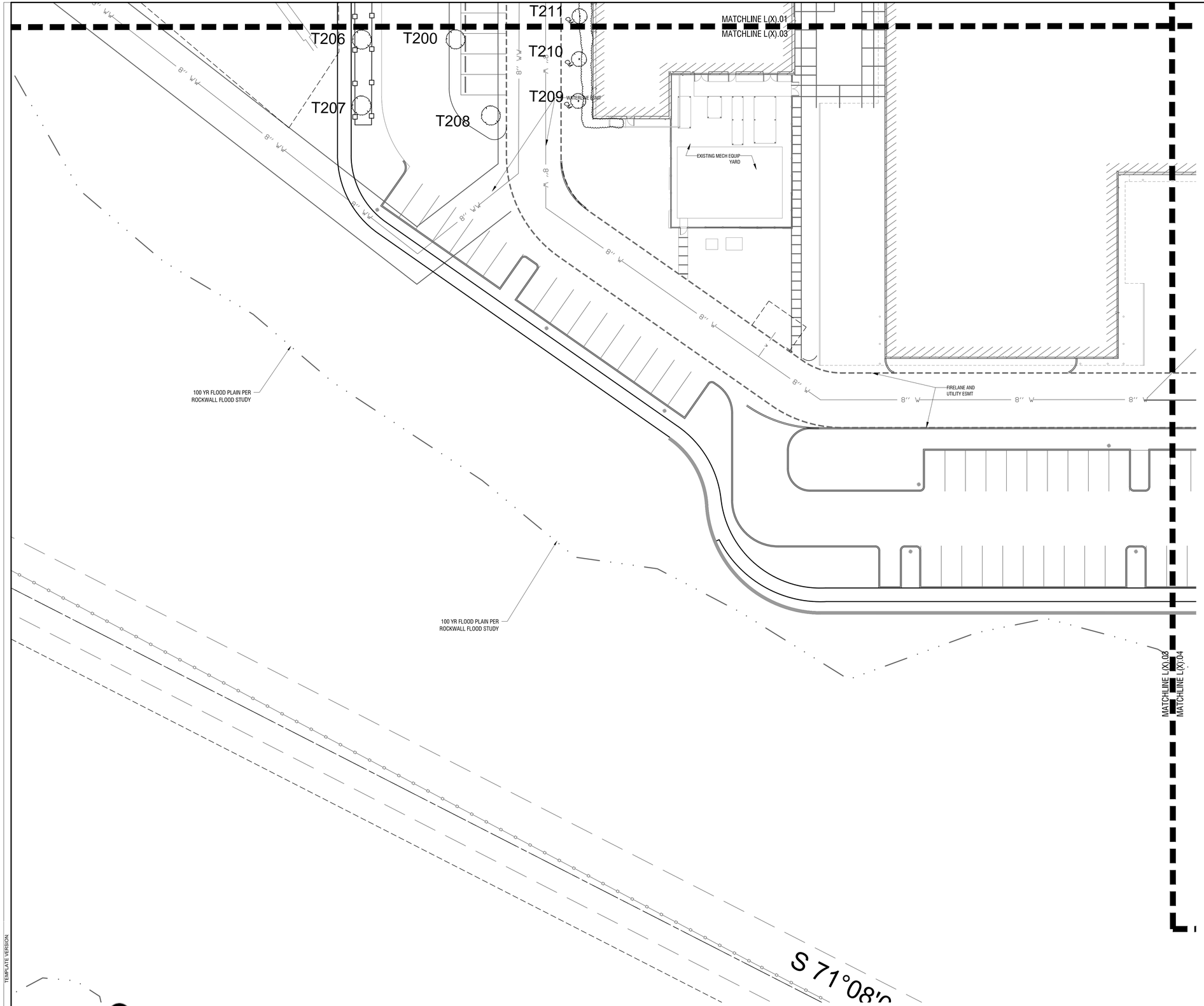
SHEET TITLE
TREESCAPE PLAN

SHEET NO.
L7.02

TEMPLATE VERSION:

PLOT DATE:



LEGEND

T40 EXISTING TREE TAG NUMBER

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED

TREE PROTECTION FENCING

Treescape Plan

Scale: 1" = 20' - 0"

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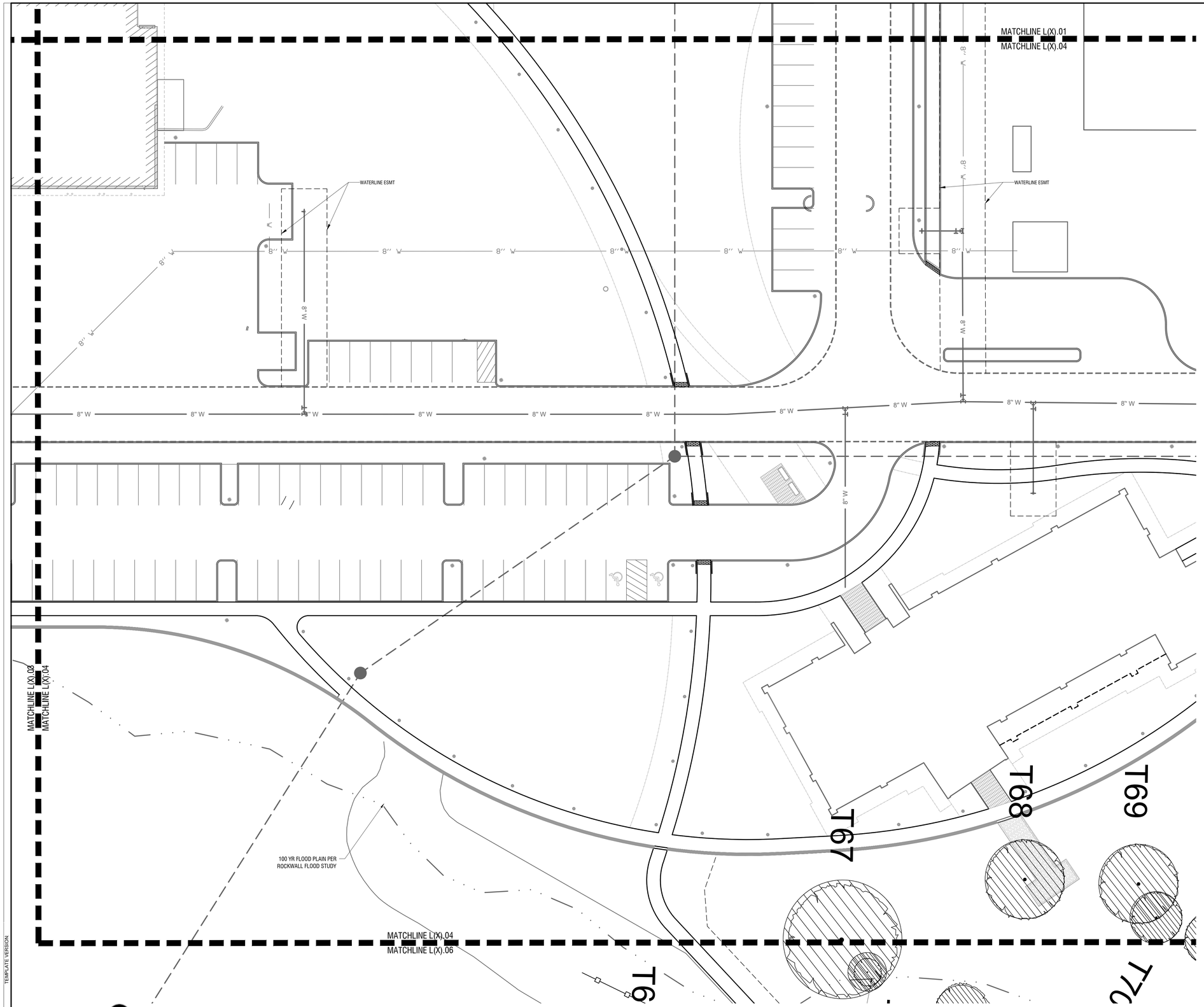
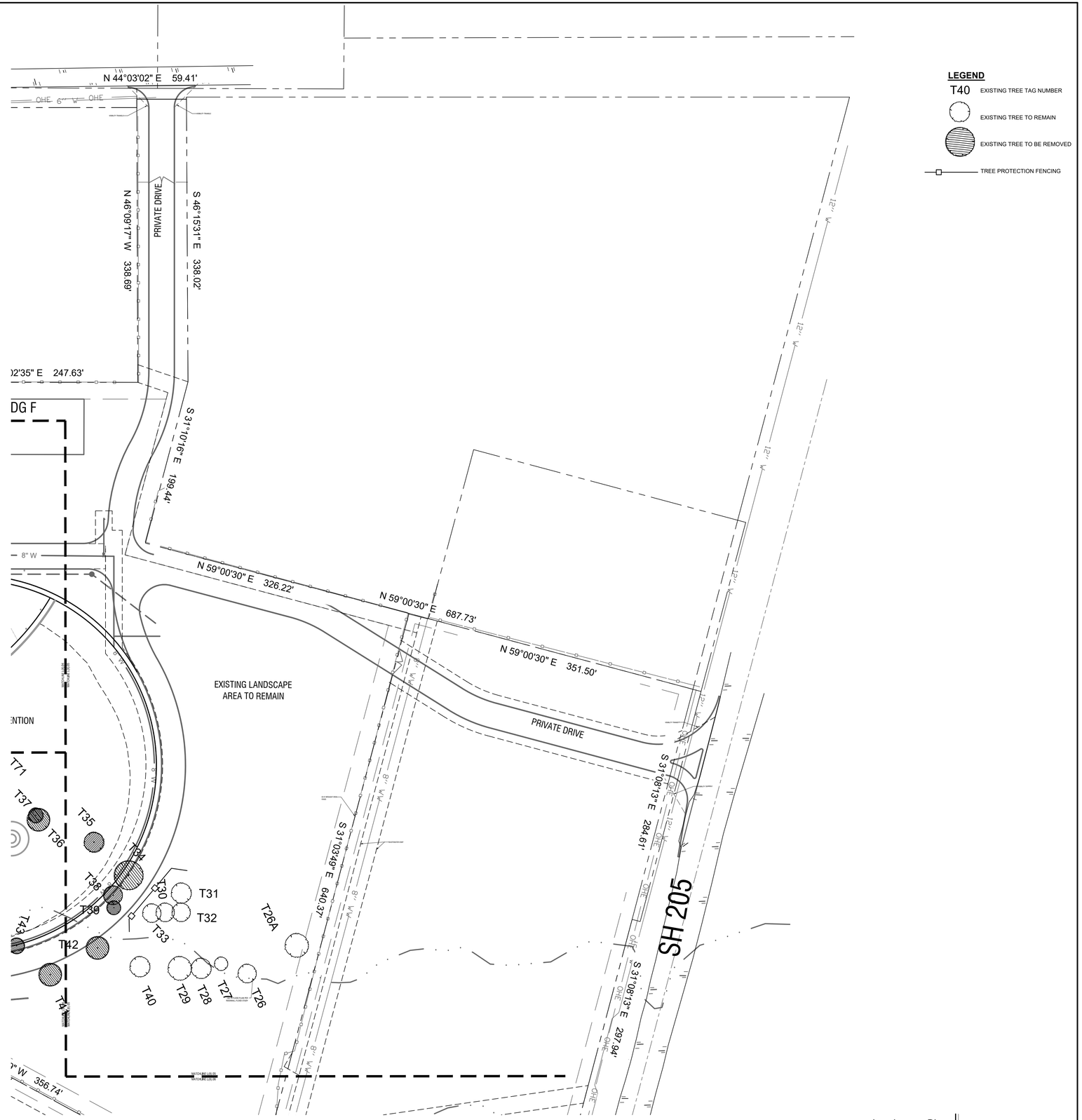
SHEET TITLE
TREESCAPE PLAN

SHEET NO.
L7.03

PLOT DATE:

TEMPLATE VERSION:


MATCHLINE L(X).01
MATCHLINE L(X).04
WATERLINE ESMT
WATERLINE ESMT
8" W
8" W
8" W



LEGEND

- T40 — EXISTING TREE TAG NUMBER
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCING

NORTH

0' 60' 120'

Scale: 1" = 60'-0"

Landscape Plan

Scale: 1" = 60' - 0"

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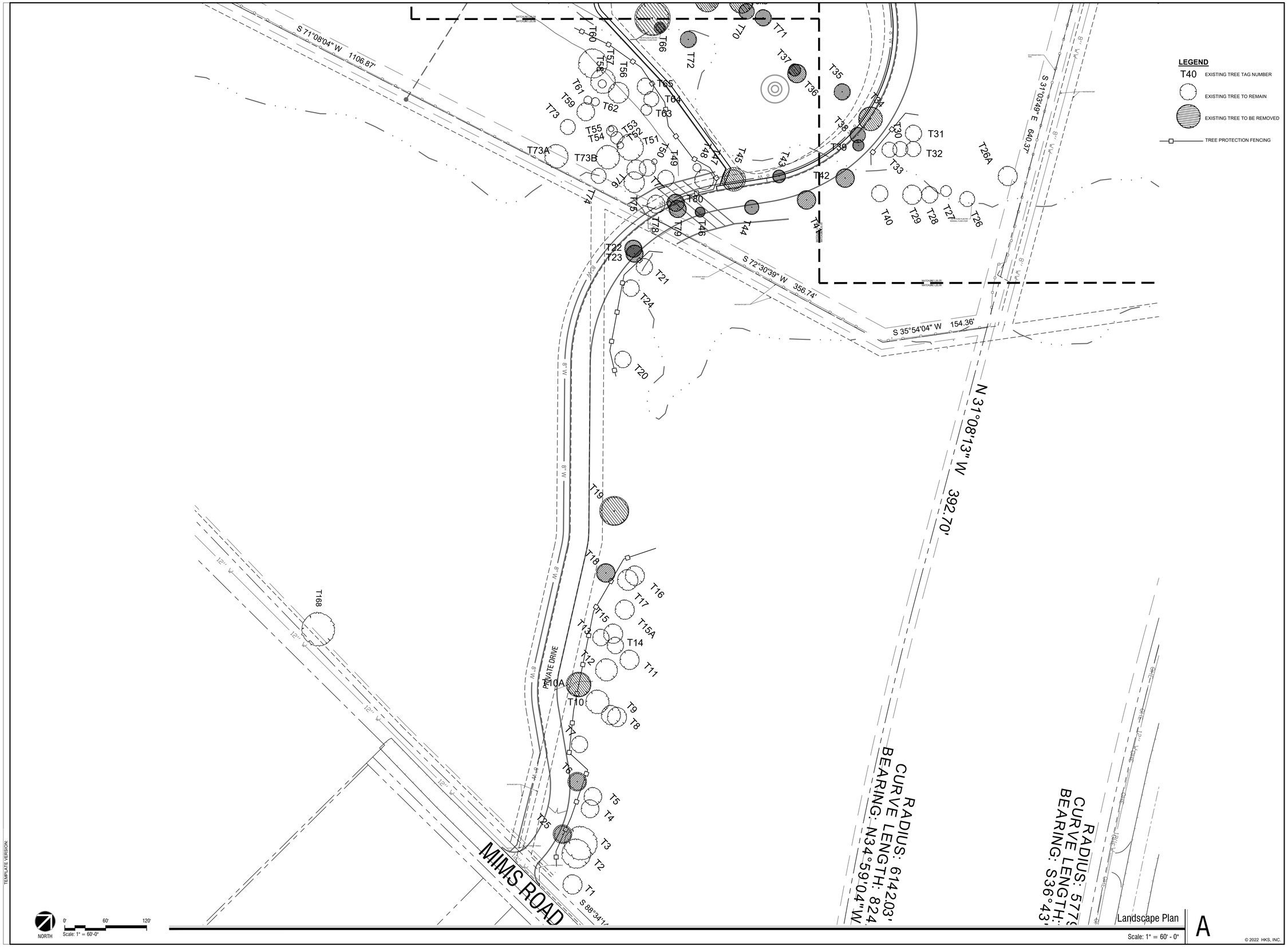
SHEET TITLE
TREESCAPE PLAN

SHEET NO.
L7.05



Landscape Plan

Scale: 1" = 60' - 0"

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SHEET TITLE
TREESCAPE PLAN

SHEET NO.
L7.06

Location Key	Size DBH (Inches)	Description	Common Name	Comments	Tree Designation				Removal Status	Replacement Caliper Inches
					Feature	Primary	Secondary	Non-Protected		
T1	14	M.T.	Bois D'Arc					X		
T2	24	M.T.	Bois D'Arc					X		
T3	24		Bois D'Arc					X		
T4	16	M.T.	Hackberry				X			
T5	13		American Elm			X				
T6	12		Eastern Red Cedar				X		Removed	6
T7	12		Eastern Red Cedar				X			
T8	14		Hackberry				X			
T9	15	M.T.	Bois D'Arc					X		
T10	18	M.T.	American Elm			X				
T10A	30		Cottonwood					X	Removed	
T11	14		Black Willow					X		
T12	16		Black Willow					X		
T13	12		Eastern Red Cedar				X			
T14	15	M.T.	Hackberry	Dying and Covered with Poison Ivy			X			
T15	14		Hackberry	Diseased Crown			X			
T15A	14	M.T.	Hackberry				X			
T16	14		Hackberry				X			
T17	15		American Elm			X				
T18	13		Hackberry				X		Removed	6.5
T19	14	M.T.	Bois D'Arc	Tagged as "20"				X	Removed	
T20	12		Eastern Red Cedar				X			
T21	13	M.T.	Eastern Red Cedar				X			
T22	12		Eastern Red Cedar				X		Removed	6
T23	12		Eastern Red Cedar				X		Removed	6
T24	12		Eastern Red Cedar				X			
T25	12		Eastern Red Cedar				X		Removed	6
T26A	9		Cedar Elm			X				
T26	11		Eastern Red Cedar				X			
T27	8		White Ash			X				
T28	13	M.T.	Eastern Red Cedar				X			
T29	14	M.T.	Eastern Red Cedar				X			
T30	11		Eastern Red Cedar				X			
T31	12		Eastern Red Cedar				X			
T32	11		Eastern Red Cedar	Branched to Ground			X			
T33	11		Eastern Red Cedar				X			
T34	17		White Ash			X			Removed	17
T35	12		Eastern Red Cedar	Only Top 1/4 of Tree is Alive.			X		Removed	6
T36	13		Eastern Red Cedar	Entirely Dead			X		Removed	6.5
T37	9		White Ash			X			Removed	9
T38	11		Hackberry				X		Removed	5.5
T39	8		Slippery Elm	Entire Tree is Wilted.		X			Removed	8
T40	12		Hackberry				X			
T41	13		Hackberry				X		Removed	6.5
T42	14	M.T.	Eastern Red Cedar				X		Removed	7
T43	8		Hackberry					X	Removed	
T44	10"		Bois D'Arc					X	Removed	
T45	14		American Elm			X			Removed	14
T46	7		Slippery Elm			X			Removed	7
T47	14		White Ash			X				
T48	6		Cedar Elm			X				
T49	12		Eastern Red Cedar				X			
T50	4		Bois D'Arc					X		
T51	19		Bois D'Arc					X		
T52	5		Persimmon			X				
T53	9		Persimmon			X				
T54	8		Black Willow					X		
T55	4		Persimmon			X				
T56	15		White Ash			X				
T57	18		Bois D'Arc					X		
T58	6		Bois D'Arc					X		
T59	14	M.T.	Bois D'Arc					X		
T60	21	M.T.	Bois D'Arc					X		
T61	6		Bois D'Arc	Tagged as "62"				X		
T62	6		Bois D'Arc	Tagged as "63"				X		
T63	8		American Elm			X				
T64	8	M.T.	Hackberry					X		
T65	12		White Ash			X				
T66	6		Bois D'Arc					X	Removed	
T67	24	M.T.	Bois D'Arc					X	Removed	
T68	17	M.T.	Hackberry				X		Removed	8.5
T69	15	M.T.	Hackberry				X		Removed	7.5
T70	11		Hackberry				X		Removed	5.5
T71	12		Bois D'Arc					X	Removed	
T72	14		Hackberry				X		Removed	7
T73	11		Cedar Elm			X				
T73A	8		American Elm			X				
T73B	12		Eastern Red Cedar				X			
T74	15		Eastern Red Cedar				X			
T75	15		Eastern Red Cedar				X			
T76	14		Eastern Red Cedar				X			
T77	12		Black Willow					X		
T78	13		Eastern Red Cedar				X			
T79	12		Eastern Red Cedar				X		Removed	6
T80	12		Eastern Red Cedar				X		Removed	6
T81	12	M.T.	'Natchez' Crape Myrtle					X		
T81A	18		Live Oak			X			Removed	18
T82	7	M.T.	'Natchez' Crape Myrtle					X		
T83	6	M.T.	'Natchez' Crape Myrtle					X		
T84	11	M.T.	'Natchez' Crape Myrtle					X		
T85	16	M.T.	'Natchez' Crape Myrtle					X		
T86	18	M.T.	'Natchez' Crape Myrtle					X		
T87	15	M.T.	'Natchez' Crape Myrtle					X		
T88	11	M.T.	'Natchez' Crape Myrtle					X		
T89	15		Bradford Pear			X			Removed	15
T90	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T90A	20	M.T.	'Natchez' Crape Myrtle					X	Removed	
T90B	9	M.T.	'Watermelon Red' Crape Myrtle					X	Removed	
T91	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T92	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T93	15	M.T.	'Natchez' Crape Myrtle					X	Removed	
T94	9	M.T.	'Natchez' Crape Myrtle					X	Removed	
T95	19	M.T.	'Natchez' Crape Myrtle					X	Removed	
T96	7	M.T.	'Watermelon Red' Crape Myrtle					X	Removed	
T96	7	M.T.	'Watermelon Red' Crape Myrtle					X	Removed	
T97	19	M.T.	'Natchez' Crape Myrtle					X	Removed	
T98	9	M.T.	'Watermelon Red' Crape Myrtle					X	Removed	
T99	13	M.T.	'Natchez' Crape Myrtle					X	Removed	
T100	8	M.T.	'Natchez' Crape Myrtle					X	Removed	
T101	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T102	7	M.T.	'Natchez' Crape Myrtle					X	Removed	
T103	10	M.T.	'Natchez' Crape Myrtle					X	Removed	
T104	7	M.T.	'Natchez' Crape Myrtle					X	Removed	
T105	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T106	6	M.T.	'Natchez' Crape Myrtle					X	Removed	
T107	18		Red Oak			X			Removed	18
T108	22		Bradford Pear			X			Removed	22
T109	12		Bradford Pear	Diseased		X			Removed	12
T110	15		Bradford Pear	Wind Damaged		X				
T111	15		Live Oak			X			Removed	15
T112	17		Live Oak			X				
T113	13		Live Oak	Bad Freeze Damaged Trunk		X			Removed	13
T114	5		Magnolia			X			Removed	5
T115	9		Live Oak	Bad Freeze Damaged Trunk		X			Removed	9
T116	12		Texas Red Oak	Substantial Trunk Damage with Borer Infestation		X			Removed	12
T138	18	M.T.	Hackberry				X			
T141	12		Eastern Red Cedar				X			
T142	14		Eastern Red Cedar				X			
T143	17	M.T.	Eastern Red Cedar				X			
T144	4		Cedar Elm			X				
T145	16		Eastern Red Cedar				X			
T146	11		Eastern Red Cedar				X			
T147	14		Eastern Red Cedar				X			
T148	12		Eastern Red Cedar				X			
T149	12		Eastern Red Cedar				X			
T150	12		Eastern Red Cedar				X			
T151	12	M.T.	Eastern Red Cedar				X			
T152	15		Eastern Red Cedar				X			
T153	11		Eastern Red Cedar				X			
T155	16		Eastern Red Cedar				X			
T156	12		Eastern Red Cedar				X			
T157	14		Eastern Red Cedar				X			
T158	8		Cedar Elm			X				
T158A	7		Cedar Elm			X				
T159	8		Locust					X		
T160	5		White Ash			X				
T161	5		Cedar Elm			X				
T162	4		White Ash			X				
T163	4		Cedar Elm			X				
T164	8		Cedar Elm			X				
T164A	7		Cedar Elm			X				
T164B	10	M.T.	Cedar Elm			X				
T164C	6		Cedar Elm			X				
T165	7		Black Willow					X		
T166	20		Black Willow					X		
T168	19	M.T.	Eastern Red Cedar				X			
T168A	23	M.T.	Eastern Red Cedar				X			
T170	6		Live Oak			X			Removed	6
T171	6		Live Oak			X				
T172	6		Bur Oak			X				
T173	6		Bur Oak			X				
T174	6		Bur Oak			X				
T175	6		Bur Oak			X				
T176	7		Live Oak			X				
T177	8	M.T.	'Natchez' Crape Myrtle					X		
T178	6		Bur Oak			X				
T179	6		Bur Oak			X				
T180	6		Bur Oak			X				
T181	6		Live Oak	Stunted- Old Sapsucker Damage		X				
T182	10	M.T.	'Natchez' Crape Myrtle					X		
T183	7.5	M.T.	'Natchez' Crape Myrtle					X		
T184	7	M.T.	'Natchez' Crape Myrtle					X		
T185	6		Bald Cypress			X				
T186	6		Bald Cypress			X				
T187	6		Bald Cypress			X				
T188	6		Bald Cypress			X				
T189	6		Bald Cypress			X				
T190	6		Live Oak	Stunted- Old Sapsucker Damage		X				
T191	6		Live Oak			X				
T192	6		Bald Cypress			X				
T193	6		Bald Cypress			X				
T194	6		Live Oak			X				
T195	6		Bald Cypress			X				
T196	6		Live Oak			X				
T197	6		Live Oak			X				
T198	6		Live Oak			X				
T199	6		Live Oak			X				
T200	6		Live Oak			X				
T201	6		Bald Cypress			X				
T202	6		Bald Cypress			X				
T203	6		Bald Cypress			X				
T204	6		Bald Cypress			X				
T205	6		Bald Cypress			X				
T206	6		Bald Cypress			X				
T207	6		Bald Cypress			X				
T208	6		Live Oak			X				
T209	-		Crape Myrtle	Dead, Coming Back From Roots						
T210	3.5	M.T.	'Natchez' Crape Myrtle					X		
T211	2.5	M.T.	'Natchez' Crape Myrtle					X		
T212	2.5	M.T.	'Natchez' Crape Myrtle					X		
T213	3	M.T.	'Natchez' Crape Myrtle					X		
T214	6		Live Oak	Weeping Habit		X				
T215	6		Live Oak	Weeping Habit		X				
T216	6		Live Oak	Weeping Habit		X				
T217	6		Live Oak	Weeping Habit		X				
T218	6		Live Oak	Weeping Habit		X				
T219	6		Live Oak	Weeping Habit		X				
T223	14		Black Willow					X		
TOTAL	**2,210**									

TOTAL REPLACEMENT INCHES REQUIRED:	302.5
MITIGATION INCHES PROVIDED ON SITE:	513
MITIGATION INCHES REMAINING:	-210.5

NOTE: REFER TO L5.08 FOR TREE PROTECTION FENCING DETAIL.

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PLOT DATE:

TEMPLATE VERSION:

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ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
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P.L.A. ____ LANDON R. HUCKINS
L.A. No. 3480 Date 10/14/2022

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000

DATE
10/14/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
TREESCAPE TABLE

SHEET NO.
L7.07

RAYBURN ELECTRIC COOPERATIVE

LANDSCAPE PLANS
FOR
BUILDING D AND E CAMPUS EXPANSION
ROCKWALL, TX

HARDSCAPE, LANDSCAPE, IRRIGATION

		Drawings Issued										
		30% PROGRESS SET (ISSUE DATE - 09.01.22)	65% PROGRESS SET (ISSUE DATE - 09.26.22)	PSP SUBMITTAL (ISSUE DATE - 10.11.22)								
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L7.05	TREESCAPE PLAN		●	●								
L7.06	TREESCAPE PLAN		●	●								
L7.07	TREESCAPE TABLE	●	●	●								

HKS

ARCHITECT
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LANDSCAPE ARCHITECT
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RayburnElectric COOPERATIVE

PRELIMINARY
FOR REVIEW ONLY
Not for construction or permit purposes.
Kimley»Horn
P.L.A. LANDON R. HUCKINS
L.A. No. 3480 Date 10/14/2022

KEY PLAN

REVISION
NO. DESCRIPTION DATE

HKS PROJECT NUMBER
25370.000
DATE
10/14/22
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SHEET INDEX

SHEET NO.
L0.00

PLOT DATE:
TEMPLATE VERSION:

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GENERAL NOTES:

1. WRITTEN DIMENSIONS PREVAIL OVER SCALED DIMENSIONS. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
2. THE CONTRACTOR BEARS ALL RESPONSIBILITY FOR VERIFYING ALL UNDERGROUND UTILITIES, PIPES, STRUCTURES, AND LINE RUNS IN THE FIELD PRIOR TO CONSTRUCTION. ANY DAMAGE TO UTILITIES THAT ARE TO REMAIN SHALL BE REPAIRED IMMEDIATELY AT NO EXPENSE TO THE OWNER. LANDSCAPE ARCHITECT ASSUMES NO RESPONSIBILITY FOR ANY NOT SHOWN ON PLANS.
3. ALL PROPOSED AND FINISHED GRADES ARE BASED ON INFORMATION PROVIDED BY THE OWNER'S SURVEY AND/OR CIVIL ENGINEER. ANY DISCREPANCIES IN ACTUAL FIELD MEASUREMENTS ARE TO BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
4. PRIOR TO COMMENCEMENT OF HARDSCAPE CONSTRUCTION, ALL PIERS, FOOTINGS, AND WALLS ARE TO BE SURVEYED, LAID OUT, AND STAKED IN FIELD FOR REVIEW BY LANDSCAPE ARCHITECT. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY DEMOLITION, ADJUSTMENTS, OR RECONSTRUCTION RESULTING FROM UNAUTHORIZED CONSTRUCTION ACTIVITIES.
5. CONTRACTOR IS RESPONSIBLE FOR ALL QUANTITIES PER DRAWINGS AND SPECIFICATIONS. ANY QUANTITIES PROVIDED BY LANDSCAPE ARCHITECT ARE PROVIDED FOR CONVENIENCE ONLY. CONTRACTORS ARE TO BID THEIR OWN VERIFIED QUANTITIES. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
6. EASEMENTS SETBACKS, BUILDING, CURB AND GUTTER, UNDERGROUND UTILITIES HAVE BEEN SUPPLIED TO LANDSCAPE ARCHITECT BY THE PROJECT CIVIL ENGINEER. REFER TO CIVIL ENGINEERS DRAWINGS FOR ADDITIONAL INFORMATION.
7. **DESIGN BUILD FOUNTAIN CONTRACTOR TO PROVIDE ALL DESIGN & ENGINEERING FOR POOL AND FOUNTAIN TO INCLUDE ALL MEP AND STRUCTURE DESIGN.**

IRRIGATION NOTES:

1. AN AUTOMATIC IRRIGATION SYSTEM SHALL BE PROVIDED FOR ALL PLANTING AREAS. OVER SPRAY ON STREETS AND WALKS IS PROHIBITED.
2. IRRIGATION SYSTEMS SHALL BE MAINTAINED AND REPLACED AS NECESSARY.
3. ALL PLANTING AREAS TO BE FULLY IRRIGATED.
4. IRRIGATION SYSTEM TO HAVE A FULLY AUTOMATED CONTROL SYSTEM.
5. ANY EXISTING PLANTING DAMAGED DURING CONSTRUCTION IS TO BE REPLACED AT NO COST THE OWNER.
6. IF THE EXISTING IRRIGATION SYSTEM IS DAMAGED OR TURNED OFF DURING CONSTRUCTION ACTIVITIES, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAND WATER ALL PLANT MATERIAL AS NEEDED.

PLANTING NOTES:

1. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UNDERGROUND UTILITIES, PIPES, STRUCTURES, AND LINE RUNS IN THE FIELD PRIOR TO THE INSTALLATION OF ANY PLANT MATERIAL.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADVISE THE LANDSCAPE ARCHITECT OF ANY CONDITION FOUND ON THE SITE WHICH PROHIBITS INSTALLATION AS SHOWN ON THESE DRAWINGS.
3. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AND MUST BE REPLACED WITH PLANT MATERIAL OF SAME VARIETY AND SIZE IF DAMAGED, DESTROYED, OR REMOVED.
4. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR FINE GRADING AND REMOVAL OF DEBRIS PRIOR TO PLANTING IN ALL AREAS.
5. FINAL FINISH GRADING SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL TOPSOIL REQUIRED TO CREATE A SMOOTH CONDITION PRIOR TO PLANTING.
6. ALL PLANT QUANTITIES LISTED ARE FOR INFORMATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FULL COVERAGE IN ALL PLANTING AREAS AS SPECIFIED IN THE PLANT SCHEDULE AND VERIFY ALL QUANTITIES.
7. LANDSCAPE CONTRACTOR TO PROVIDE STEEL EDGING (REFER TO MATERIALS PAGE) BETWEEN ALL PLANTING BEDS AND LAWN AREAS.
8. ALL PLANT MATERIAL SHALL CONFORM TO THE SPECIFICATIONS AND SIZES GIVEN IN THE PLANT LIST AND SHALL BE NURSERY GROWN IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK. LATEST EDITION AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS. ANY PLANT SUBSTITUTION SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PURCHASE.
9. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ANY COORDINATION WITH OTHER CONTRACTORS ON SITE AS REQUIRED TO ACCOMPLISH ALL PLANTING OPERATIONS.
10. ALL NEW PLANTING AREAS TO BE AMENDED PER SPECIFICATIONS.
11. ANY PLANT MATERIAL THAT DOES NOT SURVIVE SHALL BE REPLACED WITH AN EQUIVALENT SIZE AND SPECIES WITHIN THIRTY (30) DAYS.
12. PLANT MATERIAL SHALL BE PRUNED AS NECESSARY TO CONTROL SIZE BUT NOT TO DISRUPT THE NATURAL GROWTH PATTERN OR CHARACTERISTIC FORM OF THE PLANT EXCEPT AS NECESSARY TO ACHIEVE HEIGHT CLEARANCE FOR VISIBILITY AND PEDESTRIAN PASSAGE OR TO ACHIEVE A CONTINUOUS OPAQUE HEDGE IF REQUIRED.
13. LANDSCAPED AREAS SHALL BE KEPT FREE OF TRASH, WEEDS, DEBRIS, AND DEAD PLANT MATERIAL.
14. ALL LIME STABILIZED SOIL & INORGANIC SELECT FILL FOR BUILDING SHOULD BE REMOVED FROM PLANTING AREAS TO A DEPTH OF 24" & REPLACED WITH ORGANIC IMPORTED TOPSOIL FILL.
15. TREES OVERHANGING PEDESTRIAN WALKWAYS AND PARKING SHALL HAVE 7' CLEAR TRUNK HEIGHT TO MEET ACCESSIBILITY REQUIREMENTS. TREES OVERHANGING PUBLIC STREETS AND FIRE LANE SHALL HAVE A 14' MIN. CLEAR TRUNK HEIGHT.
16. CONTRACTOR TO PROVIDE 12 MONTH WARRANTY AFTER FINAL ACCEPTANCE.
17. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITY (NOT ALREADY INCLUDED IN PLANTING PLANS) TO BE FINE GRADED, AND PLANTED WITH PLANTED WITH PLANTS OR SOD TO MATCH EXISTING CONDITIONS.

MATERIAL LEGEND:

PAVING

P-1 CONCRETE PAVING (STANDARD)

COLOR:	NATURAL GRAY
FINISH:	MEDIUM BROOM FINISH
CONTROL JOINTS:	SAWCUT (1/4 DEPTH OF CONCRETE) @ REGULAR INTERVALS (TYPICAL JOINT SPACING TO BE EQUAL TO WIDTH OF WALK)
EXPANSION JOINTS:	GENERALLY 30' O.C. MAX. (SEE PLANS FOR LOCATION)
JOINT SEALANT:	COLOR TO MATCH CONCRETE
IMPORTANT:	**REPLACE ALL COARSE AGGREGATE WITH 3/8" CRUSHED WHITE LIMESTONE**
APPROVAL:	***MOCKUP, EJ SEALANT SAMPLE***

P-2 CONCRETE PAVING (INTEGRAL COLOR)

COLOR:	TBD (SCOFIELD, CHROMIX ADMIXTURE)
FINISH:	HEAVY ROCK SALT (50% COVERAGE)
CONTROL JOINTS:	SAWCUT (1/4 DEPTH OF CONCRETE) REGULAR INTERVALS (JOINT SPACING REFERENCE PLAN)
EXPANSION JOINTS:	GENERALLY 30' O.C. MAX. (SEE PLANS FOR EXACT LOCATION)
JOINT SEALANT:	COLOR TO MATCH CONCRETE
APPROVAL:	***COLOR SAMPLE, EJ SEALANT SAMPLE, MOCKUP***

P-3 CONCRETE PAVING (AMPHITHEATER SEATING)

COLOR:	TBD (SCOFIELD, CHROMIX ADMIXTURE)
FINISH:	ARCHITECTURAL FINISH
CONTROL JOINTS:	SAWCUT (1/4 DEPTH OF CONCRETE) REGULAR INTERVALS (JOINT SPACING REFERENCE PLAN)
EXPANSION JOINTS:	GENERALLY 30' O.C. MAX. (SEE PLANS FOR EXACT LOCATION)
JOINT SEALANT:	COLOR TO MATCH CONCRETE
INSTALL:	PHENOLIC FACED HIGH DENSITY OVERLAY PLYFORM (REF. SPECS). TIE HOLES SPACED 12" FROM WALL TOP AND ENDS, SPACED EQUALLY WITHIN WALL FIELD AT 24" O.C. MAX. PROVIDE SAW CUT CONTROL JOINTS CENTERED BETWEEN EVERY OTHER ROW OF TIE HOLES (APPROX. 4'-0" O.C. MAX) WALL TOP TO BE TROWELED SMOOTH. PROVIDE SHARP 90° CORNERS. NO CHAMFERED OR RADIUS CORNERS WILL BE ACCEPTED. ON ARCHITECTURALLY FINISHED CONCRETE, EXCESSIVELY LARGE OR FREQUENT BUGHOLES AND/OR OTHER SURFACE DEFECTS WILL BE CAUSE FOR REJECTION OF MOCKUP.
APPROVAL:	***COLOR SAMPLE, EJ SEALANT SAMPLE, MOCKUP***

P-4 UNIT PAVER (ENTRY WALKWAY)

TYPE:	VERONA
COLOR:	PEWTER(33%), ANTIQUE PEWTER (33%), SLATE (33%)
SIZE:	3" x 18" x 80mm
PATTERN:	RANDOM 1/3 RUNNING BOND
INSTALL:	REF. DETAILS
SUPPLIER:	KEYSTONE HARDSCAPES
CONTACT:	JOEY GUEDEA (214.684.4427)
APPROVAL:	***CUT SHEET, SAMPLE, MOCKUP***

P-5 UNIT PAVER (UPPER COURTYARD)

TYPE:	VERONA
COLOR:	SAND HILL BLEND
SIZE:	8" x 16" x 80mm
PATTERN:	*RUNNING BOND*
INSTALL:	REF. DETAILS
SUPPLIER:	KEYSTONE HARDSCAPES
CONTACT:	JOEY GUEDEA (214.684.4427)
APPROVAL:	***CUT SHEET, SAMPLE, MOCKUP***

P-6 UNIT PAVER (OUTDOOR KITCHEN PAVING)

TYPE:	VERONA
COLOR:	CHARCOAL
SIZE:	3" x 18" x 80mm
PATTERN:	RANDOM STACKED BOND
INSTALL:	REF. DETAILS
SUPPLIER:	KEYSTONE HARDSCAPES
CONTACT:	JOEY GUEDEA (214.684.4427)
APPROVAL:	***CUT SHEET, SAMPLE, MOCKUP***

P-7 UNIT PAVER (LOWER COURTYARD)

TYPE:	HOLLAND
COLOR:	ANTIQUE PEWTER (50% FIELD), SAND HILL BLEND (50% FIELD), CHARCOAL (BORDER)
SIZE:	4" x 8" x 60mm
PATTERN:	HERRINGBONE WITH SINGLE SOLDIER COURSE BORDER
INSTALL:	REF. DETAILS
SUPPLIER:	KEYSTONE HARDSCAPES
CONTACT:	JOEY GUEDEA (214.684.4427)
APPROVAL:	***CUT SHEET, SAMPLE, MOCKUP***

P-8 UNIT PAVER (TRUNCATED)

TYPE:	TRUNCATED DOME CONCTETE PAVER
COLOR:	CHARCOAL
SIZE:	4" x 8" x 60mm
PATTERN:	RUNNING BOND
INSTALL:	REF. DETAILS
SUPPLIER:	KEYSTONE HARDSCAPES
CONTACT:	JOEY GUEDEA (214.684.4427)
APPROVAL:	***CUT SHEET, SAMPLE, MOCKUP***

AGGREGATES

AG-1 DECORATIVE GRAVEL

TYPE:	TEJAS BLACK GRAVEL
SIZE:	2"-4"
INSTALL:	REFER DETAILS
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***SAMPLE, MOCKUP***

AG-2 DECOMPOSED GRANITE

TYPE:	NATURAL
SIZE:	3/4" - FINES
INSTALL:	REFER DETAILS
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***SAMPLE, MOCKUP***

METALS

M-1 STEEL EDGE

MATERIAL:	*PLANTING:* 3/16" x 4" STEEL PLATE *HARDSCAPE:* 1/4" x 6" STEEL PLATE
COLOR:	*PLANTING:* POWDERCOAT BLACK *HARDSCAPE:* POWDERCOAT BLACK
SIZE:	LENGTHS PER PLAN, ALL SEAMS TO BE FLUSH AND LEVEL
INSTALL:	REF. DETAILS

M-3 HANDRAIL

MATERIAL:	STAINLESS STEEL (TYPE 304)
FINISH:	BRUSHED
SIZE:	1.5" DIA.
INSTALL:	REF. DETAILS

SITE AMENITIES

A-1 GRILL

TYPE:	PGS T
MODEL:	S36T
FINISH:	STAINLESS STEEL
SUPPLIER:	AEI CORPORATION
INSTALL:	PROVIDE ALL PRODUCTS REQUIRED FOR NATURAL GAS HOOKUP, PROVIDE STAINLESS TIMER WALL SWITCH
APPROVAL:	***CUT SHEET***

A-2 COUNTERTOP

MATERIAL:	CONCRETE
COLOR / FINISH:	TBD
SIZE:	2" THICK
INSTALL:	REF. DETAILS
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***SAMPLE, SHOP DRAWINGS***

A-3 BENCH

TYPE:	GENERATION 50 (ANGLE END ARMS W/ BACK)
FINISH / COLOR:	THERMALLY MODIFIED ASH/BLUE ASH
INSTALL:	SURFACE MOUNT
SUPPLIER:	LANDSCAPE FORMS
CONTACT:	LARA MOFFET (972.740.3373)
APPROVAL:	***CUT SHEET***

A-4 LITTER/ RECYCLING RECEPTACLE

TYPE:	GENERATION 50 (ANGLE END ARMS W/ BACK)
FINISH / COLOR:	THERMALLY MODIFIED ASH/BLUE ASH
INSTALL:	PER MANUFACTURER'S SPECIFICATIONS
SUPPLIER:	LANDSCAPE FORMS
CONTACT:	LARA MOFFET (972.740.3373)
APPROVAL:	***CUT SHEET***

A-5 CAFE DINING TABLE

TYPE:	CHIPMAN ROUND
FINISH / COLOR:	WHITE
INSTALL:	SURFACE MOUNT
SUPPLIER:	LANDSCAPE FORMS
CONTACT:	LARA MOFFET (972.740.3373)
APPROVAL:	***CUT SHEET***

A-6 STONE BLOCK SEATING

TYPE:	LUEDERS LIMESTONE BLOCK
FINISH / COLOR:	*HONED TOP, BOTTOM, AND ENDS W/ ROUGHBACK SIDES*
SIZE:	24" HT. x 18" W. x 6' LENGTH
INSTALL:	REF. DETAILS
SUPPLIER:	MOTHERROCK STONE GROUP
CONTACT:	CLINT HART (214.205.6491)
APPROVAL:	***CUT SHEET***

A-7 OUTDOOR KITCHEN STONE

TYPE:	LUEDERS LIMESTONE VENEER
FINISH / COLOR:	*TBD*
SIZE:	TBD
INSTALL:	REF. DETAILS
SUPPLIER:	MOTHERROCK STONE GROUP
CONTACT:	CLINT HART (214.205.6491)
APPROVAL:	***CUT SHEET***

WALL SYSTEMS/FINISHES

W-1 STONE RETAINING WALLS

TYPE:	STONE VENEER WITH CONCRETE CORE
MATERIAL:	CUT LUEDERS LIMESTONE (TO MATCH EXISTING BUILDINGS/WALLS
COLOR/FINISH:	ROUGHBACK, ASHLAR PATTERN
SIZE:	*CAP* - 12" X 24" X 3" THICK *FIELD* - VARIED SIZES, REF. PLAN FOR WALL HEIGHTS
INSTALL:	REF. DETAILS
SUPPLIER:	MOTHERROCK STONE GROUP
CONTACT:	CLINT HART (214.205.6491)
APPROVAL:	***SAMPLE, SHOP DRAWINGS, MOCKUP***

W-2 FEATURE WALLS

TYPE:	STONE VENEER WITH CONCRETE CORE
MATERIAL:	LUEDERS LIMESTONE
COLOR/FINISH:	HONED FINISH, RUNNING BOND PATTERN
SIZE:	CAP - 12" x 24" X 3" THICK FIELD - 12" x 24"
INSTALL:	REF. DETAILS
SUPPLIER:	MOTHERROCK STONE GROUP
CONTACT:	CLINT HART (214.205.6491)
APPROVAL:	***SAMPLE, SHOP DRAWINGS, MOCKUP***

WOOD

WD-1 WOOD DECKING

TYPE:	IPE
FINISH:	TBD
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***SAMPLE, SHOP DRAWINGS, MOCKUP***

DRAINS

D-1 AREA DRAIN

MODEL:	*TBD*
SIZE:	6" SQUARE
FINISH:	STAINLESS STEEL OR BRONZE
COLOR:	BLACK
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***CUT SHEET***

D-2 PLANTER DRAIN

MODEL:	*TBD*
SIZE:	12" SQUARE WITH ATRIUM GRATE TOP
FINISH:	CAST IRON
COLOR:	BLACK
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***CUT SHEET***

LIGHTING

L-1 POLE LIGHT

TYPE:	LITHONIA CSX1 LED (TO MATCH EXISTING)
COLOR/FINISH:	BROWN TO MATCH EXISTING
CONTACT:	ALA, REF. ARCH PLANS

L-2 LIT BOLLARD

TYPE:	LITHONIA CSX1 LED (TO MATCH EXISTING)
COLOR/FINISH:	BROWN TO MATCH EXISTING
CONTACT:	ALA, REF. ARCH PLANS

L-3 TREE UPLIGHT

MANUFACTURER:	BK
MODEL:	DS-LED-E65-MFL-A9-BLP-12-11-A/PP-S-18-B-BLP-SF
COLOR/FINISH:	TBD
INSTALL:	PER MANUFACTURERS SPECIFICATIONS
SUPPLIER:	ALA LIGHTING
CONTACT:	TIM GALVIN (214.658.9024)

L-4 ACCENT WALL LIGHT (RECESSED WALL WASH)

MANUFACTURER:	LUMENPULSE
MODEL:	LOG RO 120-24-30K-80X30-UMP-SI-DIM IP68 RATED LIGHT. LIGHT TO BE INSTALLED BELOW FINISH GRADE, REF. DETAILS
COLOR/FINISH:	SILVER SANDTEX
INSTALL:	PER MANUFACTURERS SPECIFICATIONS
SUPPLIER:	ALA LIGHTING
CONTACT:	TIM GALVIN (214.658.9024)

L-5 WALL STEP LIGHT

MANUFACTURER:	BEGA
MODEL:	RECESSED WALL LUMINAIRE (SHIELDED)
COLOR/FINISH:	BRUSHED STAINLESS STEEL
INSTALL:	PER MANUFACTURERS SPECIFICATIONS
SUPPLIER:	ALA LIGHTING
CONTACT:	TIM GALVIN (214.658.9024)

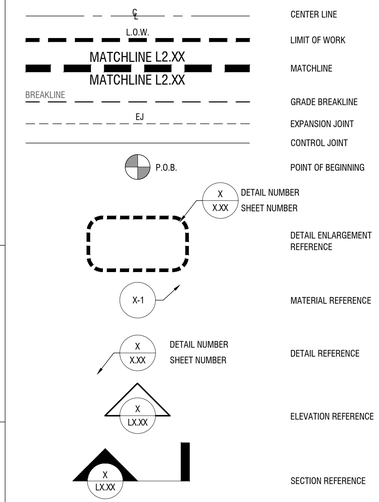
MISCELLANEOUS

MI-1 BUBBLER

MANUFACTURER:	CRYSTAL FOUNTAINS
MODEL:	TBD (FOAM JET W/ FIBER OPTIC LIGHT)
FINISH:	BRONZE
INSTALL:	TOP OF NOZZLE TO BE SET FLUSH WITH POOL FINISH, INSTALL PER MANUFACTURER RECOMMENDATIONS
APPROVAL:	***CUT SHEET***

SYMBOLS LEGEND:

GENERAL



CENTER LINE
LIMIT OF WORK
MATCHLINE
GRADE BREAKLINE
EXPANSION JOINT
CONTROL JOINT
POINT OF BEGINNING
DETAIL NUMBER / SHEET NUMBER
DETAIL ENLARGEMENT REFERENCE
MATERIAL REFERENCE
DETAIL NUMBER / SHEET NUMBER
DETAIL REFERENCE
ELEVATION REFERENCE
SECTION REFERENCE

ABBREVIATIONS

735.46	PROPOSED SPOT GRADE
⊕ 735.46	EXISTING SPOT GRADE
TW	TOP OF WALL
BW	BOTTOM OF WALL
TF	TOP OF FOOTING
COL	TOP OF COLUMN
TS	TOP STEP
BS	BOTTOM STEP
TR	TOP OF RAMP
BR	BOTTOM OF RAMP
TC	TOP OF CURB
BC	BOTTOM OF CURB
TB	TOP OF BAND
TP	TOP OF PAVEMENT
TGr	TOP OF GRAVEL
TG	TOP OF GRADE
FL	FLOWLINE/INVERT ELEVATION
EJ	EXPANSION JOINT
CJ	CONTROL JOINT
CL	CENTER LINE
POB	POINT OF BEGINNING

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RELEASED FOR REVIEW ONLY
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Not for construction or permit purposes.
Kimley»Horn
P.I.A. _____ LANDON R. HUCKINS
L.A. No. 3480 Date 10/14/2022

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000
DATE
10/14/22
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
GENERAL NOTES & MATERIALS LEGEND

SHEET NO.
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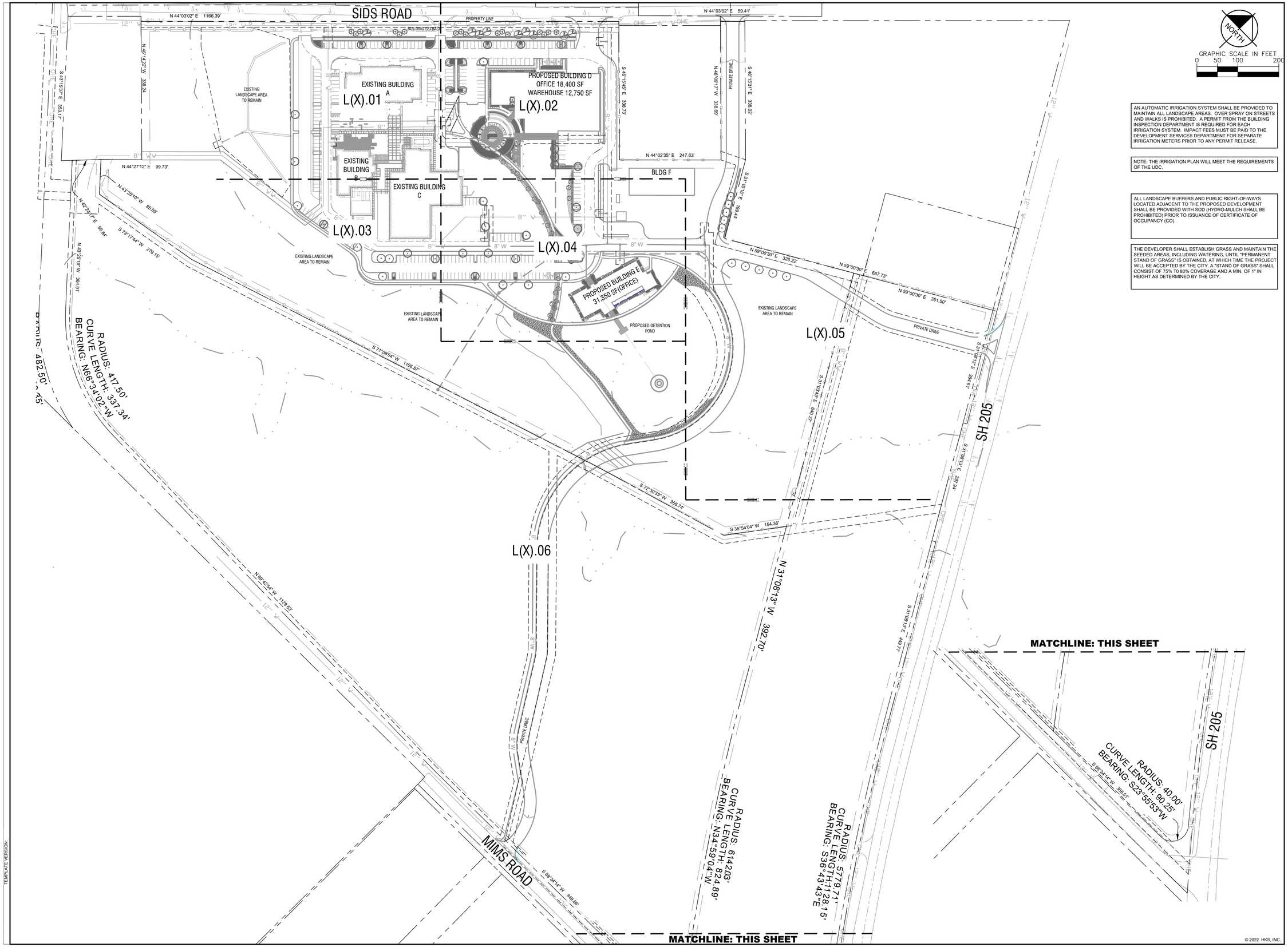

GRAPHIC SCALE IN FEET
0 50 100 200

AN AUTOMATIC IRRIGATION SYSTEM SHALL BE PROVIDED TO MAINTAIN ALL LANDSCAPE AREAS. OVER SPRAY ON STREETS AND WALKS IS PROHIBITED. A PERMIT FROM THE BUILDING INSPECTION DEPARTMENT IS REQUIRED FOR EACH IRRIGATION SYSTEM. IMPACT FEES MUST BE PAID TO THE DEVELOPMENT SERVICES DEPARTMENT FOR SEPARATE IRRIGATION METERS PRIOR TO ANY PERMIT RELEASE.

NOTE: THE IRRIGATION PLAN WILL MEET THE REQUIREMENTS OF THE UDC.

ALL LANDSCAPE BUFFERS AND PUBLIC RIGHT-OF-WAYS LOCATED ADJACENT TO THE PROPOSED DEVELOPMENT SHALL BE PROVIDED WITH SOD (HYDRO-MULCH SHALL BE PROHIBITED) PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY (CO).

THE DEVELOPER SHALL ESTABLISH GRASS AND MAINTAIN THE SEEDED AREAS, INCLUDING WATERING, UNTIL "PERMANENT STAND OF GRASS" IS OBTAINED, AT WHICH TIME THE PROJECT WILL BE ACCEPTED BY THE CITY. A "STAND OF GRASS" SHALL CONSIST OF 75% TO 80% COVERAGE AND A MIN. OF 1" IN HEIGHT AS DETERMINED BY THE CITY.

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ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

RayburnElectric COOPERATIVE

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P.L.A. ____ LANDON R. HUCKINS
L.A. No. 3480 Date 10/14/2022

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000
DATE
10/14/22
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
OVERALL PLAN

SHEET NO.
L1.01

PLOT DATE:
TEMPLATE VERSION:

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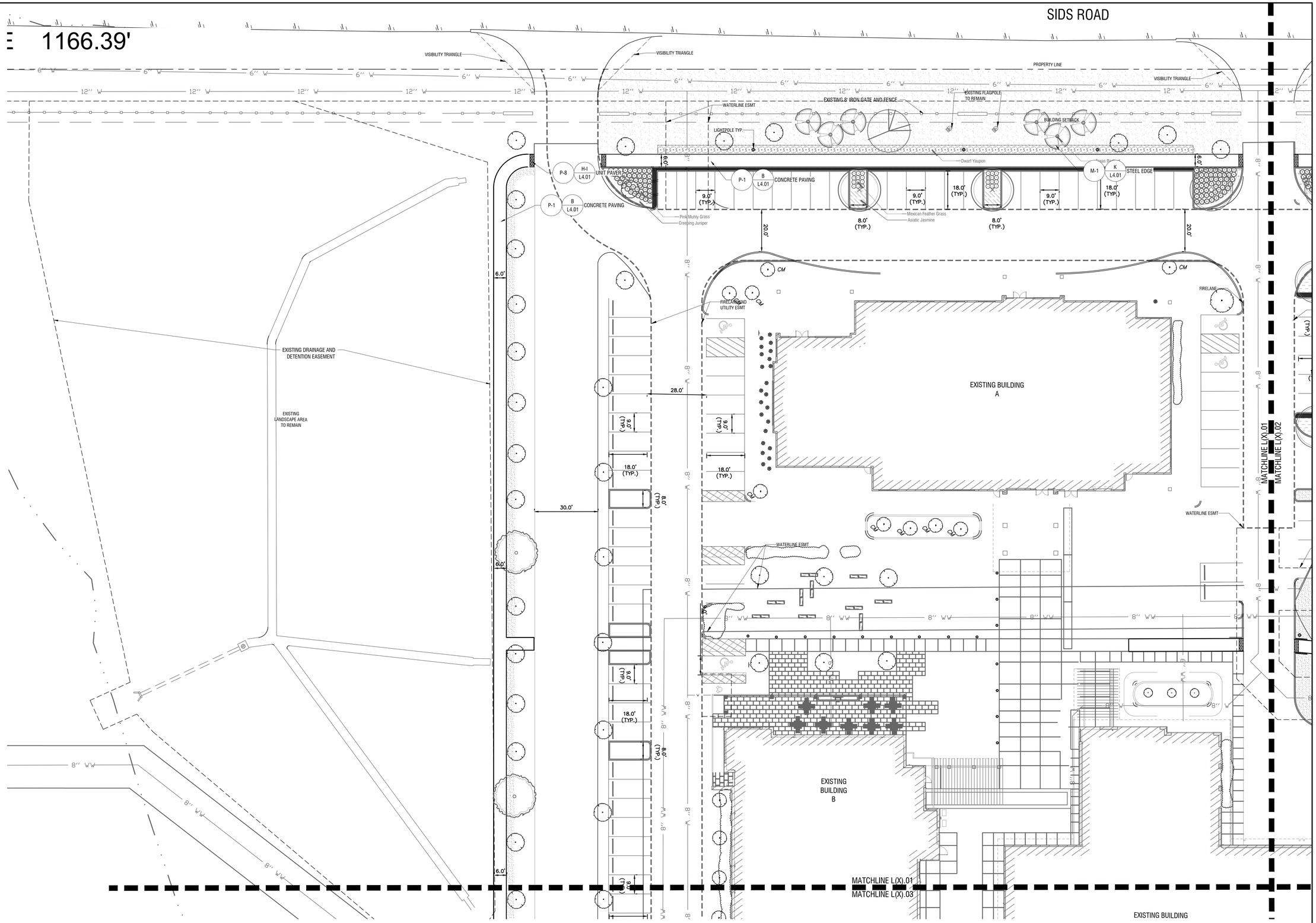

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DALLAS, TX 75201

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SHEET TITLE
HARDSCAPE PLAN

SHEET NO.
L2.01

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PLOT DATE:

SIDS ROAD

VISIBILITY TRIANGLE

PROPOSED 8' IRON GATE AND FENCE

Texas Redbud

Texas Red Oak

Live Oak

Purple Wintercreeper

Brakelights Red Yucca

Giant Liriope

Cedar Elm

Texas Sage

Mahonia Soft Caress

Common Boxwood

Bermuda Grass

Autumn Sage

Multi-Trunk

Dallas Red Crape Myrtle

WATERLINE ESMT

FIRELANE

BISTRO TABLES A-5

STONE BLOCK SEATING A-6

DECORATIVE GRAVEL J L4.01 A6-2

M-1 K L4.01 STEEL EDGE

AG-1 J L4.01 DECOMPOSED GRANITE

P-1 B L4.01 CONCRETE PAVING

P-3

P-4 E L4.01 UNIT PAVER

P-5 E L4.01 UNIT PAVER

P-6 E L4.01 UNIT PAVER

P-7 E L4.01 UNIT PAVER

P-8 H-I L4.01 UNIT PAVER

W-1 X LX.XX STONE RETAINING WALLS

W-2 X LX.XX FEATURE WALLS

WD-1 X LX.XX WOOD DECKING

A-3 BENCH

A-6 STONE BLOCK SEATING

A6-2 J L4.01 DECORATIVE GRAVEL

A-7 X LX.XX OUTDOOR KITCHEN STONE

PROPOSED BUILDING D
OFFICE 18,400 SF
WAREHOUSE 12,750 SF

S 46°15'45" E 338.73'

N 44°02'35" E 24

BLDG F

MATCHLINE L(X).01
MATCHLINE L(X).02
MATCHLINE L(X).01
MATCHLINE L(X).04

NORTH
0' 20' 40'
Scale: 1" = 20'-0"

Hardscape Plan
Scale: 1" = 20' - 0"

A

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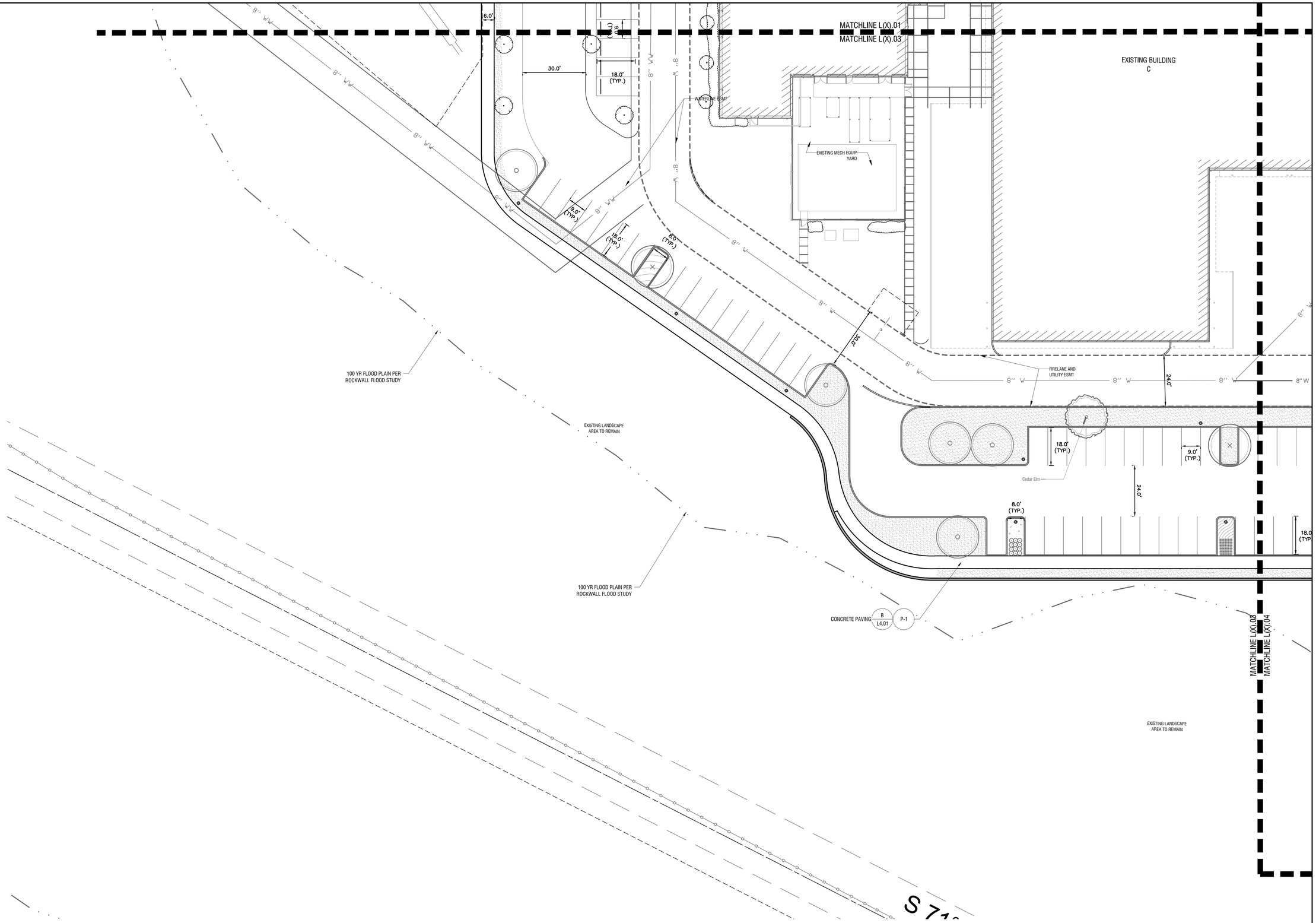
SHEET TITLE
HARDSCAPE PLAN

SHEET NO.
L2.02



NORTH

0' 20' 40'

Scale: 1" = 20'-0"

Hardscape Plan

Scale: 1" = 20' - 0"

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10/14/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
HARDSCAPE PLAN

SHEET NO.
L2.03

MATCHLINE L(X).01
MATCHLINE L(X).04

18.0' (TYP.)
9.0' (TYP.)
18.0' (TYP.)
Lacebark Elm
WATERLINE ESMT
8" W
8' W
9.0' (TYP.)
18.0' (TYP.)
11.0'
24.0'
Purple Wintercreeper
P-8
H-I
L4.01
UNIT PAVER
35.0'
WATERLINE ESMT
A-6
STONE BLOCK SEATING
P-4
Yaupon Holly
Fountain Grass
Mexican Feather Grass
Littoral Planting Upland Mix
PROPOSED BUILDING E
31,350 SF(OFFICE)
M-1
K
L4.01
STEEL EDGE
W-1
X
LX.XX
STONE RETAINING WALLS
WD-1
X
LX.XX
WOOD DECKING
CONCRETE PAVING
B
L4.01
P-1
100 YR FLOOD PLAIN PER
ROCKWALL FLOOD STUDY
8.0' (TYP.)
18.0' (TYP.)
9.0' (TYP.)
24.0'
MATCHLINE L(X).03
MATCHLINE L(X).04
MATCHLINE L(X).04
MATCHLINE L(X).05
MATCHLINE L(X).04
MATCHLINE L(X).06
PROPOSED DETENTION

NORTH
0' 20' 40'
Scale: 1" = 20'-0"

Hardscape Plan
Scale: 1" = 20' - 0"
A

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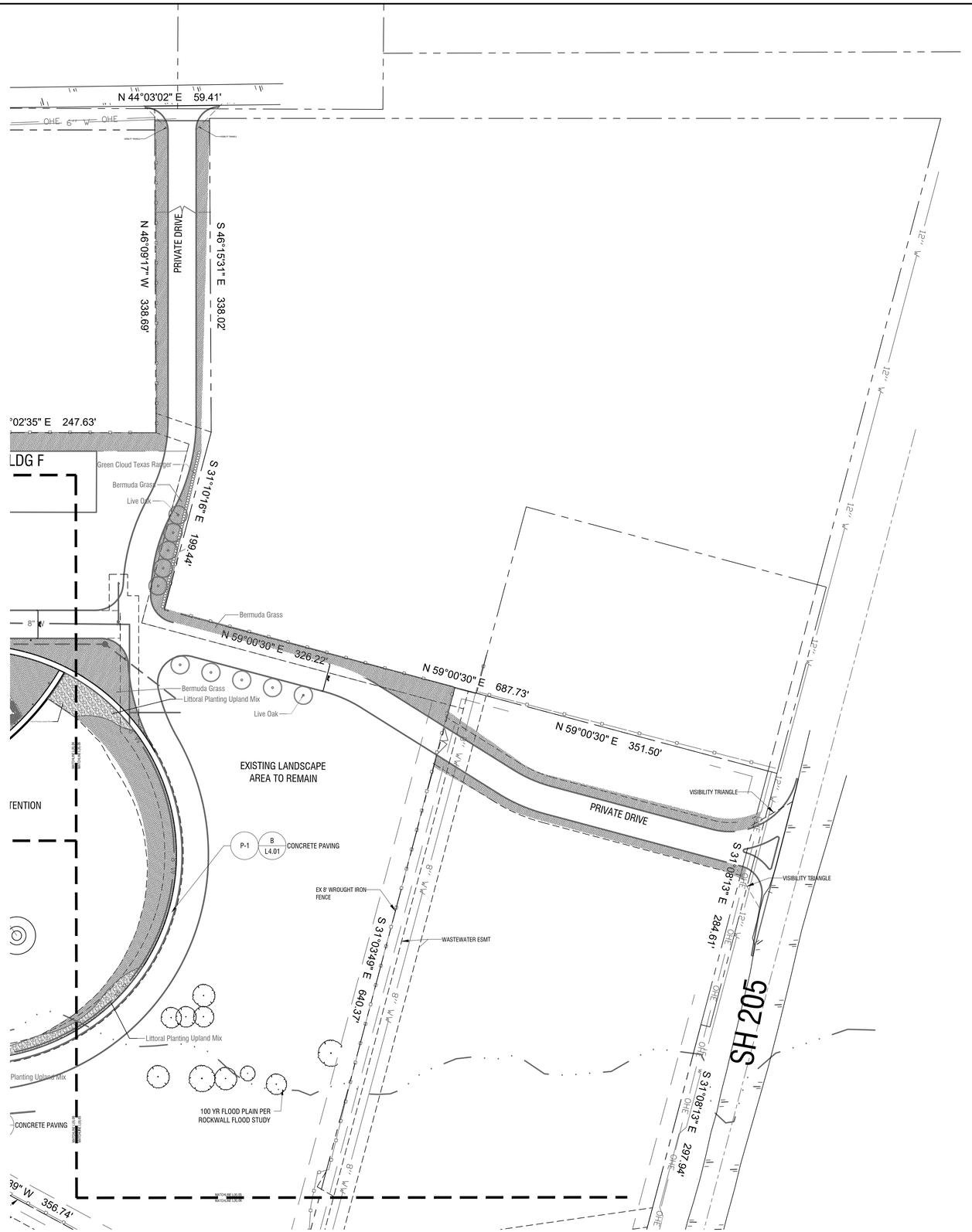
SHEET TITLE
HARDSCAPE PLAN

SHEET NO.
L2.04



NORTH

0' 60' 120'

Scale: 1" = 60'-0"

Hardscape Plan

Scale: 1" = 60' - 0"

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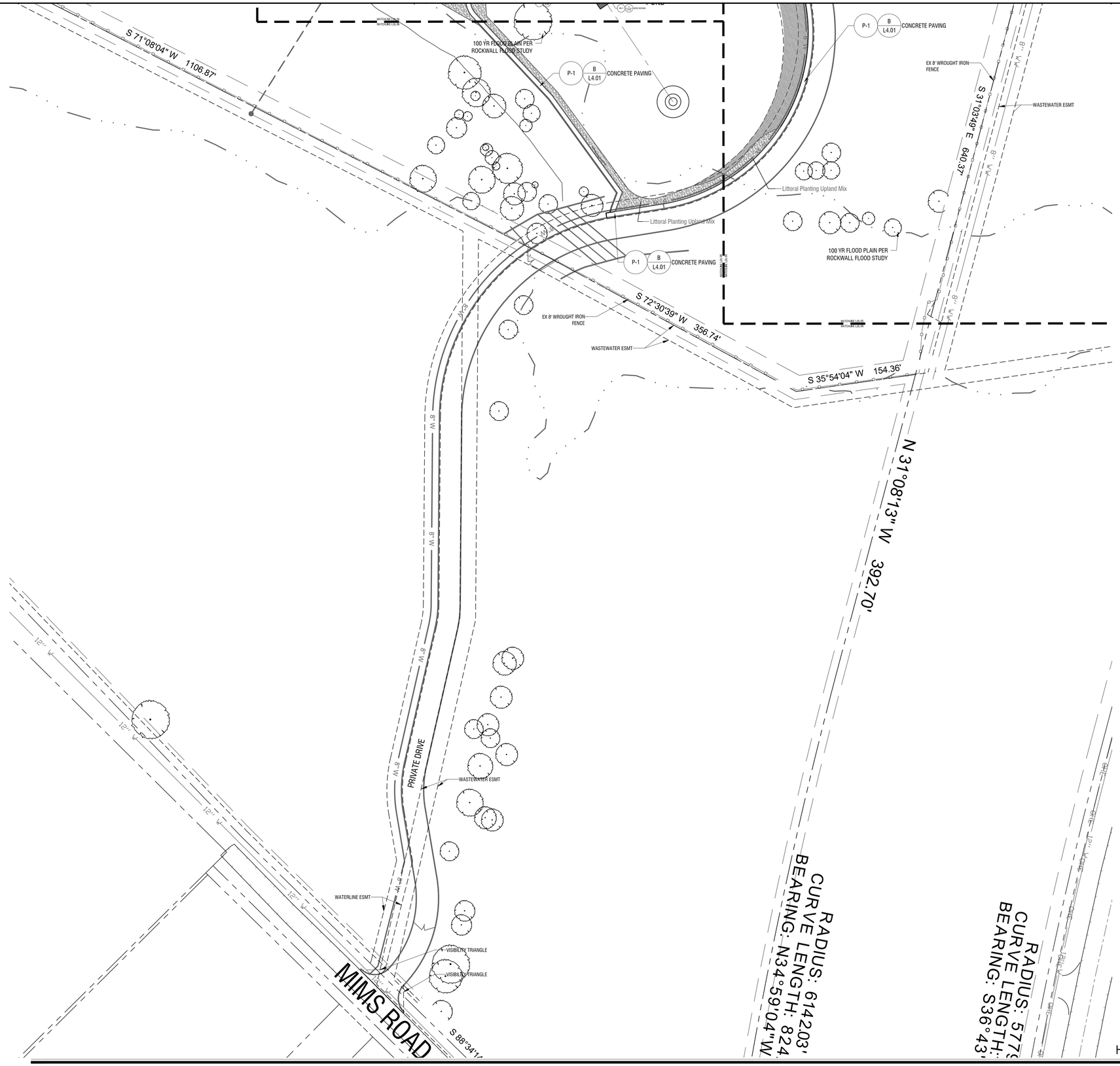
SHEET TITLE
HARDSCAPE PLAN

SHEET NO.
L2.05



Hardscape Plan

Scale: 1" = 60' - 0"

A

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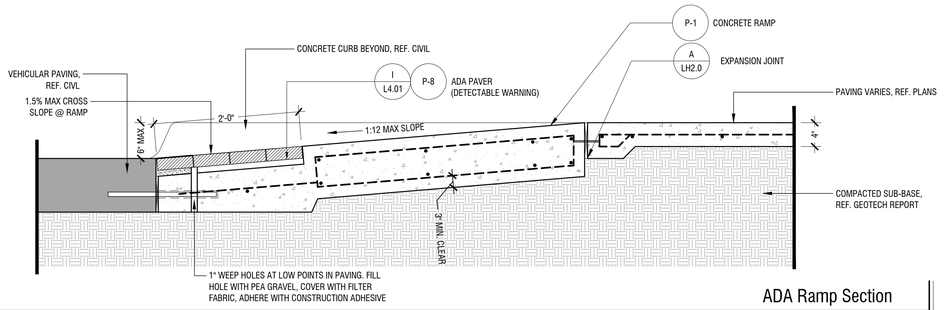
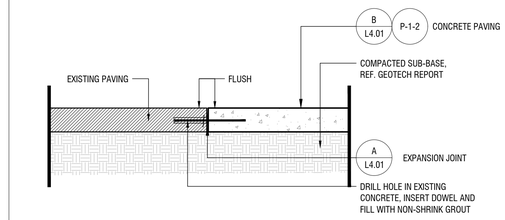
SHEET TITLE
HARDSCAPE PLAN

SHEET NO.
L2.06



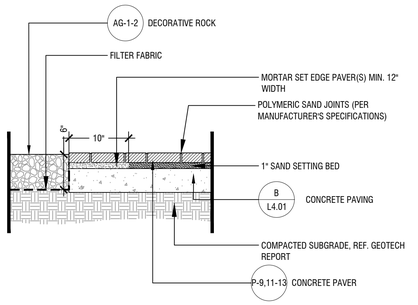
ADA Ramp Section — H

Scale: 1" = 1'-0"



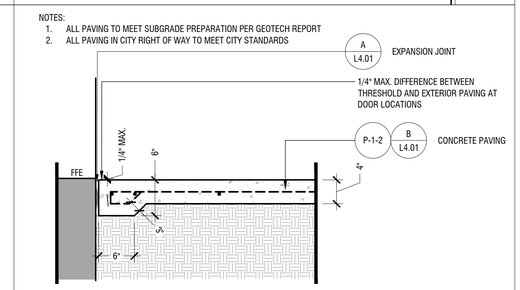
Concrete to Existing Sidewalk — D

Scale: 1" = 1'-0"



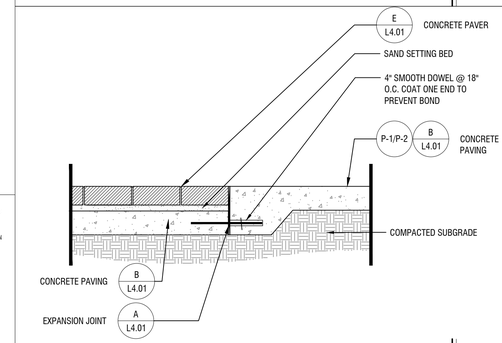
Paver to Decorative Rock Transition — G

Scale: 1"=1'-0"



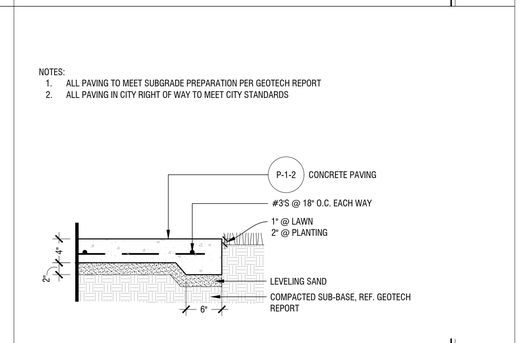
Concrete Paving @ Building — C

Scale: 1" = 1'-0"



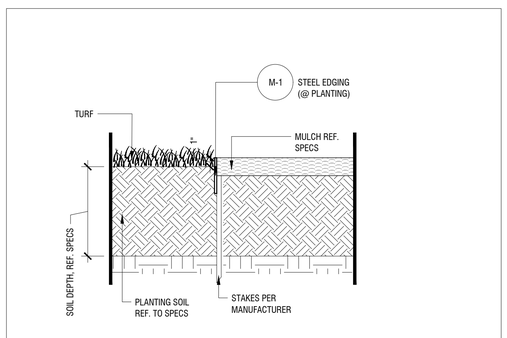
Concrete Paver to Concrete Paving Transition — F

Scale: 1" = 1'-0"



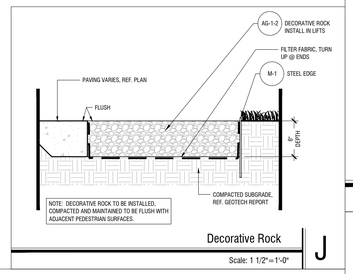
Typ. Concrete Paving — B

Scale: 1" = 1'-0"



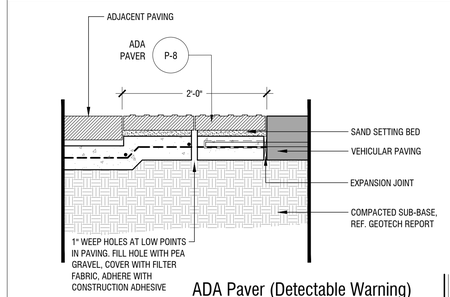
Steel Edge — K

Scale: 1 1/2" = 1'-0"



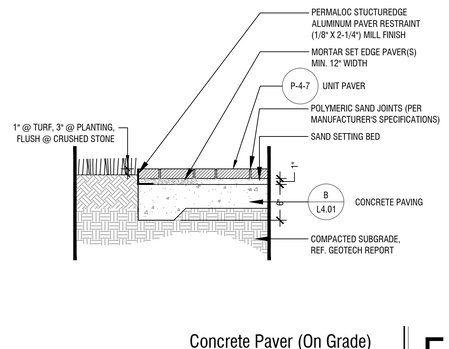
Decorative Rock — J

Scale: 1 1/2" = 1'-0"



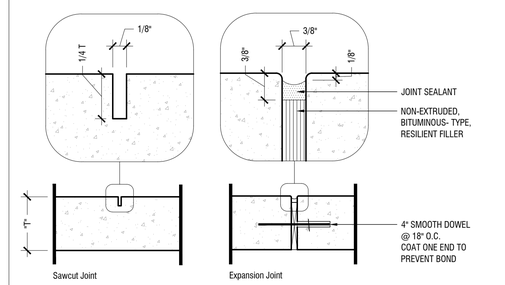
ADA Paver (Detectable Warning) — I

Scale: 1" = 1'-0"



Concrete Paver (On Grade) — E

Scale: 1" = 1'-0"



Concrete Paving Joints — A

N.T.S.

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ISSUE
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SHEET TITLE
HARDSCAPE DETAILS

SHEET NO.
L4.01

PLOT DATE:

TEMPLATE VERSION:

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Luminaire Schedule								
Symbol	Type	Qty	Manufacturer / Catalog Number	Total Lumen Output	Total Input Watts	Ballast Factor	Light Lost Factor	User Defined Factor
	AA	51	LITHONIA CSX1 LED 60C 700 40K T4M HS	12377	134	1.000	0.900	1.000
	BB	40	LITHONIA KBD8 LED 12C 350 40K ASY MVOLT	809	16	1.000	0.900	1.000
	CC	2	LITHONIA DSXW2 LED 20C 350 40K T2S MVOLT	2988	25	1.000	0.900	1.000

Calculation Summary						
Calculation Grid Location	Calc. Height (Ft.)	Units	Avg	Max	Min	Avg/Min
GROUND_Planar	0	Fc	0.78	5.0	0.0	N.A.
PARKING LOT 1		Fc	2.69	4.1	1.4	1.92
PARKING LOT 2 & ROADWAY		Fc	2.90	5.0	0.8	3.63

AA

CSX1 LED
LED Area Luminaire

Specifications
EPA: 0.7 ft² (65 m²)
Length: 23-1/2" (597 mm)
Width: 18-1/2" (470 mm)
Height: 5-7/8" (149 mm)
Weight (max): 37 lbs (16 kg)

CC

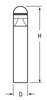
D-Series Size 2
LED Wall Luminaire

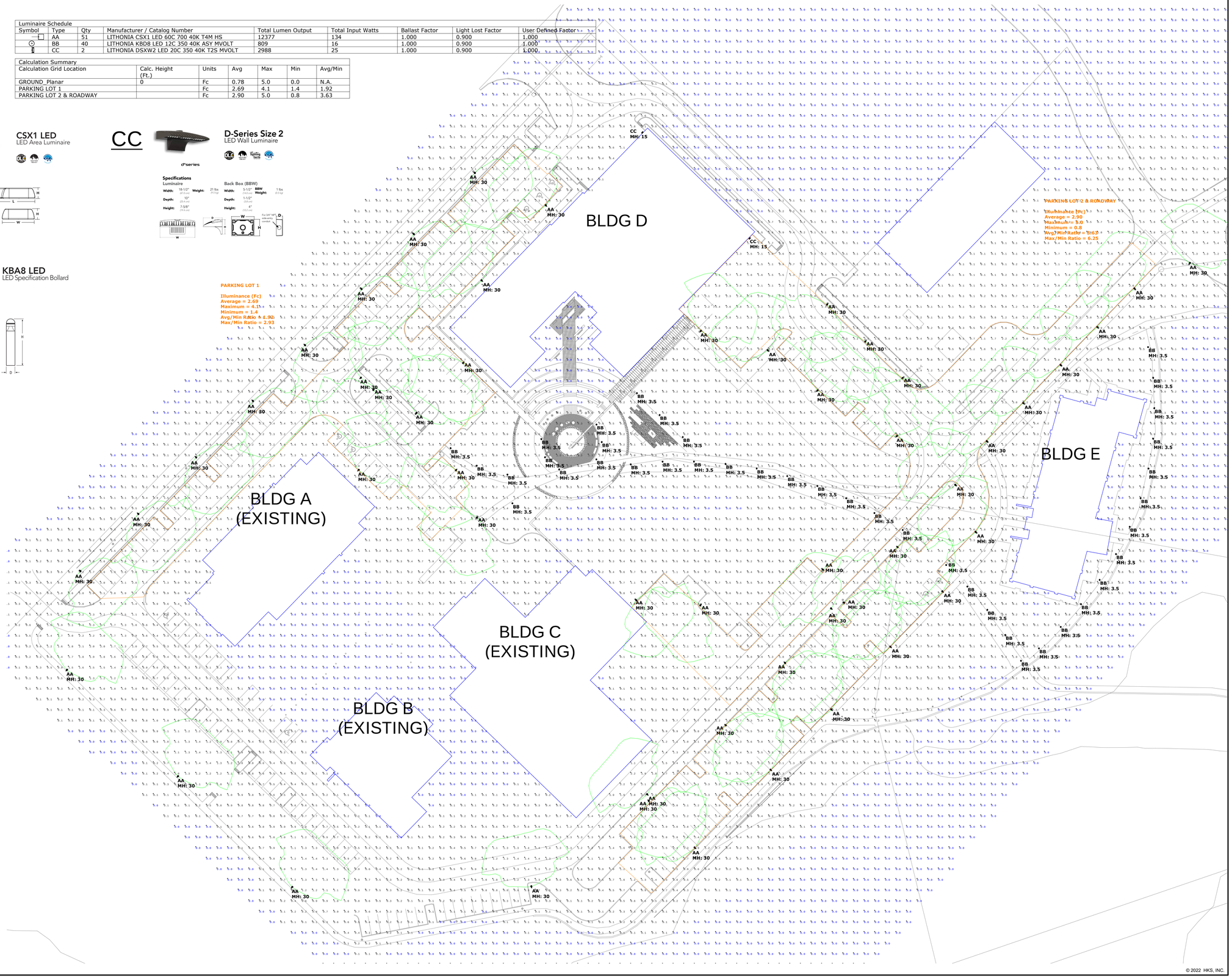
Specifications
Luminaire
Width: 18-1/2" (470 mm) Weight: 21 lbs (9.5 kg)
Depth: 10" (254 mm)
Height: 7-5/8" (194 mm)
Back Box (BBW)
Width: 5-1/2" (140 mm) BBW Weight: 1 lbs (0.5 kg)
Depth: 1-1/2" (38 mm)
Height: 4" (102 mm)

BB

KBA8 LED
LED Specification Bollard

Specifications
8" Round (203 mm)
Height: 42" (106.7 cm)
Weight (max): 27 lbs (12.25 kg)





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GARLAND, TEXAS 75040

HKS PROJECT NUMBER
25370.000

DATE
10/14/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
SITE LIGHTING - PHOTOMETRIC CALCS

SHEET NO.
SL.00

VP:LOT DATE:
TEMPLATE VERSION:

Traffic Impact Analysis

Rayburn Electric Cooperative
Rockwall, Texas

October 13, 2022

Kimley-Horn and Associates, Inc.
Dallas, Texas

Project #67075002
Registered Firm F-928

Kimley»Horn

Traffic Impact Analysis

Rayburn Electric Cooperative Campus Expansion
Rockwall, Texas

Prepared by:

Kimley-Horn and Associates, Inc.
13455 Noel Road, Two Galleria Tower, Suite 700
Dallas, Texas 75240
Registered Firm F-928

10/13/2022

Contact:
Christian DeLuca, P.E., PTOE
972-770-1300
October 13, 2022

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EXECUTIVE SUMMARY

The proposed Rayburn Electric Cooperative (REC) Campus Expansion development is located within the block bounded by Goliad Street, Sims Road, and Mims Road in Rockwall, Texas. The site is proposed to be built as a distribution center. This study is intended to identify traffic generation characteristics, identify potential traffic related impacts on the local street system, and to develop mitigation measures required for identified impacts. The following existing intersections were selected to be part of this study:

- Goliad Street & Sids Road
- Mims Road & Sids Road
- Goliad Street & Mims Road
- Mims Road & National Drive

The analysis also included the following driveways having access in and out of the site:

- Drive 1, which is an existing full-access driveway for the REC Campus to Sids Road
- Drive 2, which is an existing full-access driveway for the REC Campus to Sids Road. The driveway is across from the driveway for Air Performance.
- Drive 3, which is an existing full-access driveway for the REC Campus to Sids Road. The driveway is across from the driveway for Rockwall ISD school bus parking lot.
- Drive 4, which is an existing full-access driveway for the REC Campus to Sids Road
- Drive 5, which is a proposed right-in right-out driveway to Goliad Street.
- Drive 6, which is an existing full-access driveway for the REC Campus to Mims Road. The driveway is across from the existing roadway, National Drive.

Traffic operations were analyzed at the study intersections for existing volumes and 2024 background traffic volumes and 2024 background plus site-generated traffic volumes. The future years correspond to the expected buildout year of the site. Conditions were analyzed for the weekday AM and PM peak hours. The background traffic conditions include existing traffic with compound growth rates.

The REC campus expansion development is expected to generate approximately 26 new weekday AM peak hour one-way vehicle trips and 37 new weekday PM peak hour one-way vehicle trips at buildout. The distribution of the site-generated traffic volumes onto the street system was based on the surrounding roadway network, existing traffic patterns, and the project's proposed access locations.

Based on the analysis presented in this report, the proposed Rayburn Electric Cooperative Campus Expansion development can be successfully incorporated into the surrounding roadway network. The proposed site driveways provide the appropriate level of access for the development. The site-generated traffic does not have a significant or disproportionate effect on the existing vehicle traffic operations. The following recommendations should be included in the development of the site:

1. Construct Drive 4 to Goliad Street as a right-in/right-out driveway due to not meeting TxDOT driveway access spacing.

I.INTRODUCTION

A. Purpose

Kimley-Horn was retained to conduct a Traffic Impact Analysis (TIA) of future traffic conditions associated with the development of the Rayburn Electric Cooperative Campus Expansion site located within the block bounded by Goliad Street, Sims Road, and Mims Road in Rockwall, Texas. A site vicinity map is provided as **Exhibit 1**. **Exhibit 2** shows the proposed conceptual site plan. This study is intended to identify traffic generation characteristics, identify potential traffic related impacts on the local street system, and to develop mitigation measures required for identified impacts.

B. Methodology

Traffic operations were analyzed at the study intersections for AM and PM peak hours for the following scenarios due to falling into Analysis Category 1 based on the requirements listed in Table 2.6 in the City of Rockwall's Standards of Design & Construction.

- 2022 existing traffic
- 2024 background traffic
- 2024 background plus site traffic

The capacity analyses were conducted using the *Synchro*™ software package and its associated *Intersection* reports for signalized intersections and *Highway Capacity Manual* reports for unsignalized intersections.

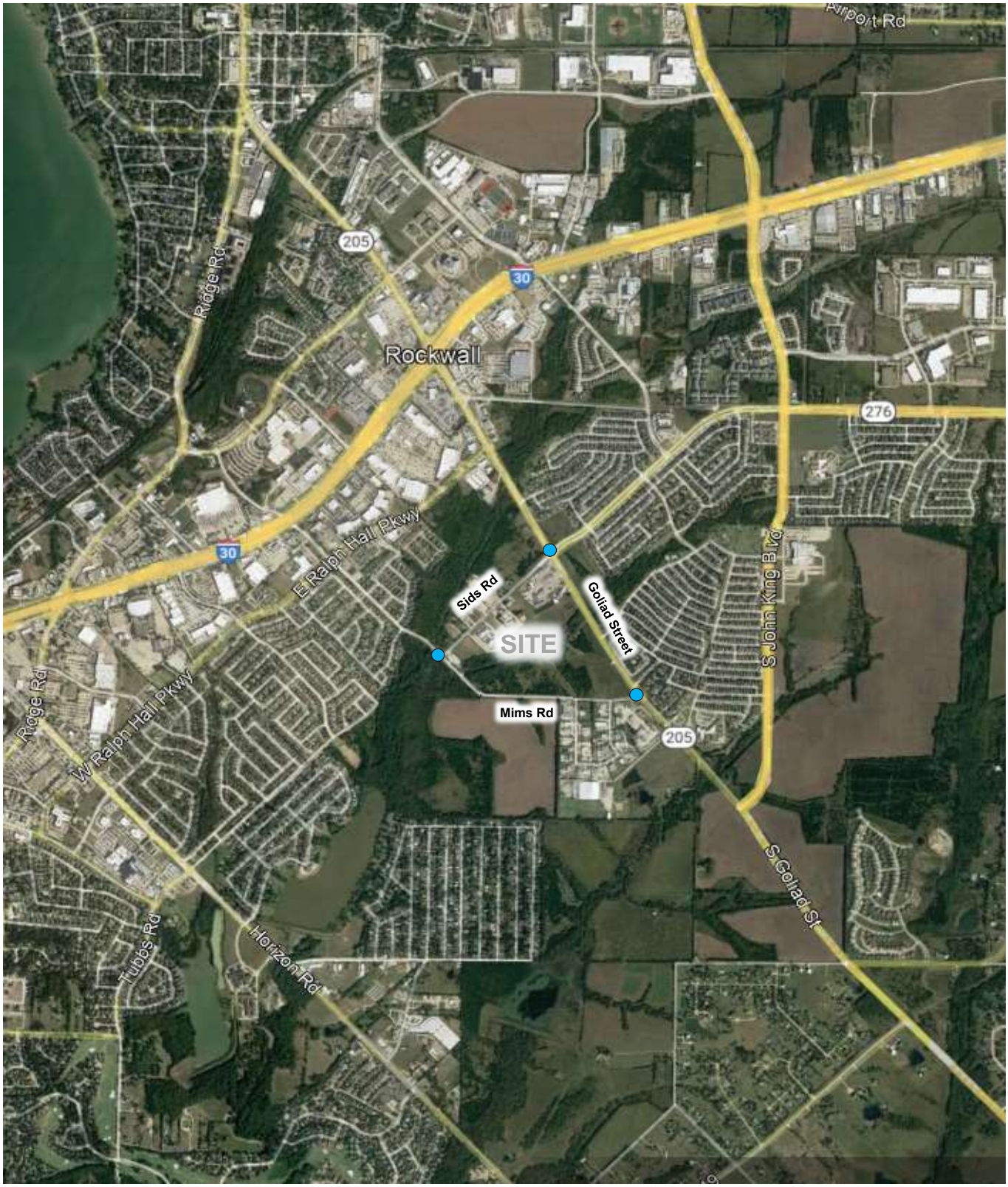

EXHIBIT 1

Vicinity Map

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

= Study Intersection

North

Not To Scale

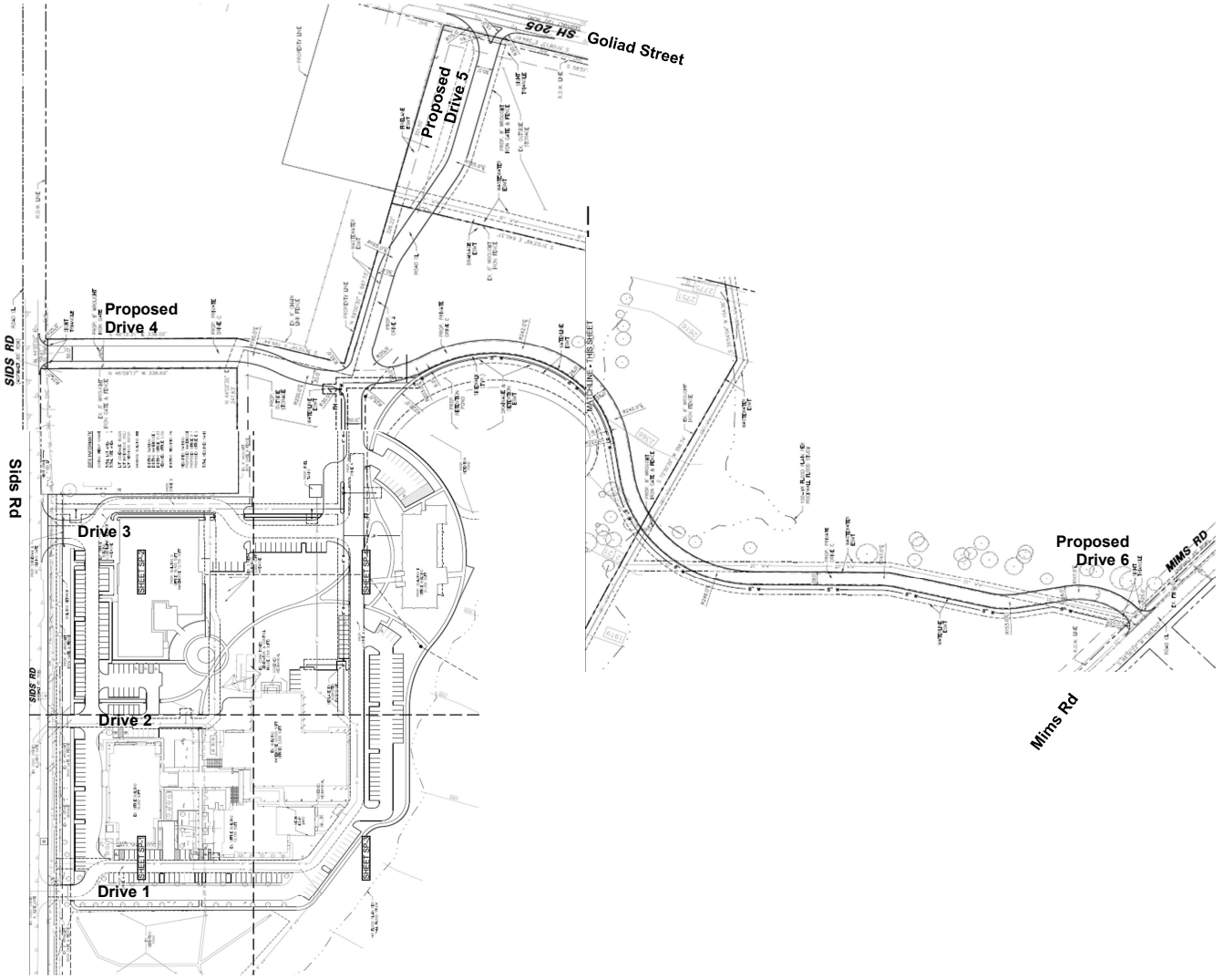

EXHIBIT 2

Conceptual Site Plan

Lineman Building - Rockwall, Texas

Kimley»Horn

North

Not To Scale

II. EXISTING AND FUTURE AREA CONDITIONS

A. Roadway Characteristics

The following signalized intersections were evaluated as part of this study:

- Goliad Street & Sids Road

The following unsignalized intersections were evaluated as part of this study:

- Mims Road & Sids Road
- Goliad Street & Mims Road
- Mims Road & National Drive

The major study area roadways are described below.

Sids Road – is a two-lane undivided roadway between Mims Road to Goliad Street and then transitions into a four-lane divided roadway east of Goliad Street. The speed limit is 30 mph west of Goliad Street adjacent to the proposed site and 50 mph east of Goliad Street. Sids Road is identified as a 4-lane undivided minor arterial, west of Goliad Street, and a 6-lane divided arterial, east of Goliad Street.

Goliad Street (SH 205) – is a two-lane undivided roadway between John King Boulevard to Sids Road and then transitions into a six-lane divided roadway north of Sids Road. The speed limit is 55 mph south of Sids Road adjacent to the proposed site and 45 mph north of Sids Road. Goliad Street is identified as a 6-lane divided arterial on the City of Rockwall Thoroughfare Plan.

Mims Road – is a two-lane undivided roadway that runs from Goliad Street to I-30. On the City of Rockwall Thoroughfare Plan, Industrial Boulevard is designated as a four-lane undivided minor arterial. The speed limit near the site is 30 mph.

Exhibit 3 illustrates the intersection geometry used for the traffic analysis.

B. Existing Study Area

The property is zoned as Heavy Commercial (LHC with “office/warehouse combinations land uses” listed as a primary land use. The use of the property will not be changing.

C. Proposed Site Improvements

The development as proposed includes expansion of the Rayburn Electric.Cooperative Campus. The existing REC campus contains 62,750 square feet; 7700 square feet will be removed while two buildings totaling 52,500 square feet will be added. The net gain is 44,800 square feet.

As shown in **Exhibit 3**, the site has three proposed driveways. The driveways to be modeled in this analysis are as follows:

Drive 1 – is an existing full-access driveway to Sids Road. The drive is approximately 550 feet northeast of the intersection of Mims Road and Sids Road.

Drive 2 – is an existing full-access driveway to Sids Road and is located across from another commercial driveway. The drive is approximately 300 feet northeast of Drive 1.

Drive 3 – would reconstruct and widen the site's northenmost driveway to Sids Road. The drive is approximately 375 feet northeast of Drive 2 and meets the City of Rockwall's minimum driveway spacing of 200 feet.

Proposed Drive 4 – would be a full-access driveway to Sids Road approximately 285 feet north of Drive 3. Drive 4 is proposed to be 100 feet northeast of the existing commercial driveway servicing S & A Systems Inc. The City of Rockwall requires 200 feet driveway spacing on Arterials and 100 feet of spacing on Collectors. Sids Road is expected to be a 4-lane arterial in the future based on the thoroughfare plan, however, functions as a two-lane collector today. Furthermore, the roadway dead ends into Mims Road and traffic volumes will likely remain low for quite sometimes. Further attributing to collector characteristics. The S & A Systems driveway only services a few parking spaces and has very low traffic. For these reasons, the 100-foot driveway spacing is appropriate for this driveway.

Proposed Drive 5 – would be a right-in right-out driveway to Goliad Street (SH 205) approximately 810 feet south of Goliad Street. The driveway will be 155 feet south of the next driveway to the north. Goliad Street is a TxDOT roadway and therefore requires 360 feet of spacing as a 45 MPH road. This spacing requirement is not met. To provide reasonable access under these conditions but also provide the safest operation, the driveway connection should be constructed to only allow right-in/right out turning movements.

Proposed Drive 6 – would be a full access driveway to the existing intersection of Mims Road and National Drive. The access point will create the fourth leg of the existing three-legged intersection

The intersection spacing appears to meet the City of Rockwall standards for driveway spacing away from intersections of minor arterials, and between driveways to minor arterials. Intersection sight distance at the proposed driveways is acceptable with each on relatively straight segments of their respective roadway.

D. Existing Traffic Volumes

Exhibit 4 shows the existing weekday AM and PM peak hour traffic volumes. 24-hour machine counts were collected near the site at the intersection of Goliad Street and Sids Road. The raw count sheets, as well as a comparison between the 24-hour volumes collected and previous 24-hour counts, are provided at the end of this report.

The 24-hour count showed the daily volume on the roadway link as follows:

- Goliad Street, west of Sids Road: 11,423 vehicles per day (vpd)
- Sids Road, south of Goliad Street: 2,339 vpd

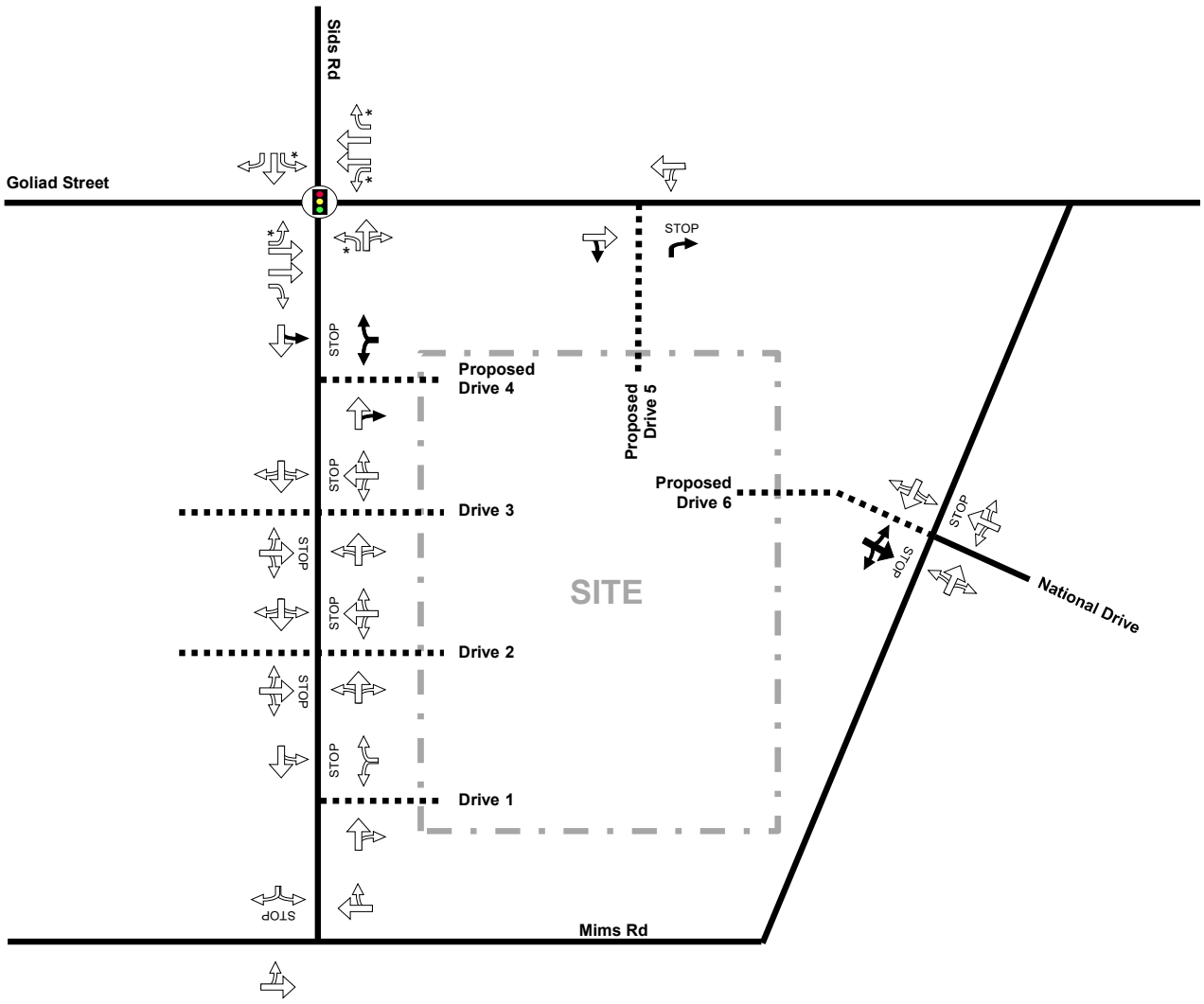

EXHIBIT 3

Lane Assignment and Intersection Control

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

= Signalized Intersection

STOP = Stop-Controlled Approach

= Travel Lane

* = Turn Bay

= Driveway Lanes or Off-Site Improvements

TWLTL = Two-Way Left Turn Lane

North

Not To Scale

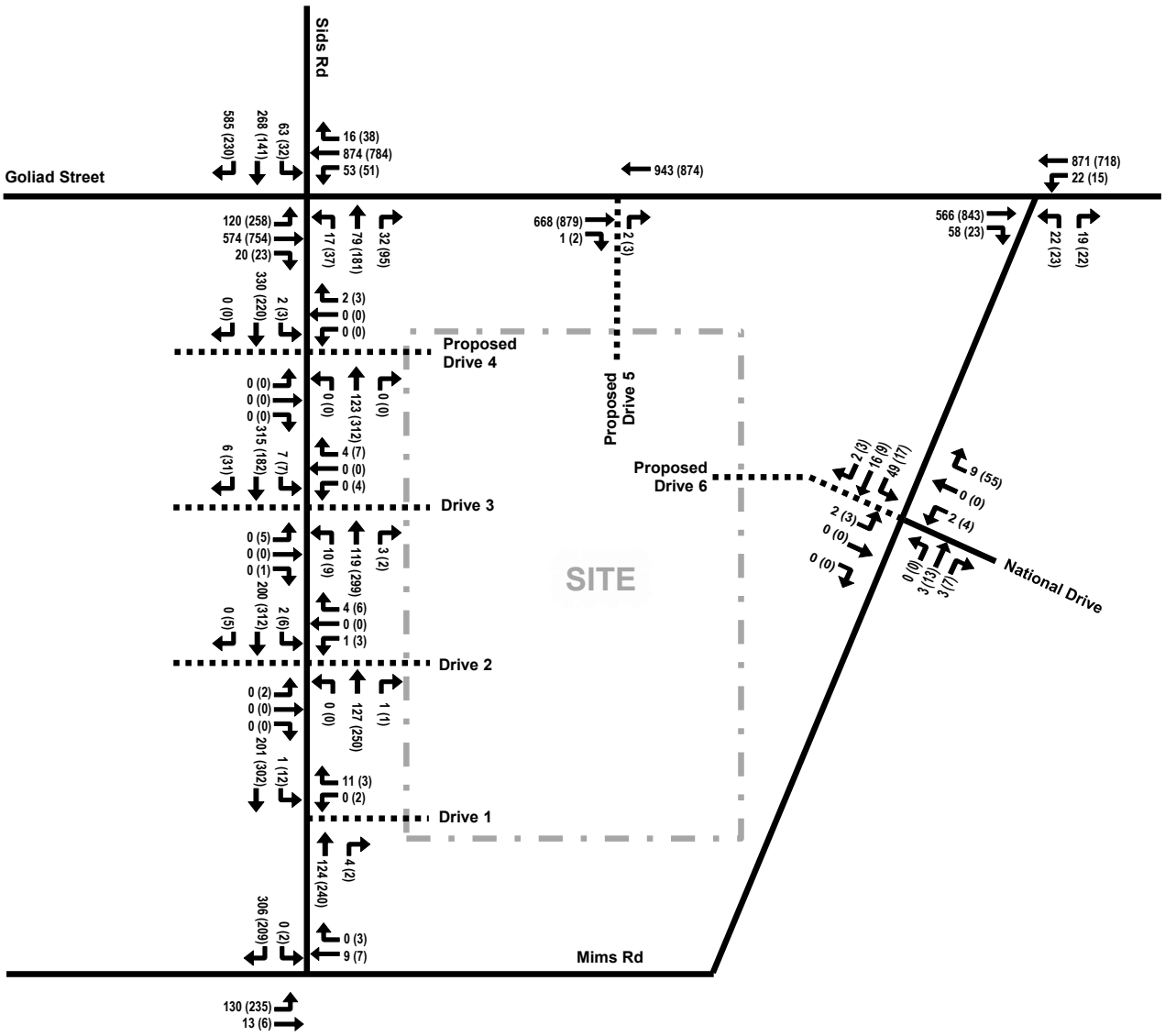

EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

Not To Scale

III. PROJECT TRAFFIC CHARACTERISTICS

A. Site-Generated Traffic

Site-generated traffic estimates are determined through a process known as trip generation. If site specific trip data is unknown, rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific tie interval using the 10th edition of *Trip Generation Manual* published by the Institute of Transportation Engineers (ITE). However, since the specific trip data of the existing site is known that data is a better indication of the expected trip data after the expansion is completed. The existing trip data was grown as a ratio based on the square footage of the existing REC campus and proposed REC campus. An additional 20% trip increase was applied to ensure a conservative analysis.

No reductions were taken for pass-by trips, internal capture, or multimodal use.

Table 1 shows the resulting daily and weekday AM and PM peak hour trip generation for the proposed development, showing new external trips.

Table 1 – Trip Generation

Land Uses	Amount	Units	ITE Code	Daily One-Way Trips	AM Peak Hour One-Way Trips			PM Peak Hour One-Way Trips		
					IN	OUT	TOTAL	IN	OUT	TOTAL
Existing Site (Observed)	*62,750*	*SF*	*170*	*636*[2]	*11*	*13*	*24*	*17*	*18*	*35*
Proposed Expansion (Estimated) [1]	44,800	SF	170	551[2]	8	10	18	13	13	25
Development Totals										
Subtotal Trip Generation Total:				1187[2]	19	23	42	30	31	60
Contingency (20% Increase)				-	4	5	8	6	6	12
Existing Site (Observed)				-636[2]	*-11*	*-13*	*-24*	*-17*	*-18*	*-35*
Total Net New External Vehicle Trips:				***551***[2]	**12**	**15**	**26**	**19**	**19**	**37**

(1) Trip Generation rates based on the existing site's observed inbound and outbound trips.
(2) Trip Generation rates based on ITE Trip Generation, 11th Edition.

B. Trip Distribution and Assignment

The distribution of the site-generated traffic volumes in to and out of the site driveways and onto the street system was based on the area street system characteristics, existing traffic patterns, relative land use density, and the locations of the proposed driveway access to/from the site. The corresponding distributions can be found in **Exhibit 5**. The corresponding inbound and outbound traffic assignment, where the directional distribution is applied using the most probable paths to and from the site can be found in **Exhibit 6**

C. Development of 2024 Background Traffic

In order to obtain 2024 background traffic, the existing traffic counts and historic counts near the site were compared to find expected growth trends within the study area. Based on the recent growth in the area, an annual growth rate of 3.2% was assumed for the background traffic through 2024. To calculate the 2024 background traffic, the existing 2022 traffic counts were grown by their respective growth rates annually for two years. The resulting 2024 background weekday AM and PM peak hour traffic volumes are shown in **Exhibit 7**.

D. Development of 2024 Total Traffic

Site traffic volumes were added to the background volumes to represent the estimated total (background plus site-generated) traffic conditions for the 2024 study year after completion of the proposed development. **Exhibit 8** shows the resulting 2024 weekday AM and PM peak hour total traffic volumes.

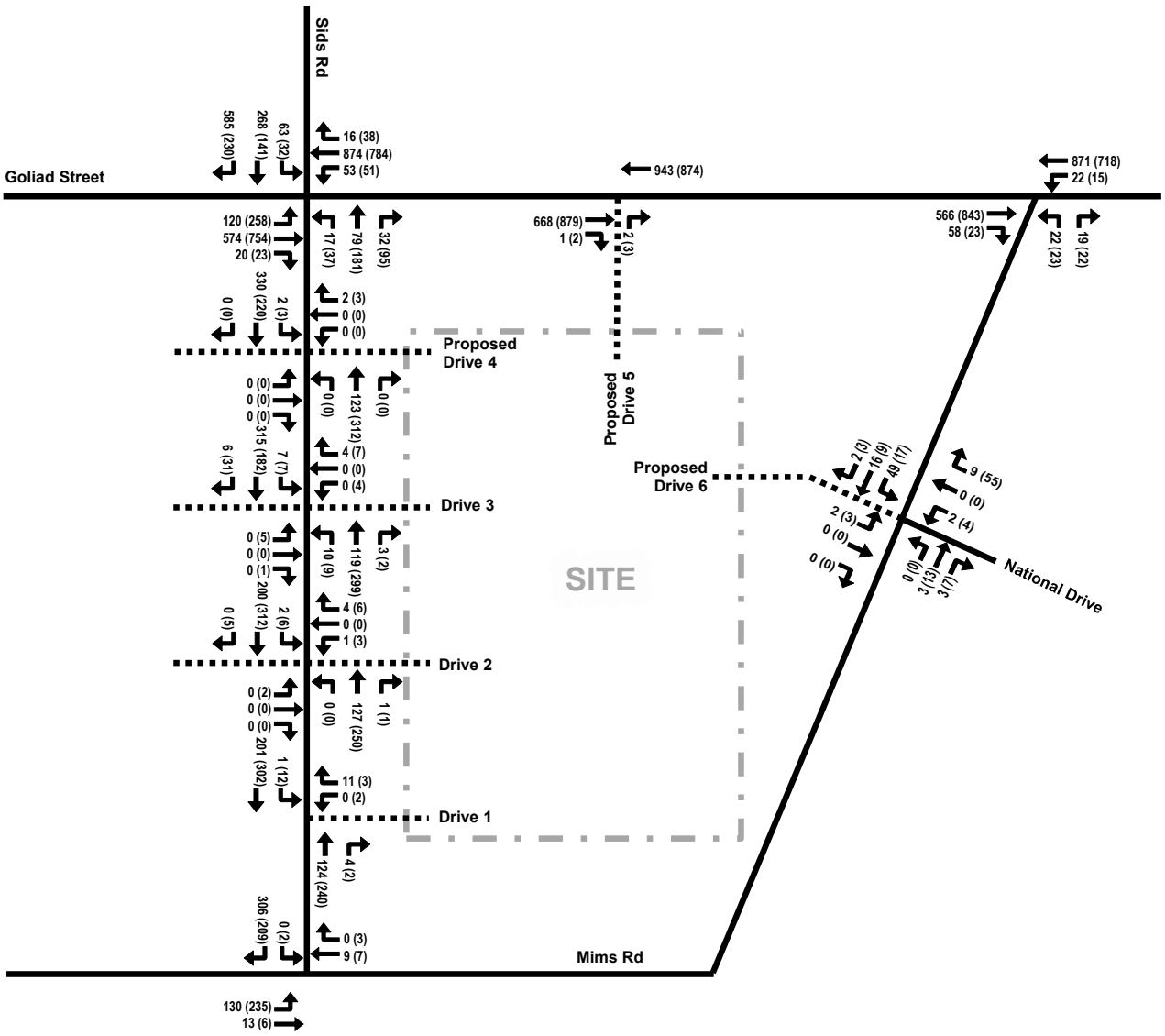

EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

Not To Scale

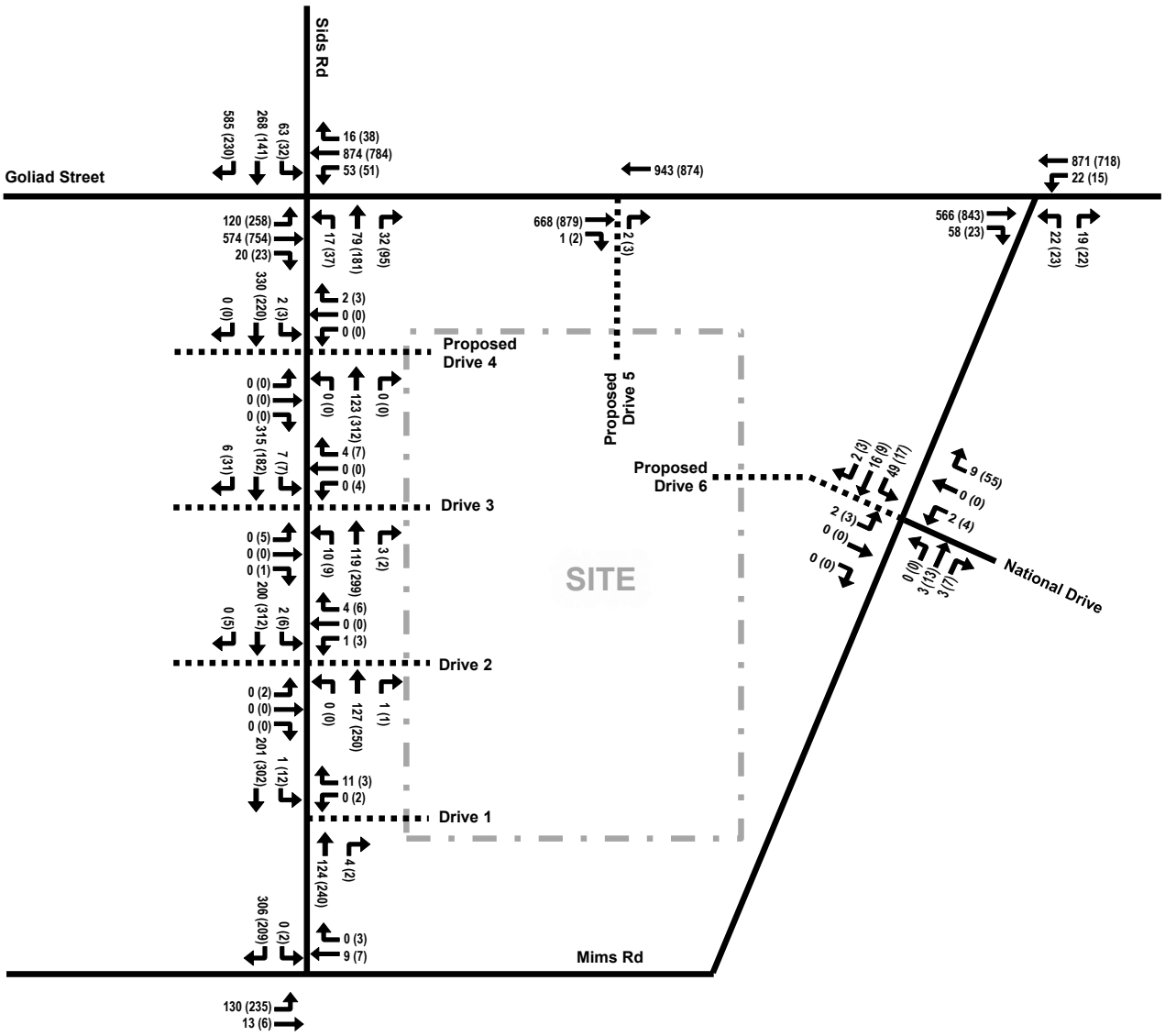

EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

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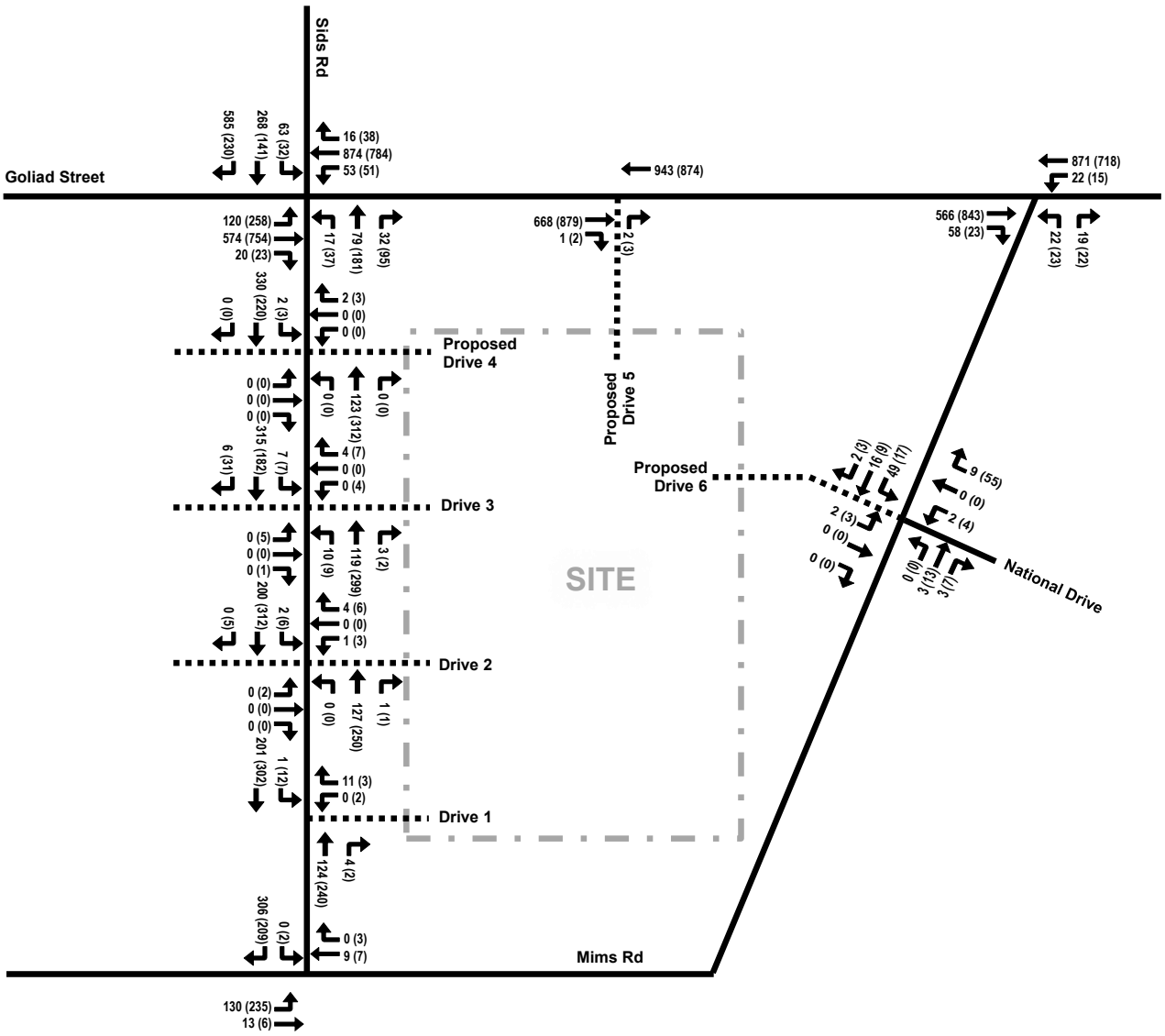

EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

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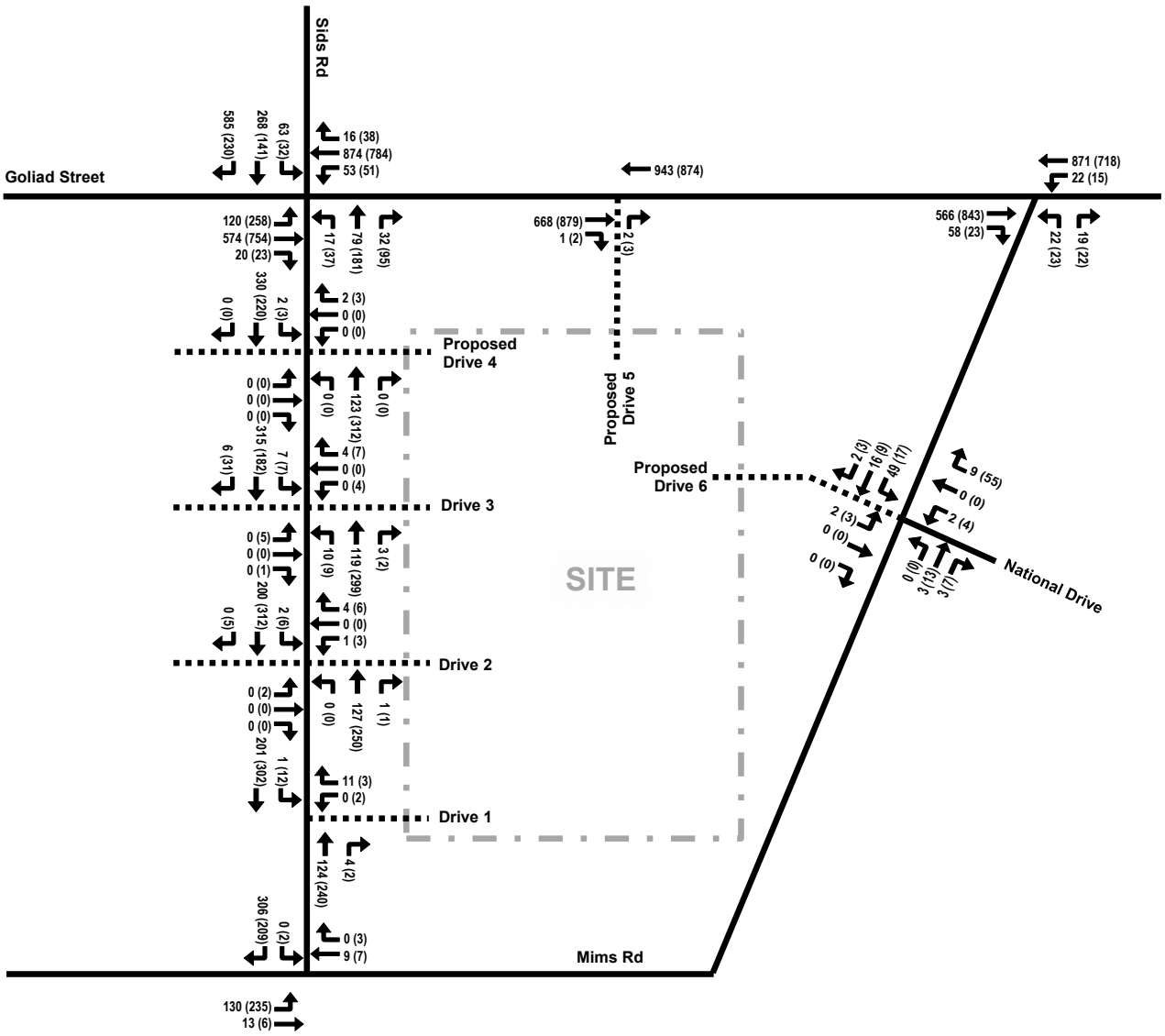


EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

Not To Scale

IV. TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn conducted a traffic operations analysis to determine potential capacity deficiencies in the 2022 & 2024study years at the study intersections. The acknowledged source for determining overall capacity is the current edition of the *Highway Capacity Manual.*

A. Analysis Methodology

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). **Table 2** shows the definition of level of service for signalized and unsignalized intersections.

Table 2 – Level of Service Definitions

Level of Service	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤10	≤10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50

Definitions provided from the Highway Capacity Manual, Special Report 209, Transportation Research Board, 2010.

Study area intersections were analyzed based on average total delay analysis for signalized and unsignalized intersections. For the unsignalized analysis, the level of service (LOS) for a two-way stop-controlled intersection is defined for each movement. Unlike signalized intersections which define LOS for each approach and for the intersection as a whole, LOS for two-way stop-controlled intersections is not defined as a whole.

Signal timings for the signalized intersection were based on the observed signal timing in the field. No timing adjustments were made in future scenarios.

The analyses assumed the lane geometry and intersection control shown in **Exhibit 3**.

The peak hour factors (PHF) for the existing traffic is known from the counts collected at the study intersections and was assumed to remain the same through the analysis. PHF for the site-generated traffic is unknown, so at new driveways it was assumed to be 0.92.

B. Analysis Results

Table 3 show the intersection operational results for the weekday AM and PM peak hours, respectively.

Table 3 – Traffic Operational Results – Weekday AM & PM Peak Hour

INTERSECTION	APPROACH	2021 Existing Traffic		2023 Background Traffic		2023 Background plus Site Traffic		2021 Existing Traffic		2023 Background Traffic		2023 Background plus Site Traffic	
		AM PEAK HOUR		AM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR		PM PEAK HOUR		PM PEAK HOUR	
		DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS
Signalized Intersection													
Sids Road & Goliad Road	EB	24.6	C	24.7	C	24.7	C	34.4	C	34.4	C	36.1	D
	WB	34.0	C	34.2	C	34.1	C	32.2	C	32.2	C	31.8	C
	NB	21.8	C	23.3	C	23.2	C	24.9	C	24.9	C	25.2	C
	SB	17.9	B	20.9	C	23.2	C	12.7	B	12.7	B	13.0	B
	Overall	**25.5**	**C**	**26.7**	**C**	**27.4**	**C**	**29.3**	**C**	**29.3**	**C**	**29.8**	**C**
Unsignalized Intersection													
Mims Road & Sids Road	EBL	7.4	A	7.5	A	7.5	A	7.6	A	7.6	A	7.7	A
	SB	9.8	A	9.9	A	10.0	A	9.3	A	9.3	A	9.3	A
Goliad Road & Mims Road	EB	8.5	A	8.5	A	8.5	A	8.4	A	8.4	A	8.4	A
	NBL	7.3	A	7.3	A	7.3	A	7.3	A	7.3	A	7.3	A
Sids Road & Drive 1	WB	9.0	A	9.0	A	9.0	A	11.3	B	11.3	B	11.0	B
	SBL	-	-	-	-	7.5	A	7.8	A	7.8	A	7.8	A
Sids Road & Drive 2	EB	0.0	A	0.0	A	0.0	A	13.7	B	13.7	B	13.9	B
	WB	9.6	A	9.8	A	9.5	A	11.4	B	11.4	B	11.1	B
	NBL	-	-	-	-	-	-	-	-	-	-	-	-
	SBL	7.5	A	7.5	A	7.5	A	7.8	A	7.8	A	7.8	A
Sids Road & Drive 3	EB	-	-	-	-	-	-	12.8	B	12.8	B	13.1	B
	WB	8.9	A	8.9	A	9.0	A	12.0	B	12.0	B	11.4	B
	NBL	8.0	A	8.0	A	8.0	A	7.7	A	7.7	A	7.7	A
	SBL	7.5	A	7.5	A	7.5	A	7.9	A	7.9	A	7.9	A
Sids Road & Drive 4	WB	-	-	-	-	9.2	A	-	-	-	-	10.3	B
	SBL	-	-	-	-	7.6	A	-	-	-	-	8.0	A
Goliad Road & Drive 5	NBT	-	-	-	-	13.6	B	-	-	-	-	16.6	C
Mims Road & National Drive / Drive 6	EBL	-	-	-	-	-	-	-	-	-	-	-	-
	WBL	-	-	-	-	-	-	7.3	A	7.3	A	7.3	A
	NBT	8.6	A	8.6	A	8.6	A	8.7	A	8.7	A	8.7	A
	SBT	-	-	-	-	9.8	A	-	-	-	-	9.4	A

- No traffic movements in this analysis scenario

C. Traffic Operations

The results in **Table 3** show the intersection operational results for the weekday AM and PM peak hours. After the site-generated traffic is added to the roadway network, each approach operates at the same LOS and negligible increase in delay during both the AM and PM peak hours. The signalized intersection of Goliad Street and Sids Road performs at LOS C in the peak hours representing favorable operations; the analysis demonstrates that the site traffic can be incorporated into the roadway network with very limited disturbances to the existing traffic flow. The existing driveways remain operating with low delays and the proposed driveways are all expected to perform with low delays at LOS B or better. These results indicate favorable operations and that the development is provided the appropriate amount of access.

D. Link Volume Analysis

The volume to capacity ratio (V/C) of Sids Road and Goliad Street was calculated for the 2022 existing traffic and the 2024 background and background plus site traffic scenarios. The daily link capacity for each roadway is taken from the NTCOG model capacity volumes assuming the rural area type, Sids Road, as a secondary arterial, has a capacity of 875 vehicles per hour per lane (vphpl). Goliad Street, as a primary arterial, has a capacity of 925 vehicles per hour per lane (vphpl).

The link analyses displayed in **Table 4** shows that Sids Road currently operates with ample capacity of LOS A/B with current traffic volumes. After the traffic from the background growth and the project site are added to the network, the roadway continues to operate at a LOS A/B through the build-out of the site in 2024. Goliad Street currently operates with acceptable capacity of LOS D in a two-lane configuration with current traffic volumes. After the traffic from the background growth and the project site are added to the network, the roadway continues to operate at a LOS D through the build-out of the site in 2024.

The site as proposed does not have a significant negative impact on the link capacities of the study roadways.

Table 4 – Link Operational Results

Analysis Year	Roadway	Segment	Number of Lanes	Capacity	Background Volume	V/C	LOS	Back+Site Volume	V/C	LOS
2022	Sids Road	Mims Road to Goliad Street	2	17,500	11,423	0.65	D	-	-	-
	Goliad Street	Sids Road to Mims Road	2	17,500	2,339	0.13	A/B	-	-	-
2024	Sids Road	Mims Road to Goliad Street	2	17,500	12,166	0.70	D	12,500	0.71	D
	Goliad Street	Sids Road to Mims Road	2	17,500	2,491	0.14	A/B	2,571	0.15	A/B

E. Right-Turn Lane Analysis

Where justified, the addition of right-turn deceleration lanes can help inbound turning vehicles separate from the through traffic, avoiding conflicts and smoothing traffic flow. The TxDOT *Access Management Manual* sets forth criteria for auxiliary lanes on TxDOT roadways. Per Table 2.3 (Auxiliary Lane Thresholds), a right-turn deceleration lane should be considered on roads with a posted speed less than or equal to 45 MPH if the projected right-turn volume into a driveway is greater than 60 vehicles per hour. **Table 5** shows the driveway locations with right-turn driveway access to the site, and how they compare with the TxDOT threshold. The high inbound volume occurs in the PM peak hour for every driveway in this analysis.

In consideration to these recommendations and TxDOT criterion, a right-turn lane is not recommended at any of the site driveways.

Table 5 – Right-Turn Lane Analysis

Right-Turn Location	Projected Maximum Peak Hour Right-Turn Volume	TxDOT Threshold (Access Management Manual, Table 2-3)	Right-Turn Lane Recommended?
Drive 1 from Sids Road	4 vph	60 vph	No
Drive 2 from Sids Road	1 vph	60 vph	No
Drive 3 from Sids Road	3 vph	60 vph	No
Drive 4 from Sids Road	0 vph	60 vph	No
Drive 5 from Goliad Street	2 vph	50 vph	No
Drive 6 from Mims Road	3 vph	60 vph	No

V.CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this report, the proposed Rayburn Electric Cooperative Campus Expansion development can be successfully incorporated into the surrounding roadway network. The proposed site driveways provide the appropriate level of access for the development. The site-generated traffic does not have a significant or disproportionate effect on the existing vehicle traffic operations.

The following recommendations should be included in the development of the site:

1. Construct Drive 4 to Goliad Street as a right-in/right-out driveway due to not meeting TxDOT driveway access spacing.

Kimley»Horn

TRAFFIC COUNTS AND HISTORICAL DATA

Lineman Building - Rockwall, Texas

Historical Link Volumes and Growth Rates

Goliad Street						
Record	**Year**	**Link Start**	**Link End**	**Source**	**24-Hour Volume**	**Annual Growth Rate**
1	2011	Lochspring Drive	SH 276	TxDOT	20,696	-
2	2013	Lochspring Drive	SH 276	TxDOT	23,328	6.2%
3	2014	Lochspring Drive	SH 276	TxDOT	21,981	-5.8%
4	2015	Lochspring Drive	SH 276	TxDOT	23,046	4.8%
5	2016	Lochspring Drive	SH 276	TxDOT	24,309	5.5%
6	2017	Lochspring Drive	SH 276	TxDOT	26,274	8.1%
7	2018	Lochspring Drive	SH 276	TxDOT	26,568	1.1%
8	2019	Lochspring Drive	SH 276	TxDOT	26,846	1.0%
9	2020	Lochspring Drive	SH 276	TxDOT	26,590	-1.0%
10	2021	Lochspring Drive	SH 276	TxDOT	27,992	5.3%
					Average Growth 2011 - 2021:	**3.0%**

Mims Road						
Record	**Year**	**Link Start**	**Link End**	**Source**	**24-Hour Volume**	**Annual Growth Rate**
1	2009	Goliad Street	Sids Road	TxDOT	1,143	-
2	2014	Goliad Street	Sids Road	TxDOT	1,353	3.4%
					Average Growth 2009 - 2014:	**3.4%**

Average Annual Growth:	**3.2%**

National Data & Surveying Services Intersection Turning Movement Count

Location: Rayburn County Electric Middle Dwy & Sids Rd
City: Rockwall
Control: No Control

Project ID: 22-470030-006
Date: 9/20/2022

Data - Totals

NS/EW Streets:	Rayburn County Electric Middle Dwy				Rayburn County Electric Middle Dwy				Sids Rd				Sids Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	0	0	0	0	0	20	0	0	1	19	0	0	40
6:45 AM	0	0	0	0	0	0	0	0	0	12	0	0	2	17	0	0	31
7:00 AM	0	0	0	0	0	0	0	0	0	14	0	0	1	27	0	0	42
7:15 AM	0	0	1	0	0	0	0	0	0	23	0	0	0	42	0	0	66
7:30 AM	0	0	0	0	0	0	0	0	0	32	0	0	1	47	0	0	80
7:45 AM	1	0	1	0	0	0	0	0	0	38	0	0	1	74	1	0	116
8:00 AM	0	0	1	0	0	0	0	0	0	23	0	0	2	93	2	0	121
8:15 AM	0	0	0	0	0	0	0	0	0	25	0	0	0	77	2	0	104
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	3	0	0	0	0	0	0	187	0	0	8	396	5	0	600
APPROACH %'s :	25.00%	0.00%	75.00%	0.00%					0.00%	100.00%	0.00%	0.00%	1.96%	96.82%	1.22%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	1	0	2	0	0	0	0	0	0	118	0	0	4	291	5	0	421
PEAK HR FACTOR :	0.250	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.776	0.000	0.000	0.500	0.782	0.625	0.000	0.870
	0.375				0.000				0.776				0.773				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	0	0	0	0	0	0	0	0	62	0	0	0	31	0	0	93
4:45 PM	0	0	2	0	1	0	0	0	0	55	0	0	0	51	0	0	109
5:00 PM	1	0	0	0	1	0	0	0	0	59	0	0	0	51	0	0	112
5:15 PM	2	0	0	0	0	0	0	0	0	59	0	0	1	42	0	0	104
5:30 PM	0	0	2	0	0	0	0	0	0	60	0	0	0	43	0	0	105
5:45 PM	0	0	0	0	1	0	0	0	0	46	0	0	0	37	0	0	84
6:00 PM	0	0	0	0	0	0	0	0	0	50	0	0	0	31	0	0	81
6:15 PM	0	0	1	0	0	0	0	0	0	43	0	0	0	37	0	0	81
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	0	5	0	3	0	0	0	0	434	0	0	1	323	0	0	769
APPROACH %'s :	37.50%	0.00%	62.50%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.31%	99.69%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	3	0	4	0	2	0	0	0	0	233	0	0	1	187	0	0	430
PEAK HR FACTOR :	0.375	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.971	0.000	0.000	0.250	0.917	0.000	0.000	0.960
	0.875				0.500				0.971				0.922				

National Data & Surveying Services Intersection Turning Movement Count

Location: Rayburn County Electric West Dwy & Sids Rd
City: Rockwall
Control: No Control

Project ID: 22-470030-005
Date: 9/20/2022

Data - Totals

NS/EW Streets:	Rayburn County Electric West Dwy				Rayburn County Electric West Dwy				Sids Rd				Sids Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	0	0	0	0	0	20	0	0	2	17	0	0	39
6:45 AM	0	0	0	0	0	0	0	0	0	12	0	0	0	17	0	0	29
7:00 AM	0	0	0	0	0	0	0	0	0	15	0	0	1	26	0	0	42
7:15 AM	0	0	0	0	0	0	0	0	0	23	4	0	2	39	0	0	68
7:30 AM	0	0	1	0	0	0	0	0	0	30	0	0	2	46	0	0	79
7:45 AM	0	0	1	0	0	0	0	0	0	37	1	0	2	72	0	0	113
8:00 AM	0	0	0	0	0	0	0	0	0	23	2	0	5	89	0	0	119
8:15 AM	0	0	0	0	0	0	0	0	0	25	0	0	0	76	0	0	101
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	2	0	0	0	0	0	0	185	7	0	14	382	0	0	590
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%					0.00%	96.35%	3.65%	0.00%	3.54%	96.46%	0.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	2	0	0	0	0	0	0	115	3	0	9	283	0	0	412
PEAK HR FACTOR :	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.777	0.375	0.000	0.450	0.795	0.000	0.000	0.866
	0.500								0.776				0.777				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	0	1	0	0	0	0	0	0	58	0	0	0	31	0	0	90
4:45 PM	0	0	0	0	0	0	0	0	0	54	0	0	0	50	0	0	104
5:00 PM	4	0	3	0	0	0	0	0	0	56	0	0	0	52	0	0	115
5:15 PM	0	0	3	0	0	0	0	0	0	56	0	0	0	44	0	0	103
5:30 PM	1	0	3	0	0	0	0	0	0	57	0	0	0	43	0	0	104
5:45 PM	0	0	0	0	0	0	0	0	0	46	0	0	0	37	0	0	83
6:00 PM	0	0	0	0	0	0	0	0	0	50	0	0	0	31	0	0	81
6:15 PM	0	0	0	0	0	0	0	0	0	44	0	0	0	38	0	0	82
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	0	10	0	0	0	0	0	0	421	0	0	0	326	0	0	762
APPROACH %'s :	33.33%	0.00%	66.67%	0.00%					0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	5	0	9	0	0	0	0	0	0	223	0	0	0	189	0	0	426
PEAK HR FACTOR :	0.313	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.978	0.000	0.000	0.000	0.909	0.000	0.000	0.926
	0.500								0.978				0.909				

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 205/S Goliad St & Mims Rd
City: Rockwall
Control: 1-Way Stop(EB)

Project ID: 22-470030-004
Date: 9/20/2022

Data - Totals

NS/EW Streets:	SR 205/S Goliad St				SR 205/S Goliad St				Mims Rd				Mims Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	2	193	0	0	0	90	9	0	8	0	0	0	0	0	0	0	302
6:45 AM	7	202	0	0	0	72	15	0	1	0	0	0	0	0	0	0	297
7:00 AM	5	216	0	0	0	94	10	0	6	0	0	0	0	0	0	0	331
7:15 AM	2	195	0	0	0	119	16	0	4	0	3	0	0	0	0	0	339
7:30 AM	10	201	0	0	0	121	10	0	8	0	3	0	0	0	0	0	353
7:45 AM	1	210	0	1	0	161	15	0	5	0	6	0	0	0	0	0	399
8:00 AM	6	210	0	0	0	128	13	0	4	0	4	0	0	0	0	0	365
8:15 AM	5	171	0	0	0	137	10	0	8	0	5	0	0	0	0	0	336
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	38	1598	0	1	0	922	98	0	44	0	21	0	0	0	0	0	2722
APPROACH %'s :	2.32%	97.62%	0.00%	0.06%	0.00%	90.39%	9.61%	0.00%	67.69%	0.00%	32.31%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	19	816	0	1	0	529	54	0	21	0	16	0	0	0	0	0	1456
PEAK HR FACTOR :	0.475	0.971	0.000	0.250	0.000	0.821	0.844	0.000	0.656	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.912
		0.968				0.828				0.841							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	3	159	0	0	0	194	10	0	7	0	5	0	0	0	0	0	378
4:45 PM	2	154	0	0	0	198	2	0	10	0	7	0	0	0	0	0	373
5:00 PM	2	186	0	0	0	177	5	0	22	0	4	0	0	0	0	0	396
5:15 PM	2	188	0	0	0	165	3	0	7	0	4	0	0	0	0	0	369
5:30 PM	4	155	0	0	0	202	6	0	5	0	10	0	0	0	0	0	382
5:45 PM	2	152	0	0	0	210	9	0	5	0	1	0	0	0	0	0	379
6:00 PM	3	176	0	0	0	211	4	0	5	0	3	0	0	0	0	0	402
6:15 PM	1	144	0	0	0	202	4	0	2	0	0	0	0	0	0	0	353
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	19	1314	0	0	0	1559	43	0	63	0	34	0	0	0	0	0	3032
APPROACH %'s :	1.43%	98.57%	0.00%	0.00%	0.00%	97.32%	2.68%	0.00%	64.95%	0.00%	35.05%	0.00%					
PEAK HR :	05:15 PM - 06:15 PM																TOTAL
PEAK HR VOL :	11	671	0	0	0	788	22	0	22	0	18	0	0	0	0	0	1532
PEAK HR FACTOR :	0.688	0.892	0.000	0.000	0.000	0.934	0.611	0.000	0.786	0.000	0.450	0.000	0.000	0.000	0.000	0.000	0.953
		0.897				0.925				0.667							

National Data & Surveying Services Intersection Turning Movement Count

Location: National Dr & Mims Rd
City: Rockwall
Control: 1-Way Stop(NB)

Project ID: 22-470030-003
Date: 9/27/2022

Data - Totals

NS/EW Streets:	National Dr				National Dr				Mims Rd				Mims Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	5	0	0	0	0	0	0	0	3	0	8	0	0	0	16
6:45 AM	0	0	3	0	0	0	0	0	0	0	0	0	11	0	0	0	14
7:00 AM	1	0	5	0	0	0	0	0	0	0	1	0	5	0	0	0	12
7:15 AM	0	0	4	0	0	0	0	0	0	0	1	0	2	0	0	0	7
7:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4
7:45 AM	1	0	2	0	0	0	0	0	0	0	1	0	5	2	0	0	11
8:00 AM	0	0	2	0	0	0	0	0	0	0	2	0	5	8	0	0	17
8:15 AM	0	0	4	0	0	0	0	0	0	3	0	0	7	5	0	1	20
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	0	25	0	0	0	0	0	0	3	8	0	46	15	0	1	101
APPROACH %'s :	10.71%	0.00%	89.29%	0.00%					0.00%	27.27%	72.73%	0.00%	74.19%	24.19%	0.00%	1.61%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	2	0	8	0	0	0	0	0	0	3	3	0	20	15	0	1	52
PEAK HR FACTOR :	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.375	0.000	0.714	0.469	0.000	0.250	0.650
	0.625								0.500				0.692				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	1	0	10	0	0	0	0	0	0	5	3	0	3	3	0	0	25
4:45 PM	0	0	7	0	0	0	0	0	0	4	2	0	3	2	0	0	18
5:00 PM	1	0	14	0	0	0	0	0	0	1	2	0	5	2	0	0	25
5:15 PM	1	0	8	0	0	0	0	0	0	2	0	0	5	1	0	0	17
5:30 PM	0	0	3	0	0	0	0	0	0	5	2	0	6	2	0	0	18
5:45 PM	0	0	2	0	0	0	0	0	0	3	1	0	7	0	0	0	13
6:00 PM	1	0	7	0	0	0	0	0	0	0	0	0	0	2	0	0	10
6:15 PM	0	0	1	0	0	0	0	0	0	0	1	0	1	1	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	0	52	0	0	0	0	0	0	20	11	0	30	13	0	0	130
APPROACH %'s :	7.14%	0.00%	92.86%	0.00%					0.00%	64.52%	35.48%	0.00%	69.77%	30.23%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	3	0	39	0	0	0	0	0	0	12	7	0	16	8	0	0	85
PEAK HR FACTOR :	0.750	0.000	0.696	0.000	0.000	0.000	0.000	0.000	0.000	0.600	0.583	0.000	0.800	0.667	0.000	0.000	0.850
	0.700								0.594				0.857				

National Data & Surveying Services Intersection Turning Movement Count

Location: Mims Rd & Sids Rd
City: Rockwall
Control: 1-Way Yield(WB)

Project ID: 22-470030-002
Date: 9/20/2022

Data - Totals

NS/EW Streets:	Mims Rd				Mims Rd				Sids Rd				Sids Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	21	1	0	0	0	0	0	0	0	0	19	0	41
6:45 AM	0	0	0	0	13	0	0	0	0	0	0	0	0	0	16	0	29
7:00 AM	0	0	0	0	15	3	0	0	0	0	0	0	0	0	26	0	44
7:15 AM	0	1	1	0	25	1	0	0	0	0	0	0	0	0	39	0	67
7:30 AM	0	2	0	0	30	3	0	0	0	0	0	0	0	0	46	0	81
7:45 AM	0	0	0	0	38	2	0	0	0	0	0	0	0	0	72	0	112
8:00 AM	0	3	0	0	25	3	0	0	0	0	0	0	0	0	89	0	120
8:15 AM	0	2	0	0	27	4	0	0	0	0	0	0	0	0	77	0	110
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	8	1	0	194	17	0	0	0	0	0	0	0	0	384	0	604
APPROACH %'s :	0.00%	88.89%	11.11%	0.00%	91.94%	8.06%	0.00%	0.00%					0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	7	0	0	120	12	0	0	0	0	0	0	0	0	284	0	423
PEAK HR FACTOR :	0.000	0.583	0.000	0.000	0.789	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.798	0.000	0.881
	0.583				0.825								0.798				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	0	0	0	59	3	0	0	0	0	0	0	0	0	31	0	93
4:45 PM	0	1	1	0	51	4	0	0	0	0	0	0	0	0	49	0	106
5:00 PM	0	2	1	0	55	0	0	0	0	0	0	0	2	0	55	0	115
5:15 PM	0	2	1	0	53	1	0	0	0	0	0	0	0	0	43	0	100
5:30 PM	0	3	0	0	58	1	0	0	0	0	0	0	0	0	45	0	107
5:45 PM	0	0	0	0	47	1	0	0	0	0	0	0	0	0	37	1	86
6:00 PM	0	0	1	0	46	1	0	0	0	0	0	0	0	0	31	0	79
6:15 PM	0	3	0	0	46	1	0	0	0	0	0	0	0	0	37	0	87
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	11	4	0	415	12	0	0	0	0	0	0	2	0	328	1	773
APPROACH %'s :	0.00%	73.33%	26.67%	0.00%	97.19%	2.81%	0.00%	0.00%					0.60%	0.00%	99.09%	0.30%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	8	3	0	217	6	0	0	0	0	0	0	2	0	192	0	428
PEAK HR FACTOR :	0.000	0.667	0.750	0.000	0.935	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.873	0.000	0.930
	0.917				0.945								0.851				

National Data & Surveying Services Intersection Turning Movement Count

Location: Rayburn County Electric East Dwy & Sids Rd
City: Rockwall
Control: No Control

Project ID: 22-470030-007
Date: 9/20/2022

Data - Totals

NS/EW Streets:	Rayburn County Electric East Dwy				Rayburn County Electric East Dwy				Sids Rd				Sids Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	0	0	0	0	2	29	0	0	1	15	1	0	48
6:45 AM	0	0	0	0	0	0	0	0	0	16	1	0	1	18	0	0	36
7:00 AM	0	0	0	0	0	0	0	0	0	20	0	0	2	29	1	0	52
7:15 AM	0	0	2	0	0	0	0	0	0	24	0	0	0	41	1	0	68
7:30 AM	0	0	1	0	0	0	0	0	0	32	0	0	1	46	3	0	83
7:45 AM	0	0	0	0	0	0	0	0	0	37	2	0	3	74	2	0	118
8:00 AM	0	0	0	0	0	0	0	0	1	23	0	0	1	96	0	0	121
8:15 AM	0	0	0	0	0	0	0	0	8	18	0	0	0	78	1	0	105
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	3	0	0	0	0	0	11	199	3	0	9	397	9	0	631
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%					5.16%	93.43%	1.41%	0.00%	2.17%	95.66%	2.17%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	1	0	0	0	0	0	9	110	2	0	5	294	6	0	427
PEAK HR FACTOR :	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.281	0.743	0.250	0.000	0.417	0.766	0.500	0.000	0.882
	0.250				0.000				0.776				0.786				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	0	1	0	0	0	0	0	7	60	0	0	0	30	6	0	104
4:45 PM	3	0	0	0	0	0	0	0	3	69	0	0	2	45	14	0	136
5:00 PM	0	0	2	0	0	0	0	0	4	77	0	0	0	42	10	0	135
5:15 PM	0	0	0	0	4	0	0	0	0	70	0	0	1	38	4	0	117
5:30 PM	1	0	1	0	1	1	0	0	1	62	1	0	0	42	1	0	111
5:45 PM	0	0	1	0	0	0	0	0	0	50	0	0	0	37	2	0	90
6:00 PM	1	0	1	0	2	0	0	0	0	52	0	0	0	30	4	0	90
6:15 PM	0	0	0	0	0	0	0	0	0	46	0	0	0	36	1	0	83
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	0	6	0	7	1	0	0	15	486	1	0	3	300	42	0	866
APPROACH %'s :	45.45%	0.00%	54.55%	0.00%	87.50%	12.50%	0.00%	0.00%	2.99%	96.81%	0.20%	0.00%	0.87%	86.96%	12.17%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	4	0	3	0	5	1	0	0	8	278	1	0	3	167	29	0	499
PEAK HR FACTOR :	0.333	0.000	0.375	0.000	0.313	0.250	0.000	0.000	0.500	0.903	0.250	0.000	0.375	0.928	0.518	0.000	0.917
	0.583				0.375				0.886				0.816				

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 205/S Goliad St & SR 276/Sids Rd
City: Rockwall
Control: Signalized

Project ID: 22-470030-001
Date: 9/20/2022

Data - Totals

NS/EW Streets: SR 205/S Goliad St | SR 205/S Goliad St | SR 276/Sids Rd | SR 276/Sids Rd

AM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 AM	0	13	1	0	4	14	1	0	0	1	1	0	0	0	3	0	38
12:15 AM	0	6	1	0	7	17	0	1	0	0	1	0	0	1	1	0	35
12:30 AM	0	4	2	0	3	18	0	0	1	1	0	0	0	1	5	0	35
12:45 AM	0	4	0	0	0	7	0	0	0	0	0	0	0	0	2	0	13
1:00 AM	0	5	0	0	2	6	0	0	0	0	0	0	1	0	1	0	15
1:15 AM	0	8	0	0	4	6	0	0	0	1	0	0	0	0	2	0	21
1:30 AM	0	6	0	0	0	5	1	0	0	0	1	0	0	0	2	0	15
1:45 AM	0	3	0	0	1	8	1	0	0	1	0	0	1	1	3	0	19
2:00 AM	0	7	0	0	1	2	1	0	0	0	1	0	0	0	2	0	14
2:15 AM	0	7	0	0	0	5	0	0	0	0	0	0	0	0	1	0	13
2:30 AM	0	5	0	0	3	6	0	0	0	0	0	0	2	0	0	0	16
2:45 AM	0	9	0	0	1	4	0	0	0	0	0	0	0	0	1	0	15
3:00 AM	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0	0	9
3:15 AM	0	6	0	0	0	2	0	0	0	0	0	0	0	1	2	0	11
3:30 AM	1	7	0	0	2	3	0	0	0	0	0	0	0	0	0	0	13
3:45 AM	0	12	0	0	0	2	0	0	0	1	0	0	0	0	2	0	17
4:00 AM	0	20	0	0	1	9	0	0	0	0	0	0	0	0	4	0	34
4:15 AM	0	24	0	0	0	4	1	0	0	0	0	0	1	1	6	0	37
4:30 AM	0	21	0	0	1	16	1	0	0	0	0	0	0	0	8	0	47
4:45 AM	1	42	0	0	3	12	1	0	0	1	1	0	0	4	13	0	78
5:00 AM	3	54	1	0	3	11	4	0	1	1	1	0	1	2	7	0	89
5:15 AM	2	68	0	0	2	26	2	0	1	2	0	0	2	5	21	0	131
5:30 AM	3	94	1	0	5	28	2	0	1	3	2	0	1	3	15	0	158
5:45 AM	2	111	0	0	3	36	14	0	1	1	1	0	3	13	24	0	209
6:00 AM	3	145	1	0	5	29	5	0	4	5	5	0	4	9	41	0	256
6:15 AM	3	161	2	0	6	45	5	0	3	6	11	0	7	10	39	0	298
6:30 AM	6	210	4	0	9	84	4	0	1	13	14	0	10	9	60	0	424
6:45 AM	6	216	3	0	13	68	3	0	2	7	9	0	14	16	79	0	436
7:00 AM	13	241	3	0	15	115	3	0	3	12	3	0	7	16	95	0	526
7:15 AM	12	212	8	0	20	111	2	0	1	13	13	0	13	34	105	0	544
7:30 AM	9	213	5	0	27	134	5	0	2	23	7	0	13	39	121	0	598
7:45 AM	9	208	2	0	30	130	2	0	4	24	12	0	18	68	129	0	636
8:00 AM	19	211	4	0	32	132	4	1	2	16	4	0	17	82	148	0	672
8:15 AM	11	188	4	0	24	142	6	1	3	8	7	0	11	61	151	0	617
8:30 AM	19	148	7	0	25	109	4	0	5	15	9	0	19	49	132	0	541
8:45 AM	17	173	1	0	32	142	6	0	18	14	8	0	9	42	122	0	584
9:00 AM	9	207	9	0	27	113	3	0	7	14	11	0	7	32	99	0	538
9:15 AM	10	172	2	0	35	117	6	0	7	10	8	0	6	26	89	0	488
9:30 AM	3	162	7	0	52	133	6	0	7	15	8	0	3	28	68	0	492
9:45 AM	5	170	3	0	28	103	5	0	1	16	7	0	1	29	60	0	428
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	166	3577	71	0	426	1959	98	3	75	224	145	0	171	582	1663	0	9160
APPROACH %'s :	4.35%	93.79%	1.86%	0.00%	17.14%	78.80%	3.94%	0.12%	16.89%	50.45%	32.66%	0.00%	7.08%	24.09%	68.83%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	48	820	15	0	113	538	17	2	11	71	30	0	59	250	549	0	2523
PEAK HR FACTOR :	0.632	0.962	0.750	0.000	0.883	0.947	0.708	0.500	0.688	0.740	0.625	0.000	0.819	0.762	0.909	0.000	0.939
	0.943				0.968				0.700				0.868				

NOON

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
10:00 AM	8	192	4	0	23	101	1	0	4	8	10	0	4	14	59	0	428
10:15 AM	8	164	0	0	25	102	6	0	4	10	8	0	4	19	56	0	406
10:30 AM	10	147	4	0	28	124	5	0	2	23	17	0	3	17	60	0	440
10:45 AM	3	163	1	0	25	138	0	0	5	20	10	0	6	17	60	0	448
11:00 AM	7	152	3	0	28	111	4	0	3	14	12	0	7	20	60	0	421
11:15 AM	3	173	3	0	45	147	9	0	3	20	2	0	2	14	52	0	473
11:30 AM	14	171	6	0	35	144	4	0	6	18	16	0	4	17	48	0	483
11:45 AM	4	160	7	0	37	138	3	0	11	17	9	0	5	25	68	0	484
12:00 PM	4	153	5	0	36	188	10	0	8	14	12	0	4	12	72	0	518
12:15 PM	10	193	2	0	38	141	7	0	5	20	18	0	4	26	70	0	534
12:30 PM	11	139	3	0	38	156	5	0	4	25	15	0	8	26	72	1	503
12:45 PM	10	140	6	0	40	140	10	0	8	30	17	0	2	23	53	0	479
1:00 PM	12	146	2	0	43	148	8	0	4	20	9	0	5	15	73	0	485
1:15 PM	10	128	2	0	47	179	10	0	8	23	16	0	3	15	55	0	496
1:30 PM	4	166	5	0	47	147	12	0	4	24	21	0	11	27	56	1	525
1:45 PM	6	144	4	0	39	171	15	0	0	16	16	0	7	24	54	0	496
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	124	2531	57	0	574	2275	109	0	79	302	208	0	79	311	968	2	7619
APPROACH %'s :	4.57%	93.33%	2.10%	0.00%	19.41%	76.91%	3.68%	0.00%	13.41%	51.27%	35.31%	0.00%	5.81%	22.87%	71.18%	0.15%	
PEAK HR :	11:45 AM - 12:45 PM																TOTAL
PEAK HR VOL :	29	645	17	0	149	623	25	0	28	76	54	0	21	89	282	1	2039
PEAK HR FACTOR :	0.659	0.835	0.607	0.000	0.980	0.828	0.625	0.000	0.636	0.760	0.750	0.000	0.656	0.856	0.979	0.250	0.955
	0.843				0.851				0.898				0.918				

PM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:00 PM	10	130	11	0	46	171	7	1	6	27	12	0	3	31	48	0	503
2:15 PM	5	147	8	0	39	159	3	0	7	35	27	0	3	17	52	0	502
2:30 PM	10	127	5	0	49	164	1	0	4	34	18	0	4	18	60	0	494
2:45 PM	13	165	5	0	56	179	2	0	5	24	16	0	7	17	62	0	551
3:00 PM	11	188	5	0	52	166	3	0	2	19	9	0	6	31	47	0	539
3:15 PM	11	136	4	0	65	161	2	0	2	28	17	0	7	22	46	0	501
3:30 PM	6	150	5	0	33	186	4	0	3	21	17	0	6	23	46	0	500
3:45 PM	9	163	9	0	52	156	9	0	4	23	18	0	12	29	53	0	537
4:00 PM	10	142	7	0	58	193	3	0	5	38	21	0	12	25	37	0	551
4:15 PM	13	145	14	0	55	185	3	0	3	21	24	0	8	20	51	0	542
4:30 PM	10	152	12	0	52	191	4	0	2	40	23	0	18	26	49	0	579
4:45 PM	22	178	6	0	53	176	3	0	7	31	29	0	6	40	48	0	599
5:00 PM	13	199	15	0	63	182	6	0	9	43	23	0	6	34	47	0	640
5:15 PM	7	183	8	0	61	141	3	1	9	55	16	0	9	27	52	0	572
5:30 PM	3	176	7	0	65	207	6	0	4	37	21	0	9	28	69	0	632
5:45 PM	9	148	9	0	60	181	2	0	5	29	19	0	26	27	58	0	573
6:00 PM	7	176	10	0	59	206	2	0	5	29	26	0	10	26	50	1	607
6:15 PM	6	156	4	0	48	201	3	0	1	24	22	0	13	23	52	0	553
6:30 PM	9	166	10	0	52	204	1	0	4	31	21	0	9	20	51	0	578
6:45 PM	3	151	13	0	54	221	1	0	3	23	14	0	11	22	35	0	551
7:00 PM	7	136	9	0	48	218	2	0	4	16	17	0	10	15	27	0	509
7:15 PM	9	128	4	0	37	178	1	0	0	15	22	0	11	12	33	0	450
7:30 PM	5	112	6	0	39	209	0	0	1	18	25	0	11	7	32	0	465
7:45 PM	4	103	4	0	35	175	2	0	0	12	11	0	7	9	34	1	397
8:00 PM	5	102	8	0	48	165	2	0	0	12	13	0	5	8	30	0	398
8:15 PM	1	111	5	0	36	162	0	0	0	18	15	0	5	7	23	0	383
8:30 PM	5	108	5	0	37	176	0	0	2	16	12	0	5	6	21	0	393
8:45 PM	2	85	4	0	44	144	0	0	2	12	18	0	5	4	8	0	328
9:00 PM	0	67	3	0	36	114	0	0	1	4	5	0	2	3	11	0	246
9:15 PM	0	41	2	0	30	91	0	0	2	5	10	0	2	6	14	1	204
9:30 PM	2	67	4	0	21	90	1	0	0	5	3	0	2	0	13	0	208
9:45 PM	0	37	0	0	15	70	1	0	0	5	1	0	1	8	7	0	145
10:00 PM	2	39	0	0	10	65	0	0	0	4	3	0	3	1	9	0	136
10:15 PM	2	31	1	0	16	66	1	1	1	3	1	0	2	2	8	0	135
10:30 PM	2	34	7	0	12	41	1	0	2	5	1	0	4	2	7	0	118
10:45 PM	0	21	1	0	14	26	0	0	0	1	5	0	1	1	6	0	76
11:00 PM	0	15	2	0	8	25	0	0	0	1	1	0	3	1	7	0	63
11:15 PM	0	10	0	0	7	25	0	1	0	2	1	0	0	1	2	0	49
11:30 PM	0	8	1	0	7	19	0	0	0	0	0	0	0	0	2	0	37
11:45 PM	0	6	0	0	6	8	0	0	0	0	0	0	0	0	2	0	22
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	233	4439	233	0	1578	5697	79	4	105	766	557	0	264	599	1309	3	15866
APPROACH %'s :	4.75%	90.50%	4.75%	0.00%	21.45%	77.43%	1.07%	0.05%	7.35%	53.64%	39.01%	0.00%	12.14%	27.54%	60.18%	0.14%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	45	736	36	0	242	706	18	1	29	166	89	0	30	129	216	0	2443
PEAK HR FACTOR :	0.511	0.925	0.600	0.000	0.931	0.853	0.750	0.250	0.806	0.755	0.767	0.000	0.833	0.806	0.783	0.000	0.954
	0.900				0.870				0.888				0.884				

Kimley»Horn

Synchro™ Output - 2022 Existing Traffic

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	2	113	538	17	48	820	15	11	71	30	59	250
Future Volume (vph)	2	113	538	17	48	820	15	11	71	30	59	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.956			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1781	0	1770	1863
Flt Permitted		0.127			0.328			0.510			0.687	
Satd. Flow (perm)	0	237	3539	1583	611	3539	1583	950	1781	0	1280	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		18			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			908			822
Travel Time (s)			7.7			15.3			20.6			18.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	2	120	572	18	51	872	16	12	76	32	63	266
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	572	18	51	872	16	12	108	0	63	266
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

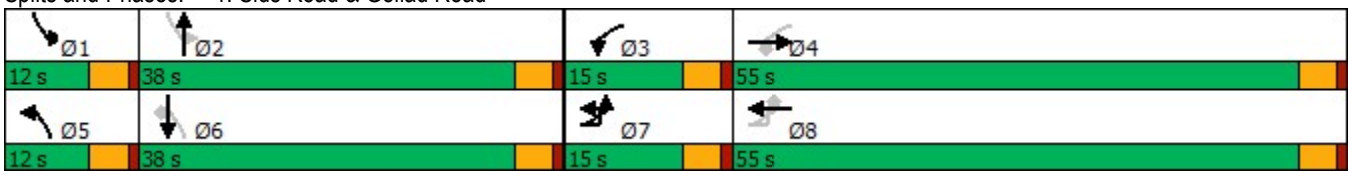
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	549
Future Volume (vph)	549
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	326
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.94
Adj. Flow (vph)	584
Shared Lane Traffic (%)	
Lane Group Flow (vph)	584
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	CI+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		39.3	34.9	34.9	40.5	30.3	30.3	42.3	34.2		39.7	41.1
Actuated g/C Ratio		0.41	0.36	0.36	0.42	0.31	0.31	0.44	0.36		0.41	0.43
v/c Ratio		0.51	0.45	0.03	0.15	0.78	0.03	0.03	0.17		0.11	0.33
Control Delay		23.3	25.7	0.1	15.8	35.7	0.1	17.9	22.2		18.2	22.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		23.3	25.7	0.1	15.8	35.7	0.1	17.9	22.2		18.2	22.8
LOS		C	C	A	B	D	A	B	C		B	C
Approach Delay			24.6			34.0			21.8			17.9
Approach LOS			C			C			C			B
Queue Length 50th (ft)		44	150	0	18	264	0	4	39		22	103
Queue Length 95th (ft)		77	203	0	38	338	0	17	91		55	231
Internal Link Dist (ft)			425			933			828			742
Turn Bay Length (ft)		285			185		265	285			330	
Base Capacity (vph)		272	1897	892	400	1897	892	484	644		569	796
Starvation Cap Reductn		0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio		0.45	0.30	0.02	0.13	0.46	0.02	0.02	0.17		0.11	0.33

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 96.2			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 25.5		Intersection LOS: C	
Intersection Capacity Utilization 82.2%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	41.1
Actuated g/C Ratio	0.43
v/c Ratio	0.68
Control Delay	15.7
Queue Delay	0.0
Total Delay	15.7
LOS	B
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	114
Queue Length 95th (ft)	#379
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	863
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.68

Intersection Summary

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	120	12	8	0	0	284
Future Vol, veh/h	120	12	8	0	0	284
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	136	14	9	0	0	323

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	9	0	-	0	295	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	286	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1611	-	-	-	696	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	763	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1611	-	-	-	637	1073
Mov Cap-2 Maneuver	-	-	-	-	637	-
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	763	-

Approach	EB	WB	SB
HCM Control Delay, s	6.8	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1611	-	-	-	1073
HCM Lane V/C Ratio	0.085	-	-	-	0.301
HCM Control Delay (s)	7.4	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	1.3

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	9	115	3	0	189
Future Vol, veh/h	0	9	115	3	0	189
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	131	3	0	215

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	348	133	0	0	134	0
Stage 1	133	-	-	-	-	-
Stage 2	215	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	649	916	-	-	1451	-
Stage 1	893	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	649	916	-	-	1451	-
Mov Cap-2 Maneuver	649	-	-	-	-	-
Stage 1	893	-	-	-	-	-
Stage 2	821	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	916	1451	-
HCM Lane V/C Ratio	-	-	0.011	-	-
HCM Control Delay (s)	-	-	9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	1	0	2	0	118	0	1	187	0
Future Vol, veh/h	0	0	0	1	0	2	0	118	0	1	187	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	1	0	2	0	136	0	1	215	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	354	353	215	353	353	136	215	0	0	136	0	0
Stage 1	217	217	-	136	136	-	-	-	-	-	-	-
Stage 2	137	136	-	217	217	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	601	572	825	602	572	913	1355	-	-	1448	-	-
Stage 1	785	723	-	867	784	-	-	-	-	-	-	-
Stage 2	866	784	-	785	723	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	599	571	825	601	571	913	1355	-	-	1448	-	-
Mov Cap-2 Maneuver	599	571	-	601	571	-	-	-	-	-	-	-
Stage 1	785	722	-	867	784	-	-	-	-	-	-	-
Stage 2	864	784	-	784	722	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.6	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1355	-	-	-	778	1448	-	-
HCM Lane V/C Ratio	-	-	-	-	0.004	0.001	-	-
HCM Control Delay (s)	0	-	-	0	9.6	7.5	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	1	9	110	2	5	294	6
Future Vol, veh/h	0	0	0	0	0	1	9	110	2	5	294	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	1	10	125	2	6	334	7

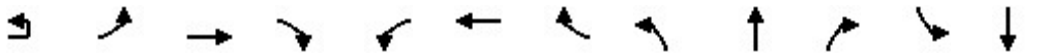
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	497	497	338	496	499	126	341	0	0	127	0	0
Stage 1	350	350	-	146	146	-	-	-	-	-	-	-
Stage 2	147	147	-	350	353	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	483	475	704	484	473	924	1218	-	-	1459	-	-
Stage 1	666	633	-	857	776	-	-	-	-	-	-	-
Stage 2	856	775	-	666	631	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	477	468	704	479	466	924	1218	-	-	1459	-	-
Mov Cap-2 Maneuver	477	468	-	479	466	-	-	-	-	-	-	-
Stage 1	660	630	-	849	769	-	-	-	-	-	-	-
Stage 2	847	768	-	663	628	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.9	0.6	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1218	-	-	-	924	1459	-	-
HCM Lane V/C Ratio	0.008	-	-	-	0.001	0.004	-	-
HCM Control Delay (s)	8	0	-	0	8.9	7.5	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Future Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.948			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1766	0	1770	1863
Flt Permitted		0.155			0.223			0.646			0.458	
Satd. Flow (perm)	0	289	3539	1583	415	3539	1583	1203	1766	0	853	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		22			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			908			822
Travel Time (s)			7.7			15.3			20.6			18.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1	272	792	20	51	825	40	33	186	100	34	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	273	792	20	51	825	40	33	286	0	34	144
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	230
Future Volume (vph)	230
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	242
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Adj. Flow (vph)	242
Shared Lane Traffic (%)	
Lane Group Flow (vph)	242
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

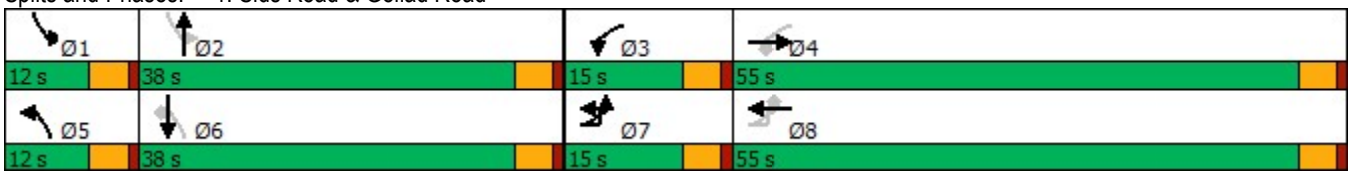


Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		39.1	37.0	37.0	41.3	28.4	28.4	38.0	34.1		38.0	34.1
Actuated g/C Ratio		0.42	0.40	0.40	0.44	0.30	0.30	0.41	0.37		0.41	0.37
v/c Ratio		0.94	0.56	0.03	0.18	0.77	0.07	0.06	0.43		0.08	0.21
Control Delay		62.5	25.7	0.1	15.9	34.8	0.3	17.4	25.8		17.6	24.7
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		62.5	25.7	0.1	15.9	34.8	0.3	17.4	25.8		17.6	24.7
LOS		E	C	A	B	C	A	B	C		B	C
Approach Delay			34.4			32.2			24.9			12.7
Approach LOS			C			C			C			B
Queue Length 50th (ft)		112	220	0	17	245	0	11	126		11	63
Queue Length 95th (ft)		#287	294	0	38	317	0	32	234		33	127
Internal Link Dist (ft)			425			933			828			742
Turn Bay Length (ft)		285			185		265	285			330	
Base Capacity (vph)		291	1951	915	345	1951	915	539	659		424	681
Starvation Cap Reductn		0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio		0.94	0.41	0.02	0.15	0.42	0.04	0.06	0.43		0.08	0.21

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 93.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 29.3		Intersection LOS: C	
Intersection Capacity Utilization 70.3%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	34.1
Actuated g/C Ratio	0.37
v/c Ratio	0.33
Control Delay	4.9
Queue Delay	0.0
Total Delay	4.9
LOS	A
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	56
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	732
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.33

Intersection Summary

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	231	6	7	3	2	205
Future Vol, veh/h	231	6	7	3	2	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	248	6	8	3	2	220

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	11	0	-	0	512	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	502	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1608	-	-	-	522	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	608	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1608	-	-	-	441	1071
Mov Cap-2 Maneuver	-	-	-	-	441	-
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	608	-

Approach	EB	WB	SB
HCM Control Delay, s	7.5	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1608	-	-	-	1056
HCM Lane V/C Ratio	0.154	-	-	-	0.211
HCM Control Delay (s)	7.6	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.5	-	-	-	0.8

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	238	0	10	302
Future Vol, veh/h	2	2	238	0	10	302
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	259	0	11	328

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	609	259	0	0	259	0
Stage 1	259	-	-	-	-	-
Stage 2	350	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	458	780	-	-	1306	-
Stage 1	784	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	453	780	-	-	1306	-
Mov Cap-2 Maneuver	453	-	-	-	-	-
Stage 1	784	-	-	-	-	-
Stage 2	706	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	573	1306	-
HCM Lane V/C Ratio	-	-	0.008	0.008	-
HCM Control Delay (s)	-	-	11.3	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	0	3	0	4	0	248	0	4	310	5
Future Vol, veh/h	2	0	0	3	0	4	0	248	0	4	310	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	3	0	4	0	258	0	4	323	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	594	592	326	592	594	258	328	0	0	258	0	0
Stage 1	334	334	-	258	258	-	-	-	-	-	-	-
Stage 2	260	258	-	334	336	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	417	419	715	418	418	781	1232	-	-	1307	-	-
Stage 1	680	643	-	747	694	-	-	-	-	-	-	-
Stage 2	745	694	-	680	642	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	414	417	715	417	416	781	1232	-	-	1307	-	-
Mov Cap-2 Maneuver	414	417	-	417	416	-	-	-	-	-	-	-
Stage 1	680	640	-	747	694	-	-	-	-	-	-	-
Stage 2	741	694	-	677	639	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	11.4	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1232	-	-	414	568	1307	-	-
HCM Lane V/C Ratio	-	-	-	0.005	0.013	0.003	-	-
HCM Control Delay (s)	0	-	-	13.7	11.4	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	1	4	0	3	9	296	1	3	178	31
Future Vol, veh/h	5	0	1	4	0	3	9	296	1	3	178	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	1	4	0	3	10	322	1	3	193	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	560	559	210	560	576	323	227	0	0	323	0	0
Stage 1	216	216	-	343	343	-	-	-	-	-	-	-
Stage 2	344	343	-	217	233	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	439	438	830	439	428	718	1341	-	-	1237	-	-
Stage 1	786	724	-	672	637	-	-	-	-	-	-	-
Stage 2	671	637	-	785	712	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	433	433	830	435	423	718	1341	-	-	1237	-	-
Mov Cap-2 Maneuver	433	433	-	435	423	-	-	-	-	-	-	-
Stage 1	779	722	-	666	631	-	-	-	-	-	-	-
Stage 2	662	631	-	782	710	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	12	0.2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1341	-	-	471	523	1237	-	-
HCM Lane V/C Ratio	0.007	-	-	0.014	0.015	0.003	-	-
HCM Control Delay (s)	7.7	0	-	12.8	12	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Synchro™ Output - 2024 Background Traffic

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	2	120	573	18	51	874	16	12	76	32	63	266
Future Volume (vph)	2	120	573	18	51	874	16	12	76	32	63	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.956			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1781	0	1770	1863
Flt Permitted		0.119			0.310			0.485			0.682	
Satd. Flow (perm)	0	222	3539	1583	577	3539	1583	903	1781	0	1270	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		17			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			908			822
Travel Time (s)			7.7			15.3			20.6			18.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	2	128	610	19	54	930	17	13	81	34	67	283
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	130	610	19	54	930	17	13	115	0	67	283
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

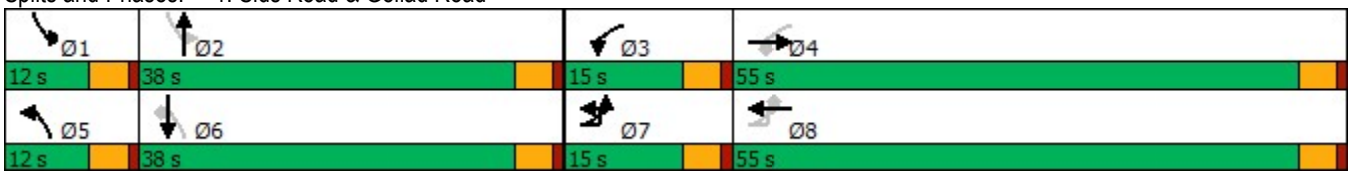
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	585
Future Volume (vph)	585
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	316
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.94
Adj. Flow (vph)	622
Shared Lane Traffic (%)	
Lane Group Flow (vph)	622
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		41.8	37.2	37.2	43.0	32.6	32.6	42.4	34.2		39.7	41.2
Actuated g/C Ratio		0.42	0.38	0.38	0.44	0.33	0.33	0.43	0.35		0.40	0.42
v/c Ratio		0.55	0.46	0.03	0.16	0.80	0.03	0.03	0.18		0.12	0.36
Control Delay		25.0	25.4	0.1	15.6	35.9	0.1	19.2	23.7		19.4	24.5
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		25.0	25.4	0.1	15.6	35.9	0.1	19.2	23.7		19.4	24.5
LOS		C	C	A	B	D	A	B	C		B	C
Approach Delay			24.7			34.2			23.3			20.9
Approach LOS			C			C			C			C
Queue Length 50th (ft)		47	162	0	19	290	0	5	45		25	119
Queue Length 95th (ft)		85	217	0	40	366	0	18	100		60	255
Internal Link Dist (ft)			425			933			828			742
Turn Bay Length (ft)		285			185		265	285			330	
Base Capacity (vph)		265	1850	872	393	1850	872	455	628		552	776
Starvation Cap Reductn		0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio		0.49	0.33	0.02	0.14	0.50	0.02	0.03	0.18		0.12	0.36

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 98.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 26.7		Intersection LOS: C	
Intersection Capacity Utilization 86.3%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	41.2
Actuated g/C Ratio	0.42
v/c Ratio	0.74
Control Delay	19.5
Queue Delay	0.0
Total Delay	19.5
LOS	B
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	158
Queue Length 95th (ft)	#465
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	844
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.74

Intersection Summary

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	128	13	9	0	0	303
Future Vol, veh/h	128	13	9	0	0	303
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	145	15	10	0	0	344

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	10	0	-	0	315	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	305	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1610	-	-	-	678	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	748	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1610	-	-	-	616	1071
Mov Cap-2 Maneuver	-	-	-	-	616	-
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	748	-

Approach	EB	WB	SB
HCM Control Delay, s	6.8	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1610	-	-	-	1071
HCM Lane V/C Ratio	0.09	-	-	-	0.321
HCM Control Delay (s)	7.5	0	-	-	9.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	1.4

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	123	3	0	201
Future Vol, veh/h	0	10	123	3	0	201
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	140	3	0	228

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	370	142	0	0	143	0
Stage 1	142	-	-	-	-	-
Stage 2	228	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	630	906	-	-	1440	-
Stage 1	885	-	-	-	-	-
Stage 2	810	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	630	906	-	-	1440	-
Mov Cap-2 Maneuver	630	-	-	-	-	-
Stage 1	885	-	-	-	-	-
Stage 2	810	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	906	1440	-
HCM Lane V/C Ratio	-	-	0.013	-	-
HCM Control Delay (s)	-	-	9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	1	0	2	0	126	0	1	199	0
Future Vol, veh/h	0	0	0	1	0	2	0	126	0	1	199	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	1	0	2	0	145	0	1	229	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	377	376	229	376	376	145	229	0	0	145	0	0
Stage 1	231	231	-	145	145	-	-	-	-	-	-	-
Stage 2	146	145	-	231	231	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	580	555	810	581	555	902	1339	-	-	1437	-	-
Stage 1	772	713	-	858	777	-	-	-	-	-	-	-
Stage 2	857	777	-	772	713	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	578	554	810	580	554	902	1339	-	-	1437	-	-
Mov Cap-2 Maneuver	578	554	-	580	554	-	-	-	-	-	-	-
Stage 1	772	712	-	858	777	-	-	-	-	-	-	-
Stage 2	855	777	-	771	712	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.8	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1339	-	-	-	761	1437	-	-
HCM Lane V/C Ratio	-	-	-	-	0.005	0.001	-	-
HCM Control Delay (s)	0	-	-	0	9.8	7.5	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	0	0	0	1	10	117	2	5	313	6
Future Vol, veh/h	0	0	0	0	0	1	10	117	2	5	313	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	1	11	133	2	6	356	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	529	529	360	528	531	134	363	0	0	135	0	0
Stage 1	372	372	-	156	156	-	-	-	-	-	-	-
Stage 2	157	157	-	372	375	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	460	455	684	461	454	915	1196	-	-	1449	-	-
Stage 1	648	619	-	846	769	-	-	-	-	-	-	-
Stage 2	845	768	-	648	617	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	454	448	684	456	447	915	1196	-	-	1449	-	-
Mov Cap-2 Maneuver	454	448	-	456	447	-	-	-	-	-	-	-
Stage 1	642	616	-	838	761	-	-	-	-	-	-	-
Stage 2	836	760	-	645	614	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.9	0.6	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1196	-	-	-	915	1449	-	-
HCM Lane V/C Ratio	0.01	-	-	-	0.001	0.004	-	-
HCM Control Delay (s)	8	0	-	0	8.9	7.5	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Future Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.948			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1766	0	1770	1863
Flt Permitted		0.155			0.223			0.646			0.458	
Satd. Flow (perm)	0	289	3539	1583	415	3539	1583	1203	1766	0	853	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		22			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			908			822
Travel Time (s)			7.7			15.3			20.6			18.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1	272	792	20	51	825	40	33	186	100	34	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	273	792	20	51	825	40	33	286	0	34	144
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

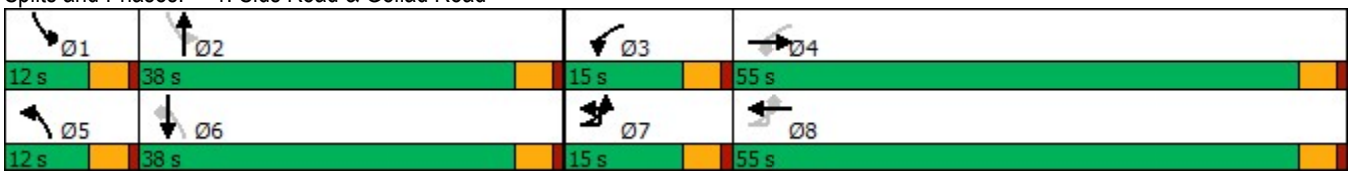
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	230
Future Volume (vph)	230
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	242
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Adj. Flow (vph)	242
Shared Lane Traffic (%)	
Lane Group Flow (vph)	242
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		39.1	37.0	37.0	41.3	28.4	28.4	38.0	34.1		38.0	34.1
Actuated g/C Ratio		0.42	0.40	0.40	0.44	0.30	0.30	0.41	0.37		0.41	0.37
v/c Ratio		0.94	0.56	0.03	0.18	0.77	0.07	0.06	0.43		0.08	0.21
Control Delay		62.5	25.7	0.1	15.9	34.8	0.3	17.4	25.8		17.6	24.7
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		62.5	25.7	0.1	15.9	34.8	0.3	17.4	25.8		17.6	24.7
LOS		E	C	A	B	C	A	B	C		B	C
Approach Delay			34.4			32.2			24.9			12.7
Approach LOS			C			C			C			B
Queue Length 50th (ft)		112	220	0	17	245	0	11	126		11	63
Queue Length 95th (ft)		#287	294	0	38	317	0	32	234		33	127
Internal Link Dist (ft)			425			933			828			742
Turn Bay Length (ft)		285			185		265	285			330	
Base Capacity (vph)		291	1951	915	345	1951	915	539	659		424	681
Starvation Cap Reductn		0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio		0.94	0.41	0.02	0.15	0.42	0.04	0.06	0.43		0.08	0.21

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 93.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 29.3		Intersection LOS: C	
Intersection Capacity Utilization 70.3%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	34.1
Actuated g/C Ratio	0.37
v/c Ratio	0.33
Control Delay	4.9
Queue Delay	0.0
Total Delay	4.9
LOS	A
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	56
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	732
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.33

Intersection Summary

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	231	6	7	3	2	205
Future Vol, veh/h	231	6	7	3	2	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	248	6	8	3	2	220

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	11	0	-	0	512	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	502	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1608	-	-	-	522	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	608	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1608	-	-	-	441	1071
Mov Cap-2 Maneuver	-	-	-	-	441	-
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	608	-

Approach	EB	WB	SB
HCM Control Delay, s	7.5	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1608	-	-	-	1056
HCM Lane V/C Ratio	0.154	-	-	-	0.211
HCM Control Delay (s)	7.6	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.5	-	-	-	0.8

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	238	0	10	302
Future Vol, veh/h	2	2	238	0	10	302
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	259	0	11	328

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	609	259	0	0	259	0
Stage 1	259	-	-	-	-	-
Stage 2	350	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	458	780	-	-	1306	-
Stage 1	784	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	453	780	-	-	1306	-
Mov Cap-2 Maneuver	453	-	-	-	-	-
Stage 1	784	-	-	-	-	-
Stage 2	706	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	573	1306	-
HCM Lane V/C Ratio	-	-	0.008	0.008	-
HCM Control Delay (s)	-	-	11.3	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	0	3	0	4	0	248	0	4	310	5
Future Vol, veh/h	2	0	0	3	0	4	0	248	0	4	310	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	3	0	4	0	258	0	4	323	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	594	592	326	592	594	258	328	0	0	258	0	0
Stage 1	334	334	-	258	258	-	-	-	-	-	-	-
Stage 2	260	258	-	334	336	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	417	419	715	418	418	781	1232	-	-	1307	-	-
Stage 1	680	643	-	747	694	-	-	-	-	-	-	-
Stage 2	745	694	-	680	642	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	414	417	715	417	416	781	1232	-	-	1307	-	-
Mov Cap-2 Maneuver	414	417	-	417	416	-	-	-	-	-	-	-
Stage 1	680	640	-	747	694	-	-	-	-	-	-	-
Stage 2	741	694	-	677	639	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	11.4	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1232	-	-	414	568	1307	-	-
HCM Lane V/C Ratio	-	-	-	0.005	0.013	0.003	-	-
HCM Control Delay (s)	0	-	-	13.7	11.4	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	1	4	0	3	9	296	1	3	178	31
Future Vol, veh/h	5	0	1	4	0	3	9	296	1	3	178	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	1	4	0	3	10	322	1	3	193	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	560	559	210	560	576	323	227	0	0	323	0	0
Stage 1	216	216	-	343	343	-	-	-	-	-	-	-
Stage 2	344	343	-	217	233	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	439	438	830	439	428	718	1341	-	-	1237	-	-
Stage 1	786	724	-	672	637	-	-	-	-	-	-	-
Stage 2	671	637	-	785	712	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	433	433	830	435	423	718	1341	-	-	1237	-	-
Mov Cap-2 Maneuver	433	433	-	435	423	-	-	-	-	-	-	-
Stage 1	779	722	-	666	631	-	-	-	-	-	-	-
Stage 2	662	631	-	782	710	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	12	0.2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1341	-	-	471	523	1237	-	-
HCM Lane V/C Ratio	0.007	-	-	0.014	0.015	0.003	-	-
HCM Control Delay (s)	7.7	0	-	12.8	12	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Synchro™ Output - 2024 Background Plus Site Traffic

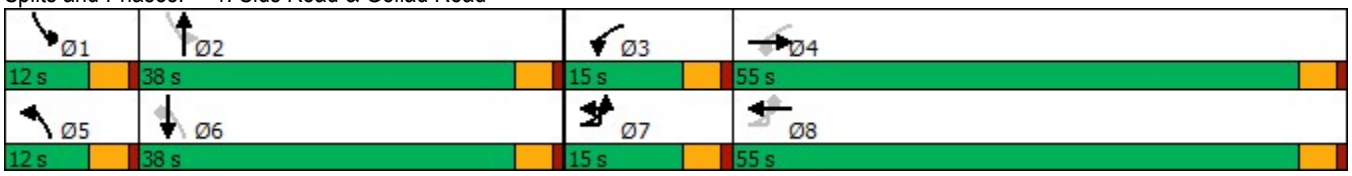
Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	2	120	574	21	53	874	16	17	79	32	63	269
Future Volume (vph)	2	120	574	21	53	874	16	17	79	32	63	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.957			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1783	0	1770	1863
Flt Permitted		0.118			0.311			0.472			0.678	
Satd. Flow (perm)	0	220	3539	1583	579	3539	1583	879	1783	0	1263	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		17			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			919			822
Travel Time (s)			7.7			15.3			20.9			18.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	2	128	611	22	56	930	17	18	84	34	67	286
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	130	611	22	56	930	17	18	118	0	67	286
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	585
Future Volume (vph)	585
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	313
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.94
Adj. Flow (vph)	622
Shared Lane Traffic (%)	
Lane Group Flow (vph)	622
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	CI+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		41.8	37.2	37.2	43.0	32.6	32.6	41.5	34.2		39.7	39.1
Actuated g/C Ratio		0.42	0.38	0.38	0.44	0.33	0.33	0.42	0.35		0.40	0.40
v/c Ratio		0.55	0.46	0.03	0.17	0.80	0.03	0.04	0.19		0.12	0.39
Control Delay		25.2	25.5	0.1	15.6	35.9	0.1	19.1	23.8		19.4	26.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		25.2	25.5	0.1	15.6	35.9	0.1	19.1	23.8		19.4	26.8
LOS		C	C	A	B	D	A	B	C		B	C
Approach Delay			24.7			34.1			23.2			23.2
Approach LOS			C			C			C			C

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 98.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 27.4		Intersection LOS: C	
Intersection Capacity Utilization 86.3%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	39.1
Actuated g/C Ratio	0.40
v/c Ratio	0.76
Control Delay	21.9
Queue Delay	0.0
Total Delay	21.9
LOS	C
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	130	611	22	56	930	17	18	118	67	286	622
v/c Ratio	0.55	0.46	0.03	0.17	0.80	0.03	0.04	0.19	0.12	0.39	0.76
Control Delay	25.2	25.5	0.1	15.6	35.9	0.1	19.1	23.8	19.4	26.8	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.2	25.5	0.1	15.6	35.9	0.1	19.1	23.8	19.4	26.8	21.9
Queue Length 50th (ft)	47	162	0	19	290	0	7	47	25	120	160
Queue Length 95th (ft)	86	217	0	41	366	0	23	103	60	260	#471
Internal Link Dist (ft)		425			933			839		742	
Turn Bay Length (ft)	285			185		265	285		330		
Base Capacity (vph)	265	1850	872	394	1850	872	440	629	549	737	815
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.33	0.03	0.14	0.50	0.02	0.04	0.19	0.12	0.39	0.76

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	8.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	131	13	9	0	0	306
Future Vol, veh/h	131	13	9	0	0	306
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	15	10	0	0	348

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	10	0	-	0	323	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	313	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1610	-	-	-	671	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	741	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1610	-	-	-	609	1071
Mov Cap-2 Maneuver	-	-	-	-	609	-
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	741	-

Approach	EB	WB	SB
HCM Control Delay, s	6.8	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1610	-	-	-	1071
HCM Lane V/C Ratio	0.092	-	-	-	0.325
HCM Control Delay (s)	7.5	0	-	-	10
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1.4

Intersection	
Int Delay, s/veh	8.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	58	22	0	0	0
Future Vol, veh/h	0	58	22	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	400	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	64	24	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	49	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	48	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	960	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	974	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	946	1084	1622	-	-	-
Mov Cap-2 Maneuver	946	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	974	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	7.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.015	-	0.059	-	-
HCM Control Delay (s)	7.3	-	8.5	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	124	4	1	201
Future Vol, veh/h	0	11	124	4	1	201
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	13	141	5	1	228

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	374	144	0	0	146	0
Stage 1	144	-	-	-	-	-
Stage 2	230	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	627	903	-	-	1436	-
Stage 1	883	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	626	903	-	-	1436	-
Mov Cap-2 Maneuver	626	-	-	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	807	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	903	1436	-
HCM Lane V/C Ratio	-	-	0.014	0.001	-
HCM Control Delay (s)	-	-	9	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	1	0	4	0	128	1	2	200	0
Future Vol, veh/h	0	0	0	1	0	4	0	128	1	2	200	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	1	0	5	0	147	1	2	230	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	384	382	230	382	382	148	230	0	0	148	0	0
Stage 1	234	234	-	148	148	-	-	-	-	-	-	-
Stage 2	150	148	-	234	234	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	574	551	809	576	551	899	1338	-	-	1434	-	-
Stage 1	769	711	-	855	775	-	-	-	-	-	-	-
Stage 2	853	775	-	769	711	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	570	550	809	575	550	899	1338	-	-	1434	-	-
Mov Cap-2 Maneuver	570	550	-	575	550	-	-	-	-	-	-	-
Stage 1	769	710	-	855	775	-	-	-	-	-	-	-
Stage 2	849	775	-	767	710	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.5	0	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1338	-	-	-	808	1434	-	-
HCM Lane V/C Ratio	-	-	-	-	0.007	0.002	-	-
HCM Control Delay (s)	0	-	-	0	9.5	7.5	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	0	0	0	4	10	120	3	8	316	6
Future Vol, veh/h	0	0	0	0	0	4	10	120	3	8	316	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	5	11	136	3	9	359	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	543	542	363	541	544	138	366	0	0	139	0	0
Stage 1	381	381	-	160	160	-	-	-	-	-	-	-
Stage 2	162	161	-	381	384	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	451	447	682	452	446	910	1193	-	-	1445	-	-
Stage 1	641	613	-	842	766	-	-	-	-	-	-	-
Stage 2	840	765	-	641	611	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	442	439	682	446	438	910	1193	-	-	1445	-	-
Mov Cap-2 Maneuver	442	439	-	446	438	-	-	-	-	-	-	-
Stage 1	635	608	-	834	758	-	-	-	-	-	-	-
Stage 2	827	757	-	636	606	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9	0.6	0.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1193	-	-	-	910	1445	-	-
HCM Lane V/C Ratio	0.01	-	-	-	0.005	0.006	-	-
HCM Control Delay (s)	8	0	-	0	9	7.5	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	668	1	0	943	0	3
Future Vol, veh/h	668	1	0	943	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	726	1	0	1025	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	727
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	424
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	424
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	424	-	-	-
HCM Lane V/C Ratio	0.008	-	-	-
HCM Control Delay (s)	13.6	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕				↕			↕			↕	
Traffic Vol, veh/h	0	3	3	1	49	16	2	2	0	9	3	0	0
Future Vol, veh/h	0	3	3	1	49	16	2	2	0	9	3	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	65	65	65	65	65	65	65	65	65	65	65	65	65
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	5	2	75	25	3	3	0	14	5	0	0

Major/Minor	Major1			Major2				Minor1			Minor2		
Conflicting Flow All	28	0	0	-	10	0	0	185	190	8	192	191	27
Stage 1	-	-	-	-	-	-	-	8	8	-	177	181	-
Stage 2	-	-	-	-	-	-	-	177	182	-	15	10	-
Critical Hdwy	4.12	-	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1585	-	-	-	1610	-	-	776	705	1074	768	704	1048
Stage 1	-	-	-	-	-	-	-	1013	889	-	825	750	-
Stage 2	-	-	-	-	-	-	-	825	749	-	1005	887	-
Platoon blocked, %		-	-			-	-						
Mov Cap-1 Maneuver	1585	-	-	~ -52	~ -52	-	-	776	705	1074	758	704	1048
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	776	705	-	758	704	-
Stage 1	-	-	-	-	-	-	-	1013	889	-	825	750	-
Stage 2	-	-	-	-	-	-	-	825	749	-	992	887	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0		8.6	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1004	1585	-	-	+	-	-	758
HCM Lane V/C Ratio	0.017	-	-	-	-	-	-	0.006
HCM Control Delay (s)	8.6	0	-	-	-	-	-	9.8
HCM Lane LOS	A	A	-	-	-	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	-	-	-	0

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	124	0	2	331
Future Vol, veh/h	0	3	124	0	2	331
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	182	0	3	487

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	675	182	0	0	182	0
Stage 1	182	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	419	861	-	-	1393	-
Stage 1	849	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	418	861	-	-	1393	-
Mov Cap-2 Maneuver	418	-	-	-	-	-
Stage 1	849	-	-	-	-	-
Stage 2	612	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	861	1393	-
HCM Lane V/C Ratio	-	-	0.005	0.002	-
HCM Control Delay (s)	-	-	9.2	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

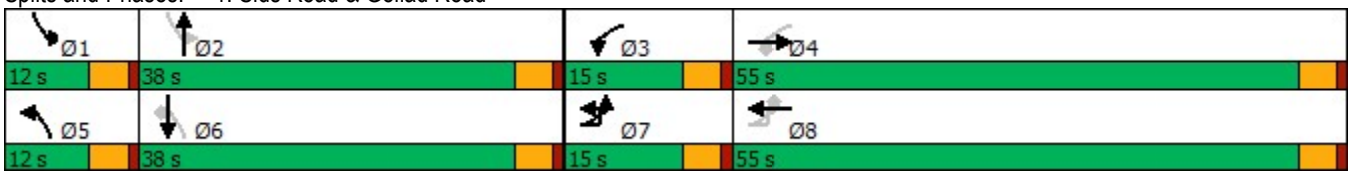
Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	258	754	23	51	784	38	38	182	95	32	141
Future Volume (vph)	1	258	754	23	51	784	38	38	182	95	32	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.949			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1768	0	1770	1863
Flt Permitted		0.152			0.209			0.641			0.451	
Satd. Flow (perm)	0	283	3539	1583	389	3539	1583	1194	1768	0	840	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		22			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			919			822
Travel Time (s)			7.7			15.3			20.9			18.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1	272	794	24	54	825	40	40	192	100	34	148
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	273	794	24	54	825	40	40	292	0	34	148
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	230
Future Volume (vph)	230
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	242
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Adj. Flow (vph)	242
Shared Lane Traffic (%)	
Lane Group Flow (vph)	242
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		39.7	35.1	35.1	40.8	29.0	29.0	38.0	34.1		38.0	34.1
Actuated g/C Ratio		0.42	0.37	0.37	0.43	0.31	0.31	0.40	0.36		0.40	0.36
v/c Ratio		0.95	0.60	0.04	0.20	0.75	0.07	0.08	0.45		0.08	0.22
Control Delay		64.4	27.5	0.1	16.2	34.3	0.3	17.6	26.2		17.7	25.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		64.4	27.5	0.1	16.2	34.3	0.3	17.6	26.2		17.7	25.1
LOS		E	C	A	B	C	A	B	C		B	C
Approach Delay			36.1			31.8			25.2			13.0
Approach LOS			D			C			C			B

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 93.9			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 29.8		Intersection LOS: C	
Intersection Capacity Utilization 70.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	34.1
Actuated g/C Ratio	0.36
v/c Ratio	0.33
Control Delay	5.0
Queue Delay	0.0
Total Delay	5.0
LOS	A
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	273	794	24	54	825	40	40	292	34	148	242
v/c Ratio	0.95	0.60	0.04	0.20	0.75	0.07	0.08	0.45	0.08	0.22	0.33
Control Delay	64.4	27.5	0.1	16.2	34.3	0.3	17.6	26.2	17.7	25.1	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.4	27.5	0.1	16.2	34.3	0.3	17.6	26.2	17.7	25.1	5.0
Queue Length 50th (ft)	114	222	0	18	246	0	13	130	11	65	0
Queue Length 95th (ft)	#290	295	0	40	317	0	37	240	33	130	56
Internal Link Dist (ft)		425			933			839		742	
Turn Bay Length (ft)	285			185		265	285		330		
Base Capacity (vph)	288	1934	908	335	1934	908	532	656	417	675	728
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.41	0.03	0.16	0.43	0.04	0.08	0.45	0.08	0.22	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	235	6	7	3	2	210
Future Vol, veh/h	235	6	7	3	2	210
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	253	6	8	3	2	226

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	11	0	-	0	522	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	512	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1608	-	-	-	515	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	602	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1608	-	-	-	434	1071
Mov Cap-2 Maneuver	-	-	-	-	434	-
Stage 1	-	-	-	-	853	-
Stage 2	-	-	-	-	602	-

Approach	EB	WB	SB
HCM Control Delay, s	7.5	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1608	-	-	-	1056
HCM Lane V/C Ratio	0.157	-	-	-	0.216
HCM Control Delay (s)	7.7	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.6	-	-	-	0.8

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	23	23	0	0	0
Future Vol, veh/h	0	23	23	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	400	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	24	24	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	49	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	48	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	960	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	974	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	946	1084	1622	-	-	-
Mov Cap-2 Maneuver	946	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	974	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	7.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.015	-	0.022	-	-
HCM Control Delay (s)	7.3	-	8.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	3	240	2	12	302
Future Vol, veh/h	2	3	240	2	12	302
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	261	2	13	328

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	616	262	0	0	263	0
Stage 1	262	-	-	-	-	-
Stage 2	354	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	454	777	-	-	1301	-
Stage 1	782	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	449	777	-	-	1301	-
Mov Cap-2 Maneuver	449	-	-	-	-	-
Stage 1	782	-	-	-	-	-
Stage 2	701	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	601	1301	-
HCM Lane V/C Ratio	-	-	0.009	0.01	-
HCM Control Delay (s)	-	-	11	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	0	3	0	6	0	250	1	6	312	5
Future Vol, veh/h	2	0	0	3	0	6	0	250	1	6	312	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	3	0	6	0	260	1	6	325	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	604	601	328	601	603	261	330	0	0	261	0	0
Stage 1	340	340	-	261	261	-	-	-	-	-	-	-
Stage 2	264	261	-	340	342	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	410	414	713	412	413	778	1229	-	-	1303	-	-
Stage 1	675	639	-	744	692	-	-	-	-	-	-	-
Stage 2	741	692	-	675	638	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	405	412	713	410	411	778	1229	-	-	1303	-	-
Mov Cap-2 Maneuver	405	412	-	410	411	-	-	-	-	-	-	-
Stage 1	675	635	-	744	692	-	-	-	-	-	-	-
Stage 2	735	692	-	671	634	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.9	11.1	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1229	-	-	405	599	1303	-	-
HCM Lane V/C Ratio	-	-	-	0.005	0.016	0.005	-	-
HCM Control Delay (s)	0	-	-	13.9	11.1	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	1	4	0	8	9	299	2	7	182	31
Future Vol, veh/h	5	0	1	4	0	8	9	299	2	7	182	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	1	4	0	9	10	325	2	8	198	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	582	578	215	578	594	326	232	0	0	327	0	0
Stage 1	231	231	-	346	346	-	-	-	-	-	-	-
Stage 2	351	347	-	232	248	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	424	427	825	427	418	715	1336	-	-	1233	-	-
Stage 1	772	713	-	670	635	-	-	-	-	-	-	-
Stage 2	666	635	-	771	701	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	414	420	825	421	411	715	1336	-	-	1233	-	-
Mov Cap-2 Maneuver	414	420	-	421	411	-	-	-	-	-	-	-
Stage 1	765	708	-	664	629	-	-	-	-	-	-	-
Stage 2	652	629	-	765	696	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.1	11.4	0.2	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1336	-	-	451	580	1233	-	-
HCM Lane V/C Ratio	0.007	-	-	0.014	0.022	0.006	-	-
HCM Control Delay (s)	7.7	0	-	13.1	11.4	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	879	2	0	874	0	3
Future Vol, veh/h	879	2	0	874	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	955	2	0	950	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	956
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	313
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	313
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	16.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	313	-	-	-
HCM Lane V/C Ratio	0.01	-	-	-
HCM Control Delay (s)	16.6	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	13	7	17	9	3	4	0	55	3	0	0
Future Vol, veh/h	0	13	7	17	9	3	4	0	55	3	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	15	8	20	11	4	5	0	65	4	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	15	0	0	23	0	0	72	74	19	105	76	13
Stage 1	-	-	-	-	-	-	19	19	-	53	53	-
Stage 2	-	-	-	-	-	-	53	55	-	52	23	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1603	-	-	1592	-	-	919	816	1059	875	814	1067
Stage 1	-	-	-	-	-	-	1000	880	-	960	851	-
Stage 2	-	-	-	-	-	-	960	849	-	961	876	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1603	-	-	1592	-	-	910	805	1059	814	803	1067
Mov Cap-2 Maneuver	-	-	-	-	-	-	910	805	-	814	803	-
Stage 1	-	-	-	-	-	-	1000	880	-	960	840	-
Stage 2	-	-	-	-	-	-	948	838	-	902	876	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	4.3	8.7	9.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1047	1603	-	-	1592	-	-	814
HCM Lane V/C Ratio	0.066	-	-	-	0.013	-	-	0.004
HCM Control Delay (s)	8.7	0	-	-	7.3	0	-	9.4
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	313	0	3	220
Future Vol, veh/h	0	3	313	0	3	220
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	368	0	4	259

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	635	368	0	0	368	0
Stage 1	368	-	-	-	-	-
Stage 2	267	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	443	677	-	-	1191	-
Stage 1	700	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	441	677	-	-	1191	-
Mov Cap-2 Maneuver	441	-	-	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	775	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	677	1191	-
HCM Lane V/C Ratio	-	-	0.005	0.003	-
HCM Control Delay (s)	-	-	10.3	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

PROJECT COMMENTS

CITY OF ROCKWALL
385 S. GOLIAD STREET
ROCKWALL, TEXAS 75087
PHONE: (972) 771-7700

DATE: 10/20/2022

PROJECT NUMBER:	SP2022-058	CASE MANAGER:	Henry Lee
PROJECT NAME:	Site Plan for Rayburn Electric Company	CASE MANAGER PHONE:	972.772.6434
SITE ADDRESS/LOCATIONS:	950 SIDS RD	CASE MANAGER EMAIL:	hlee@rockwall.com

CASE CAPTION: Discuss and consider a request by Frank A. Polma, PE of R-Delta Engineers, Inc. on behalf of Stephen Geiger of Rayburn Country Electric Cooperative for the approval of a Site Plan for an Industrial Campus on a 99.849-acre tract of land identified as Lots 6, 7, 8 & 9, Block A, Rayburn Country Addition and Tract 3 of the W. H. Barnes Survey, Abstract No. 26, City of Rockwall, Rockwall County, Texas, zoned Heavy Commercial (HC) and Commercial (C) Districts, situated within the SH-205 Overlay (SH-205 OV) District, addressed as 950 & 980 Sids Road, and take any action necessary.

DEPARTMENT	REVIEWER	DATE OF REVIEW	STATUS OF PROJECT
PLANNING	Ryan Miller	10/20/2022	Approved w/ Comments

10/20/2022: SP2022-058: Site Plan for Rayburn Electric Corporation
Please address the following comments (M= Mandatory Comments; I = Informational Comments)

I.1 This is a request for the approval of a Site Plan for an Industrial Campus on a 99.849-acre tract of land identified as Lots 6, 7, 8 & 9, Block A, Rayburn Country Addition and Tract 3 of the W. H. Barnes Survey, Abstract No. 26, City of Rockwall, Rockwall County, Texas, zoned Heavy Commercial (HC) and Commercial (C) Districts, and situated within the SH-205 Overlay (SH-205 OV) District, addressed as 950 & 980 Sids Road.
I.2 For questions or comments concerning this case please contact Henry Lee in the Planning Department at (972) 772-6434 or email hlee@rockwall.com.
M.3 For reference, include the case number (SP2022-058) in the lower right-hand corner of all pages of all revised plan submittals. (Subsection 01.02(D), Article 11, UDC)
I.4 All signage will be covered by a separate permit. (Subsection 06.02. F, of Article 05)
M.5 In the variance letter identify the compensatory measures for each variance/exception requested. According to the UDC each variance/exception required two (2) compensatory measures. (Subsection 09.01, of Article 11)
M.6 Provide the standard signature block with signature space for the Planning and Zoning Chairman and the Planning Director on all pages of the plans. Also remove the red placeholder text from the signature block. (Subsection 03.04. A, of Article 11)

APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ____ day of _____, _____.

WITNESS OUR HANDS, this _____ day of _____, _____.

_____ _____
Planning & Zoning Commission, Chairman Director of Planning and Zoning

M.7 Site Plan:
(1) Please indicate the fence location and type approved with Case No. MIS2022-009.
(2) As indicated in the variance letter the above ground storage tanks are not screened per the UDC standards. (Subsection 01.05. C, of Article 05)
(3) All dumpster enclosures must be screened with five (5) gallon shrubs. Also, the dumpster enclosure west of proposed Building F will need to be reoriented; dumpster

enclosures may not face roadways. Please also provide a detail showing the elevations of each dumpster enclosure and the materials used. (Subsection 01.05. B, of Article 05)
(4) As indicated in the variance letter the outside storage is not screened per the UDC standards. (Subsection 01.05. E, of Article 05)
(5) Building D has roll-ups doors that face a public street and must be screened accordingly. Three (3) tiered screening is the preferred screening method please indicate this on the Landscape Plan. (Subsection 05.02, of Article 08)
(6) Indicate any ground mounted utility equipment and the subsequent screening. (Subsection 01.05. C, of Article 05)
(7) Indicate all roof mounted utility equipment and crosshatch it on the building elevations. (Subsection 01.05. C, of Article 05)

M.8 Landscape Plan:
(1) Please delineate the ten (10) foot landscape buffer along Mims Road and Sids Road. (Subsection 05.01, of Article 08)
(2) The landscape buffer must continue along all of Sids Road, which entails a berm, a shrub row, and one (1) canopy tree and (1) accent tree per 50-linear feet (the trees may be clustered). An exception may be requested for this along Mims Road, which would require the variance letter to be updated and the subsequent compensatory measures identified. (Subsection 05.01, of Article 08)
(3) Provide a note that the irrigation will meet the UDC standards. (Subsection 05.04, of Article 08)
(4) Please indicate the berm within all landscape buffers. (Subsection 05.03. G, of Article 08)
(5) A 20-foot landscape buffer is required along S. Goliad Street [SH-205].
(6) NOTE: It would not be unreasonable ask for a variance (i.e. for S. Goliad Street) and an exception (i.e. for Mims Road) to the landscape buffer requirements, as you are not developing these lots at this time.

M.9 Treescape Plan:
(1) Provide the same site data information required in Section 2.1 Site Plan: Miscellaneous and Density and Dimensional Requirements of this checklist. (See Section 2.1 of this checklist)
(2) The tree mitigation for this case will change as we are under a new tree preservation ordinance, which eliminates the mitigation for Hackberry Trees under 25-inches. In addition, Eastern Red Cedars over eight (8) feet in height are required to be mitigated with one (1), four (4) inch canopy tree. Eastern Red Cedars under eight (8) feet do not require mitigation. Also, mitigation is required for the 30-inche Cottonwood Tree as 60-inches of tree per the UDC, as any tree over 25-inches must be mitigated for double. (Subsection 03.01. G, of Article 09)

M.10 Photometric Plan:
1. Provide the same site data information required in Section 2.1 Site Plan: Miscellaneous and Density and Dimensional Requirements of this checklist. (Section 2.1 of this checklist)
2. The maximum foot-candles at all property lines must not exceed 0.2 FC. (Subsection 03.03. G, of Article 07)

M.11 Building Elevations:
1. Remove the glazing from the material percentages for each building. (Subsection 04.01, of Article 05)
2. Provide the building height for Building F. (Subsection 07.03, of Article 05)
3. Please indicate all roof mounted mechanical equipment and their subsequent screening. (Subsection 01.05. C, of Article 05)
4. Provide a detail of the canopy above the above ground storage tanks. (Subsection 04.01, of Article 05)
5. Indicate the height of any parapet walls. Also, provide a note that the parapets will be finished on the back side with the same material as the front facing façade. (Subsection 04.01, of Article 05)
6. Each of the proposed buildings do not meet the articulation standards for wall length. Each of the proposed buildings do not meet the wall length for primary facades, which is Wall Length = 3 x Wall Height. Buildings D and F also do not meet the wall length for secondary facades, which is Wall Length = 3 x Wall Height. These will each be exceptions to the articulation standards if not corrected, which will require the variance letter to be updated.

I.12 Staff has identified the following exceptions and variances associated with the proposed request: [1] above ground tank screening, [2] outside storage screening, [3] driveway spacing, [4] Mims Road Construction, [5] landscaping in the landscape buffers, [6] S. Goliad Street landscape buffer, [7] Mims Road landscape buffer, [8] primary façade articulation, and [9] secondary façade articulation. Should you decide to request these items as exceptions/variances, please provide a letter that lists the exceptions/variances, why they are being requested, and the subsequent compensatory measures. For each exception and variance requested the UDC requires two (2) compensatory measures (Subsection 09.01, of Article 11); however, for certain variances and exceptions this may not be necessary (i.e. the landscape buffers along Mims Road and SH-205 and the construction of Mims Road). Examples of compensatory measures include the increased use of masonry material or stone, increased articulation, increased architectural

elements, more pedestrian amenity, larger landscape planting sizes, etc.
I.13 Please note that failure to address all comments provided by staff by 3:00 PM on November 1, 2022 will result in the automatic denial of the case on the grounds of an incomplete submittal. No refund will be given for cases that are denied due to an incomplete submittal, and a new application and fee will be required to resubmit the case.
I.14 Staff has identified the aforementioned items necessary to continue the submittal process. Please make these revisions and corrections, and provide any additional information that is requested. Revisions for this case will be due on November 1, 2022; however, it is encouraged for applicants to submit revisions as soon as possible to give staff ample time to review the case prior to the November 15, 2022 Planning & Zoning Meeting.
I.15 Please note the scheduled meetings for this case:
1) Planning & Zoning Work Session meeting will be held on October 25, 2022.
2) Planning & Zoning meeting/public hearing meeting will be held on November 15, 2022.

I.16 All meetings will be held in person and in the City's Council Chambers. All meetings listed above are scheduled to begin at 6:00 p.m. (P&Z). The City prefers that a representative(s) be present for these meetings. During the upcoming work session meeting with the Planning and Zoning Commission, representative(s) are expected to present their case and answer any questions the Planning Commission may have regarding this request.

DEPARTMENT	REVIEWER	DATE OF REVIEW	STATUS OF PROJECT
ENGINEERING	Sarah Johnston	10/19/2022	Needs Review

10/19/2022: - Laydown yard must be concrete if there is a building in the area.
- Parking spaces to be 20x9' minimum.
- Wall must be 10' from water line.
- What is being placed on top of the water line? No structures allowed in easements.
- No detention in floodplain.
- No water easements allowed in detention.

The following items are informational for the engineering design process.
General Items:
- Must meet City Standards of Design and Construction
- 4% Engineering Inspection Fees
- Impact Fees (Water, Wastewater & Roadway)
- Minimum easement width is 20' for new easements. No structures including walls allowed in easements.
- Retaining walls 3' and over must be engineered.
- All retaining walls must be rock or stone face. No smooth concrete walls.
- TIA is required to be submitted separately with application to the Engineering Dept.(must pay retainer to City before review).

Drainage Items:
- Flood and Detention Study required (must pay retainer to City before review).
- Waters of the US and Wetlands Determination for all creeks and ponds.
- Erosion setback required along creeks.
- No detention in 100yr flood plain.
- Detention is required. Post-Development C value is by zoning, C=0.9 for all non-floodplain areas.
- Ex. and proposed detention areas need to be shown
- Add note that the property owner will be responsible for maintaining, repair, and replacement of the detention/drainage systems.
-No grate inlets allowed
-Call out floodplain elevation of cross section a minimum of every 300'.
- Detention is not allowed within floodplain area.
-Floodplain and erosion hazard setback must be within a drainage easement with potentially additional width.

Water and Wastewater Items:
- Loop minimum 8-inch Water Line on site

- Public sewer to be 8" minimum.
- Only one "use" off a dead-end line (domestic, irrigation, fire sprinkler, fire hydrant, etc.)
- Min 20' utility easements.
- Mims Lift Station Pro-rata $401.89/acre.
- Trees must be a minimum of 5' from a public water line.
- Public water and sewer easements not allowed in detention easement

Roadway Paving Items:
- Fire lane to be 24' wide and in a platted easement.
- No dead-end parking.
- Parking to be 20x9' min.
- Must dedicate half of Goliad ROW 120' total ROW width
- Must dedicate half of Mims Road 65' total ROW width and build 29' wide section.
- Must dedicate half of Sids Road 65' total ROW width.
- Traffic Impact Analysis required
- Driveway Variance required for spacing along 205 for TxDOT and City requirements.
- Must pay proportional share of Sids Road for additional building.
- Drive to Mims Road must be a minimum of 1' above floodplain elevation.

Landscaping:
- No trees to be with 10' of any public water, sewer or storm line that is 10" in diameter or larger.
- No trees to be with 5' of any public water, sewer, or storm line that is less than 10".

DEPARTMENT	REVIEWER	DATE OF REVIEW	STATUS OF PROJECT
BUILDING	Rusty McDowell	10/18/2022	Approved

No Comments

DEPARTMENT	REVIEWER	DATE OF REVIEW	STATUS OF PROJECT
FIRE	Ariana Kistner	10/20/2022	Needs Review

10/20/2022: FDC (fire department connections)shall be within 50 feet, facing, and visible from the fire lane.
FDC must be within 100 feet of a fire hydrant.
The FDC shall be clear and unobstructed with a minimum of a 5-feet clear all-weather path from the fire lane access.
Show the location of all proposed and existing FDCs
Fire hydrants shall be located 6 feet behind the edge of the fire apparatus access roadway/fire lane pavement.
All buildings shall have fire lane coverage within 250 feet of all portions of the exterior building walls when protected with fire sprinklers. Show coverage measurements.

DEPARTMENT	REVIEWER	DATE OF REVIEW	STATUS OF PROJECT
GIS	Lance Singleton	10/17/2022	Approved

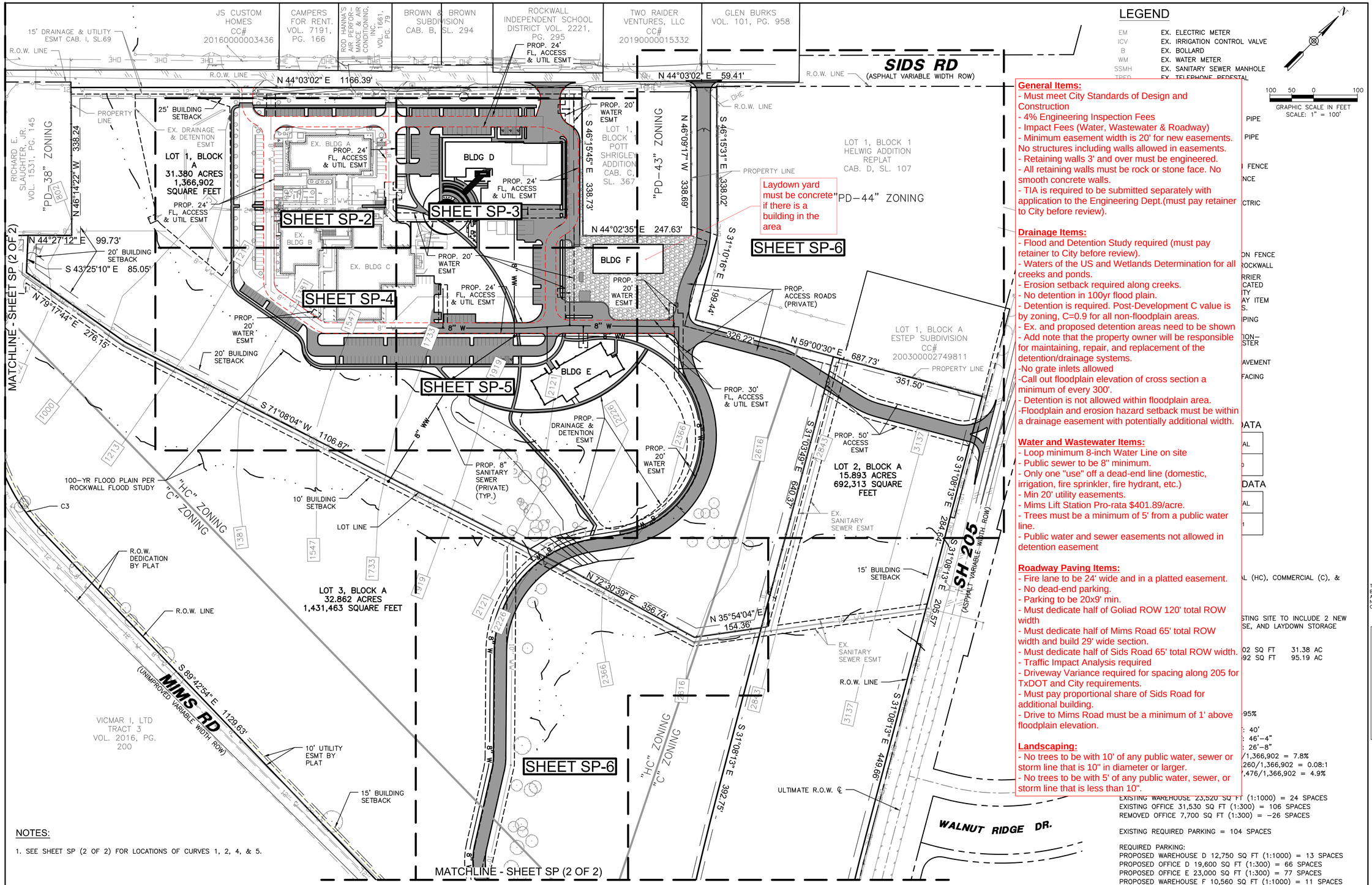
No Comments

DEPARTMENT	REVIEWER	DATE OF REVIEW	STATUS OF PROJECT
POLICE	Ryan Miller	10/20/2022	N/A

No Comments

DEPARTMENT	REVIEWER	DATE OF REVIEW	STATUS OF PROJECT
PARKS	Travis Sales	10/17/2022	Approved

No Comments



LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
TPED	EX. TELEPHONE PEDESTAL

GRAPHIC SCALE IN FEET
SCALE: 1" = 100'

General Items:
- Must meet City Standards of Design and Construction
- 4% Engineering Inspection Fees
- Impact Fees (Water, Wastewater & Roadway)
- Minimum easement width is 20' for new easements. No structures including walls allowed in easements.
- Retaining walls 3' and over must be engineered.
- All retaining walls must be rock or stone face. No smooth concrete walls.
- TIA is required to be submitted separately with application to the Engineering Dept.(must pay retainer to City before review).

Drainage Items:
- Flood and Detention Study required (must pay retainer to City before review).
- Waters of the US and Wetlands Determination for all creeks and ponds.
- Erosion setback required along creeks.
- No detention in 100yr flood plain.
- Detention is required. Post-Development C value is by zoning, C=0.9 for all non-floodplain areas.
- Ex. and proposed detention areas need to be shown
- Add note that the property owner will be responsible for maintaining, repair, and replacement of the detention/drainage systems.
-No grate inlets allowed
-Call out floodplain elevation of cross section a minimum of every 300'.
- Detention is not allowed within floodplain area.
-Floodplain and erosion hazard setback must be within a drainage easement with potentially additional width.

Water and Wastewater Items:
- Loop minimum 8-inch Water Line on site
- Public sewer to be 8" minimum.
- Only one "use" off a dead-end line (domestic, irrigation, fire sprinkler, fire hydrant, etc.)
- Min 20' utility easements.
- Mims Lift Station Pro-rata $401.89/acre.
- Trees must be a minimum of 5' from a public water line.
- Public water and sewer easements not allowed in detention easement

Roadway Paving Items:
- Fire lane to be 24' wide and in a platted easement.
- No dead-end parking.
- Parking to be 20x9' min.
- Must dedicate half of Goliad ROW 120' total ROW width
- Must dedicate half of Mims Road 65' total ROW width and build 29' wide section.
- Must dedicate half of Sids Road 65' total ROW width.
- Traffic Impact Analysis required
- Driveway Variance required for spacing along 205 for TxDOT and City requirements.
- Must pay proportional share of Sids Road for additional building.
- Drive to Mims Road must be a minimum of 1' above floodplain elevation.

Landscaping:
- No trees to be with 10' of any public water, sewer or storm line that is 10" in diameter or larger.
- No trees to be with 5' of any public water, sewer, or storm line that is less than 10".

NOTES:

1. SEE SHEET SP (2 OF 2) FOR LOCATIONS OF CURVES 1, 2, 4, & 5.

BOUNDARY CURVE DATA					
CURVE	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	11°11'01"	5,779.71'	1,128.15'	S 36°43'43" E	1,126.36'
C2	46°17'44"	450.00'	363.60'	N 66°34'02" W	353.79'
C3	36°44'03"	482.50'	309.35'	S 61°47'11" E	304.08'
C4	129°16'42"	40.00'	90.25'	S 23°55'53" W	72.29'
C5	7°41'42"	6,142.03'	824.89'	N 34°59'04" W	824.27'

APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ___ day of _____, 202_.

WITNESS OUR HANDS, this ___ day of _____, 202_.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

PAVEMENT INFORMATION:

ALL PAVEMENTS BELOW HAVE #3 BARS 24" O.C.E.W.

PAVEMENT TYPE	THICKNESS (INCHES)	28-DAY (PSI)	MIN. CEMENT (SACKS/CY) MACHINE	HAND
FIRE LANE	6"	3,600	6.0	6.5
DRIVEWAYS	6"	3,600	6.0	6.5
BARRIER FREE RAMPS	6"	3,600	6.0	6.5
DUMPSTER PADS	7"	3,600	6.0	6.5
SIDEWALKS	4"	3,000	N/A	5.5
PARKING LOT/ DRIVE AISLES	5"	3,000	5.0	5.5

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L (HC), COMMERCIAL (C), &

STING SITE TO INCLUDE 2 NEW
SE, AND LAYDOWN STORAGE

02 SQ FT 31.38 AC
92 SQ FT 95.19 AC

95%
: 40'
: 46'-4"
: 26'-8"
/1,366,902 = 7.8%
260/1,366,902 = 0.08:1
,476/1,366,902 = 4.9%

EXISTING WAREHOUSE 23,520 SQ FT (1:1000) = 24 SPACES
EXISTING OFFICE 31,530 SQ FT (1:300) = 106 SPACES
REMOVED OFFICE 7,700 SQ FT (1:300) = -26 SPACES

EXISTING REQUIRED PARKING = 104 SPACES

REQUIRED PARKING:
PROPOSED WAREHOUSE D 12,750 SQ FT (1:1000) = 13 SPACES
PROPOSED OFFICE D 19,600 SQ FT (1:300) = 66 SPACES
PROPOSED OFFICE E 23,000 SQ FT (1:300) = 77 SPACES
PROPOSED WAREHOUSE F 10,560 SQ FT (1:1000) = 11 SPACES

TOTAL REQUIRED PARKING = 271 SPACES
TOTAL PROVIDED PARKING = 271 SPACES

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1-4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

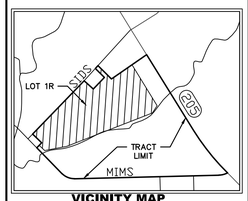
OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
TBPE No. F-1515

Rayburn Electric COOPERATIVE

STATE OF TEXAS
BRIAN PAUL PATRICK
80844
REGISTERED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BRIAN PAUL PATRICK, P.E. 80844 ON 10/14/2022. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.



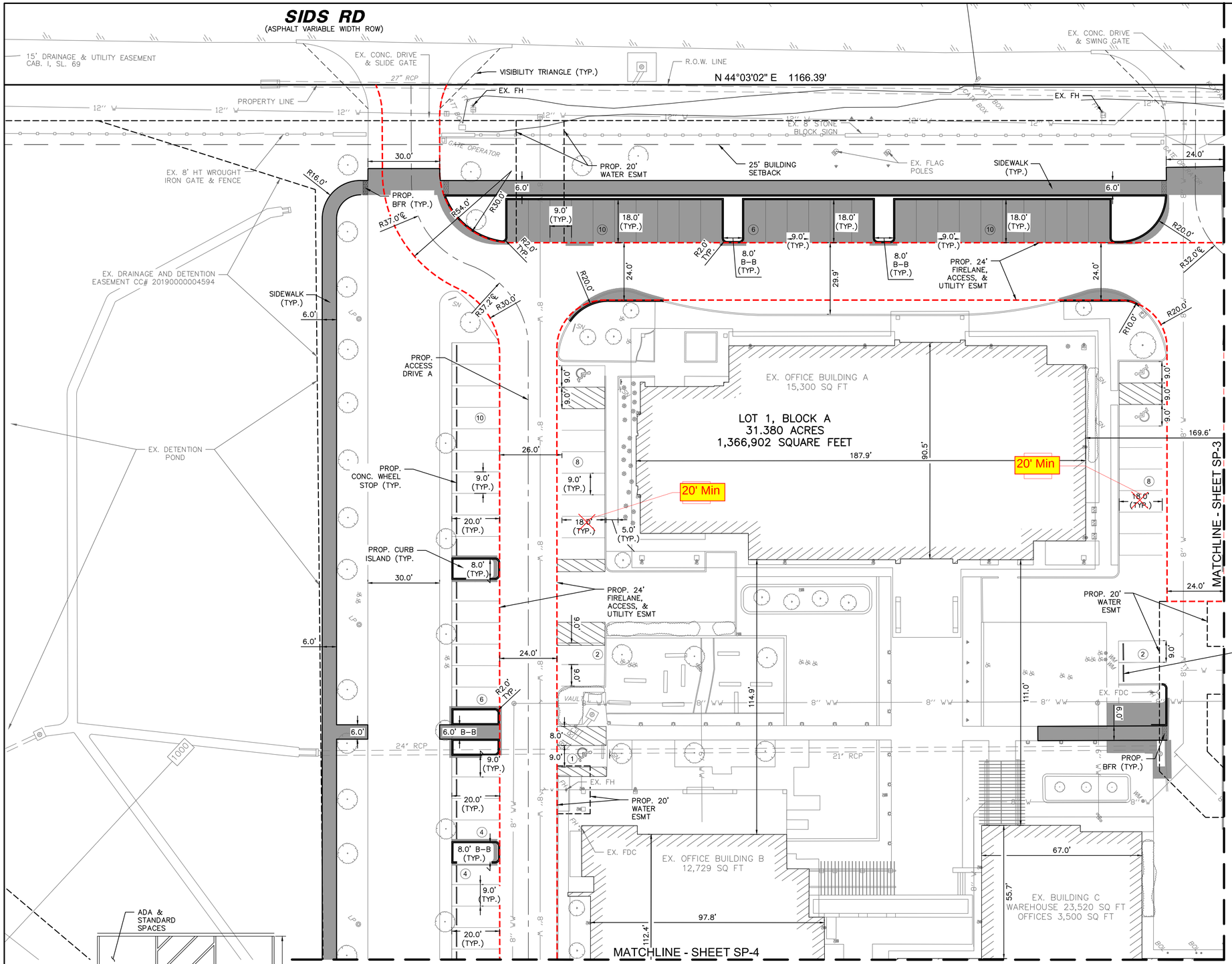
VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21
DATE
10/14/2022
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SITE PLAN
CASE# SP2022-041

SHEET NO.
SP (1 OF 2)



TYPICAL PARKING SPACE
N.T.S.

GRAPHIC SCALE IN FEET
SCALE: 1" = 20'

LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
TPED	EX. TELEPHONE PEDESTAL
WV	EX. WATER VALVE
EB	EX. ELECTRIC BOX
FH	EX. FIRE HYDRANT
CMP	EX. CORRUGATED METAL PIPE
X" W	EX. WATER MAIN PIPE
X" WW	EX. WASTE WATER MAIN PIPE
XX" CMP	EXISTING CORRUGATED METAL PIPE & SIZE
	EXISTING WROUGHT IRON FENCE
	EXISTING CHAIN LINK FENCE
PP	EXISTING POWER POLE
OHE	EXISTING OVERHEAD ELECTRIC
	EXISTING GUY WIRE
	EXISTING FLOOD LIGHT
	EDGE OF ASPHALT
	PROPOSED WROUGHT IRON FENCE
	100-YR FLOOD PLAIN-ROCKWALL
	BFR – CONSTRUCT BARRIER FREE RAMP WITH TRUNCATED DOMED PANELS PER CITY DETAILS. NO EXTRA PAY ITEM FOR MONOLITHIC CURBS.
	ACCESSIBLE AISLE STRIPING
1000	CROSS-SECTION LOCATION– CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT

NOTES:

1. ALL SIDEWALKS ARE 6' UNLESS OTHERWISE INDICATED.
2. ALL RADII ARE 2' UNLESS OTHERWISE INDICATED.
3. ALL DIMENSIONS ARE TO THE FACE OF CURB OR EDGE OF PAVEMENT.
4. SEE SHEET SP (1 OF 2) FOR SITE INFORMATION AND PARKING INFORMATION.

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OWNER/ APPLICANT
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469-402-2100

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R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
TBPE No. F-1515

Rayburn Electric COOPERATIVE

STATE OF TEXAS
BRIAN PAUL PATRICK
80844
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PROFESSIONAL ENGINEER

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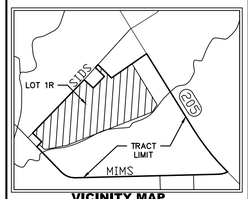


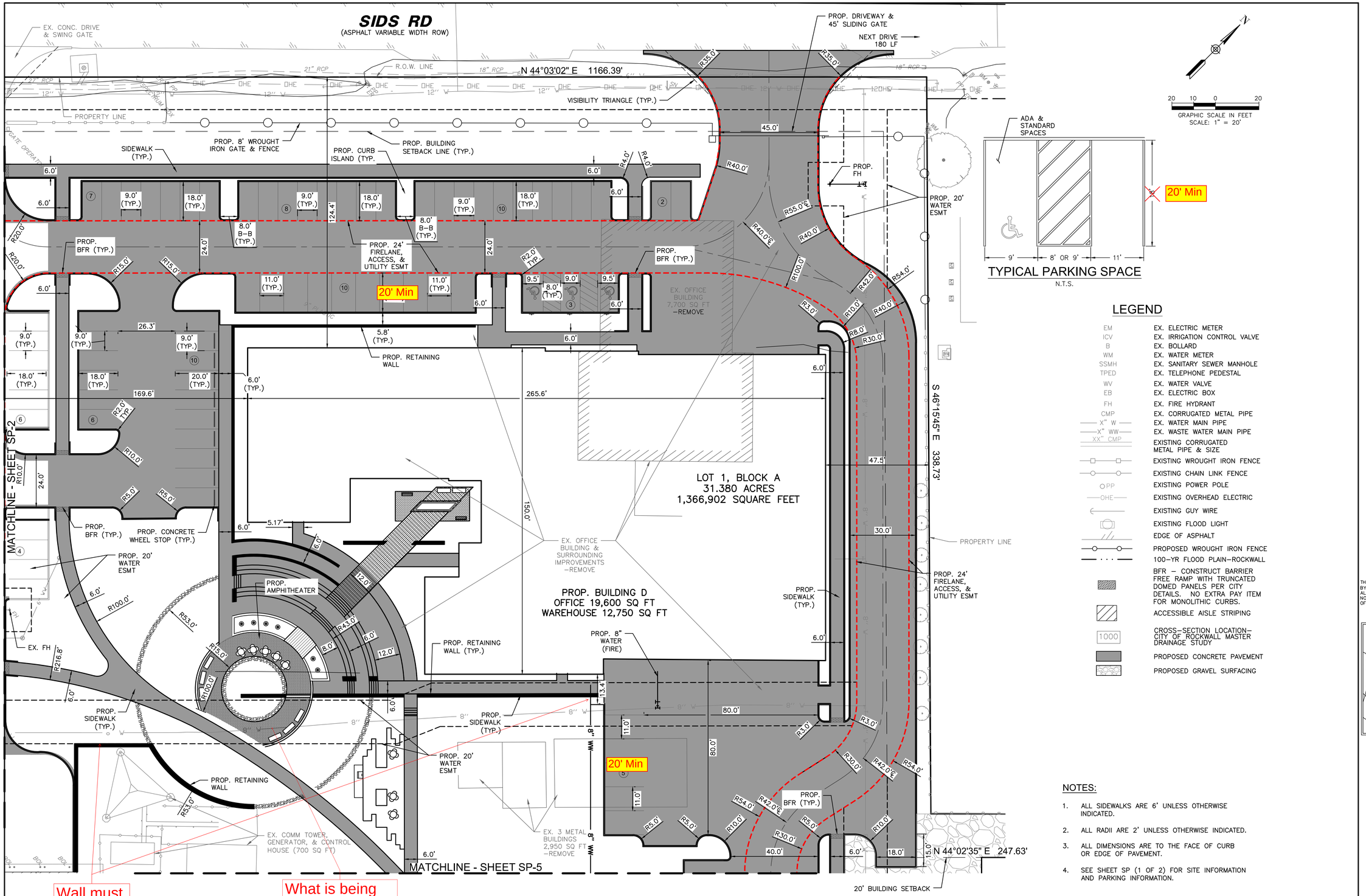
VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21
DATE
10/14/2022
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SITE PLAN
CASE# SP2022-041

SHEET NO.
SP-2



LEGEND

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ICV	EX. IRRIGATION CONTROL VALVE
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	EXISTING CHAIN LINK FENCE
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	EDGE OF ASPHALT
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1000	CROSS–SECTION LOCATION– CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT
	PROPOSED GRAVEL SURFACING

NOTES:

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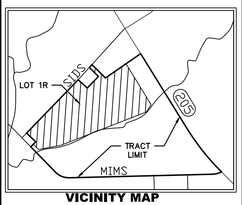

VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21

DATE
10/14/2022

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
SITE PLAN

CASE# SP2022-041

SHEET NO.
SP-3

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
TBPE No. F-1515

Rayburn Electric COOPERATIVE

STATE OF TEXAS
BRIAN PAUL PATRICK
80844
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PROFESSIONAL ENGINEER

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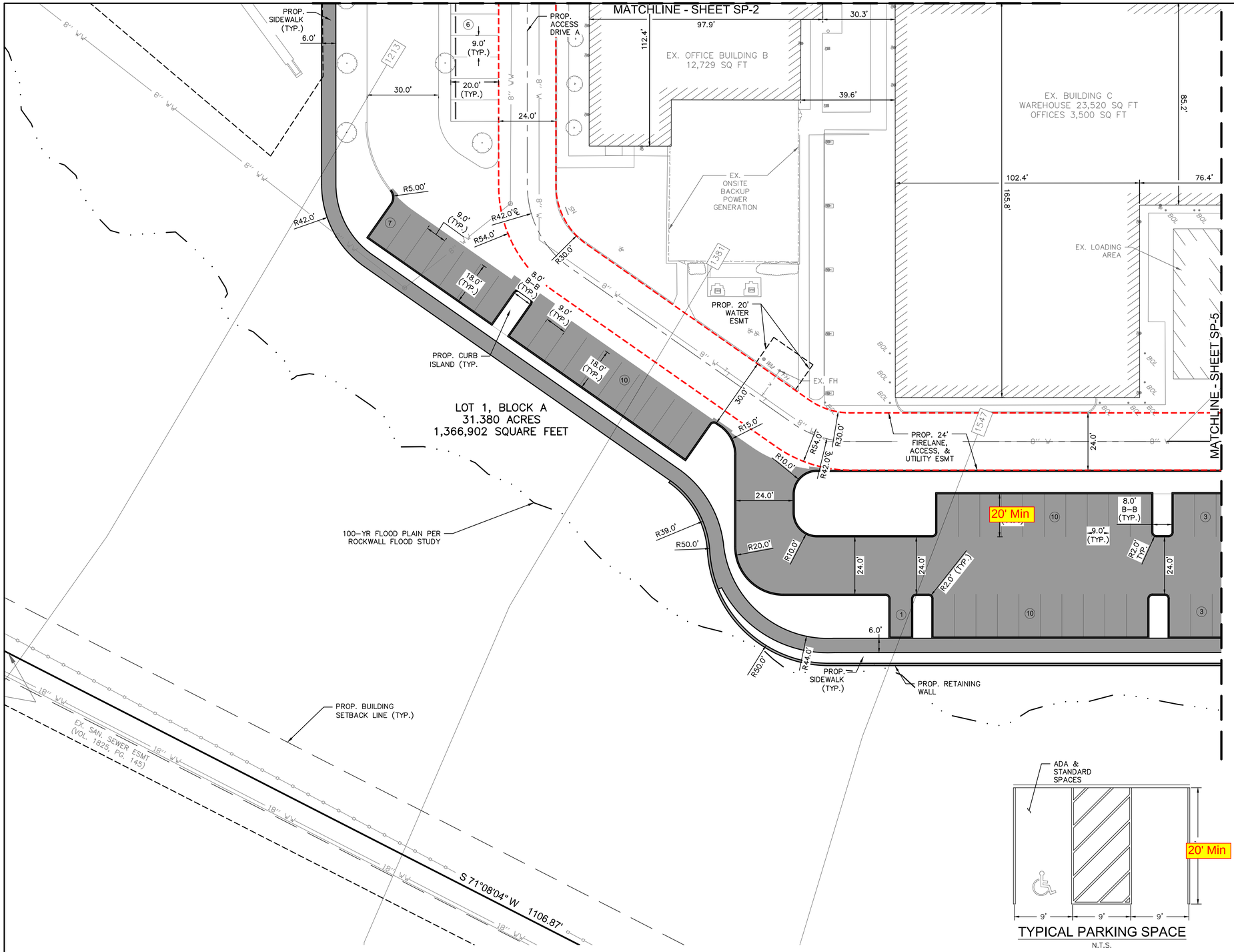

LEGEND

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ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
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1000	CROSS-SECTION LOCATION-CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT

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TYPICAL PARKING SPACE
N.T.S.

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
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STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

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SYSKA HENNESSY GROUP
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OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
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ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
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Rayburn Electric COOPERATIVE

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BRIAN PAUL PATRICK
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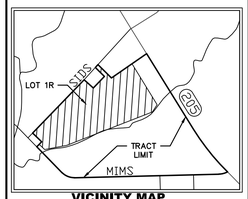

VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21

DATE
10/14/2022

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
SITE PLAN

CASE# SP2022-041

SHEET NO.
SP-4

MATCHLINE - SHEET SP-3

MATCHLINE - SHEET SP-4

MATCHLINE - SHEET SP-6

EX. BUILDING C
WAREHOUSE 23,520 SQ FT
OFFICES 3,500 SQ FT

PROP. BUILDING F
WAREHOUSE
10,560 SQ FT

PROP. BUILDING E
OFFICE
23,000 SQ FT

LOT 1, BLOCK A
31.380 ACRES
1,366,902 SQUARE FEET

PROP. ACCESS DRIVE A

PROP. ACCESS DRIVE B

PROP. 24' FIRELANE, ACCESS, & UTILITY ESMT

PROP. 8" SANITARY SEWER (PRIVATE)

PROP. SIDEWALK (TYP.)

PROP. OUTSIDE STORAGE

PROP. EMERG. GENERATOR

PROP. 20' WATER ESMT

PROP. RELOCATED ABOVE GROUND FUEL TANKS W/ CANOPY

PROP. CURB ISLAND (TYP.

PROP. FH

PROP. BFR (TYP.)

PROP. 8" WATER (FIRE)

PROP. SSMH (TYP.)

PROP. RETAINING WALL

PROP. AMENITY & DETENTION POND (SEE SHEET SP-7)

PROP. DRAINAGE & DETENTION ESMT (SEE SHEET SP-7)

EX. 8" WATER TO BE ABANDONED

REPLACE EX. DUMPSTER ENCLOSURE

EX. LOADING AREA

100-YR FLOOD PLAIN PER ROCKWALL FLOOD STUDY

20' Min

SIDEWALK (TYP.)

LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
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1000	CROSS-SECTION LOCATION-CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT
	PROPOSED GRAVEL SURFACING

GRAPHIC SCALE IN FEET
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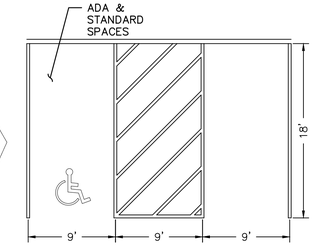
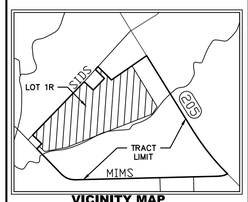


TYPICAL PARKING SPACE
N.T.S.



VICINITY MAP
NTS

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HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
TBPE No. F-1515

STATE OF TEXAS
BRIAN PAUL PATRICK
80844
REGISTERED
PROFESSIONAL ENGINEER

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PROJECT NUMBER
3036.21

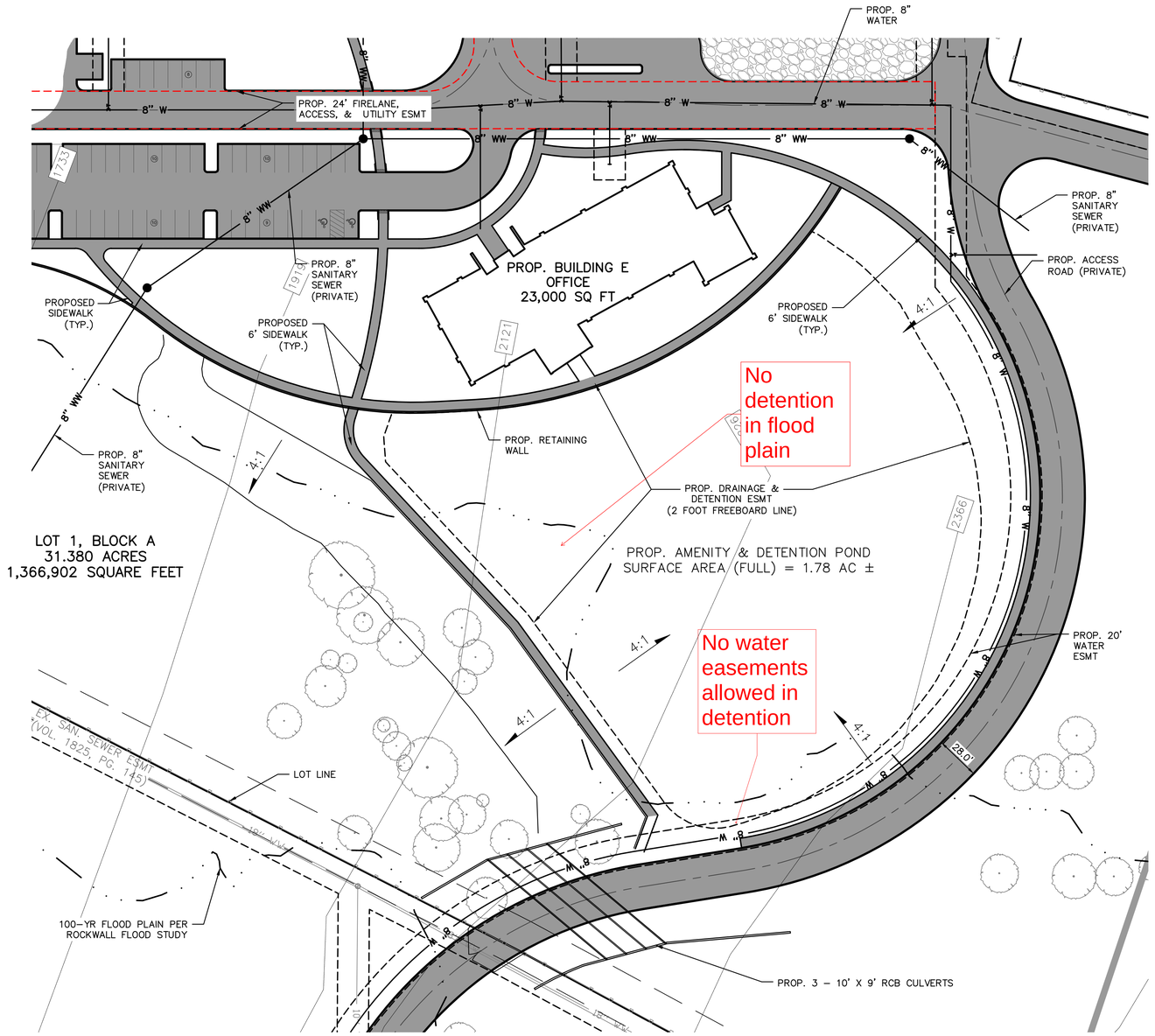
DATE
10/14/2022

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
SITE PLAN

CASE# SP2022-041

SHEET NO.
SP-5



40 20 0 40

GRAPHIC SCALE IN FEET
SCALE: 1" = 40'

LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
TPED	EX. TELEPHONE PEDESTAL
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	EX. GUY WIRE
	EX. FLOOD LIGHT
	EDGE OF ASPHALT
	PROP. WROUGHT IRON FENCE
	100-YR FLOOD PLAIN-ROCKWALL
	BFR - CONSTRUCT BARRIER FREE RAMP WITH TRUNCATED DOMED PANELS PER CITY DETAILS. NO EXTRA PAY ITEM FOR MONOLITHIC CURBS.
	ACCESSIBLE AISLE STRIPING
1000	CROSS-SECTION LOCATION-CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT

NOTES:

1. ALL SIDEWALKS ARE 6' UNLESS OTHERWISE INDICATED.
2. ALL RADII ARE 2' UNLESS OTHERWISE INDICATED.
3. ALL DIMENSIONS ARE TO THE FACE OF CURB OR EDGE OF PAVEMENT.
4. SEE SHEET SP (1 OF 2) FOR SITE INFORMATION AND PARKING INFORMATION.

HKS

ARCHITECT
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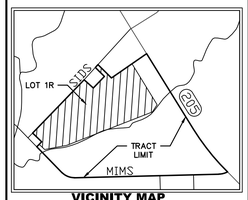


VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21
DATE
10/14/2022
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SITE PLAN
CASE# SP2022-041

SHEET NO.
SP-7

DEVELOPMENT APPLICATION

City of Rockwall
Planning and Zoning Department
385 S. Goliad Street
Rockwall, Texas 75087

STAFF USE ONLY

PLANNING & ZONING CASE NO.

NOTE: *THE APPLICATION IS NOT CONSIDERED ACCEPTED BY THE CITY UNTIL THE PLANNING DIRECTOR AND CITY ENGINEER HAVE SIGNED BELOW.*

DIRECTOR OF PLANNING:

CITY ENGINEER:

PLEASE CHECK THE APPROPRIATE BOX BELOW TO INDICATE THE TYPE OF DEVELOPMENT REQUEST [SELECT ONLY ONE BOX]:

PLATTING APPLICATION FEES:
- ☐ MASTER PLAT ($100.00 + $15.00 ACRE) [1]
- ☐ PRELIMINARY PLAT ($200.00 + $15.00 ACRE) [1]
- ☐ FINAL PLAT ($300.00 + $20.00 ACRE) [1]
- ☐ REPLAT ($300.00 + $20.00 ACRE) [1]
- ☐ AMENDING OR MINOR PLAT ($150.00)
- ☐ PLAT REINSTATEMENT REQUEST ($100.00)

SITE PLAN APPLICATION FEES:
- ☑ SITE PLAN ($250.00 + $20.00 ACRE) [1]
- ☐ AMENDED SITE PLAN/ELEVATIONS/LANDSCAPING PLAN ($100.00)

ZONING APPLICATION FEES:
- ☐ ZONING CHANGE ($200.00 + $15.00 ACRE) [1]
- ☐ SPECIFIC USE PERMIT ($200.00 + $15.00 ACRE) [1 & 2]
- ☐ PD DEVELOPMENT PLANS ($200.00 + $15.00 ACRE) [1]

OTHER APPLICATION FEES:
- ☐ TREE REMOVAL ($75.00)
- ☐ VARIANCE REQUEST/SPECIAL EXCEPTIONS ($100.00) [2]

NOTES:
[1]: IN DETERMINING THE FEE, PLEASE USE THE EXACT ACREAGE WHEN MULTIPLYING BY THE PER ACRE AMOUNT. FOR REQUESTS ON LESS THAN ONE ACRE, ROUND UP TO ONE (1) ACRE.
[2]: A ***$1,000.00*** FEE WILL BE ADDED TO THE APPLICATION FEE FOR ANY REQUEST THAT INVOLVES CONSTRUCTION WITHOUT OR NOT IN COMPLIANCE TO AN APPROVED BUILDING PERMIT.

PROPERTY INFORMATION [PLEASE PRINT]

ADDRESS	950 Sids Road, Rockwall, Texas				
SUBDIVISION	Rayburn Country Addition	LOT		BLOCK	
GENERAL LOCATION					

ZONING, SITE PLAN AND PLATTING INFORMATION [PLEASE PRINT]

CURRENT ZONING	AG, C and HC	CURRENT USE	Rayburn Electric's Headquarters		
PROPOSED ZONING	AG, C and HC	PROPOSED USE	Rayburn Electric's Headquarters		
ACREAGE	99.849	LOTS [CURRENT]	Four (4)	LOTS [PROPOSED]	Four (4)

☑ ***SITE PLANS AND PLATS:*** *BY CHECKING THIS BOX YOU ACKNOWLEDGE THAT DUE TO THE PASSAGE OF HB3167 THE CITY NO LONGER HAS FLEXIBILITY WITH REGARD TO ITS APPROVAL PROCESS, AND FAILURE TO ADDRESS ANY OF STAFF'S COMMENTS BY THE DATE PROVIDED ON THE DEVELOPMENT CALENDAR WILL RESULT IN THE DENIAL OF YOUR CASE.*

OWNER/APPLICANT/AGENT INFORMATION [PLEASE PRINT/CHECK THE PRIMARY CONTACT/ORIGINAL SIGNATURES ARE REQUIRED]

☐ OWNER	Rayburn Country Electric Coop.	☐ APPLICANT	R-Delta Engineers, Inc.
CONTACT PERSON	Stephen Geiger	CONTACT PERSON	Frank A. Polma, P.E.
ADDRESS	950 Sids Road	ADDRESS	618 Main Street
CITY, STATE & ZIP	Rockwall, Texas, 75087	CITY, STATE & ZIP	Garland, Texas, 75040
PHONE	(469) 402-2112	PHONE	(972) 494-5031
E-MAIL	sgeiger@rayburnelectric.com	E-MAIL	fapolma@rdelta.com

NOTARY VERIFICATION [REQUIRED]

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED Stephen Geiger [*OWNER*] THE UNDERSIGNED, WHO STATED THE INFORMATION ON THIS APPLICATION TO BE TRUE AND CERTIFIED THE FOLLOWING:

"I HEREBY CERTIFY THAT I AM THE OWNER FOR THE PURPOSE OF THIS APPLICATION; ALL INFORMATION SUBMITTED HEREIN IS TRUE AND CORRECT; AND THE APPLICATION FEE OF $ 2,246.98 *, TO COVER THE COST OF THIS APPLICATION, HAS BEEN PAID TO THE CITY OF ROCKWALL ON THIS THE* 14th *DAY OF* October *, 2022. BY SIGNING THIS APPLICATION, I AGREE THAT THE CITY OF ROCKWALL (I.E. "CITY") IS AUTHORIZED AND PERMITTED TO PROVIDE INFORMATION CONTAINED WITHIN THIS APPLICATION TO THE PUBLIC. THE CITY IS ALSO AUTHORIZED AND PERMITTED TO REPRODUCE ANY COPYRIGHTED INFORMATION SUBMITTED IN CONJUNCTION WITH THIS APPLICATION, IF SUCH REPRODUCTION IS ASSOCIATED OR IN RESPONSE TO A REQUEST FOR PUBLIC INFORMATION."*

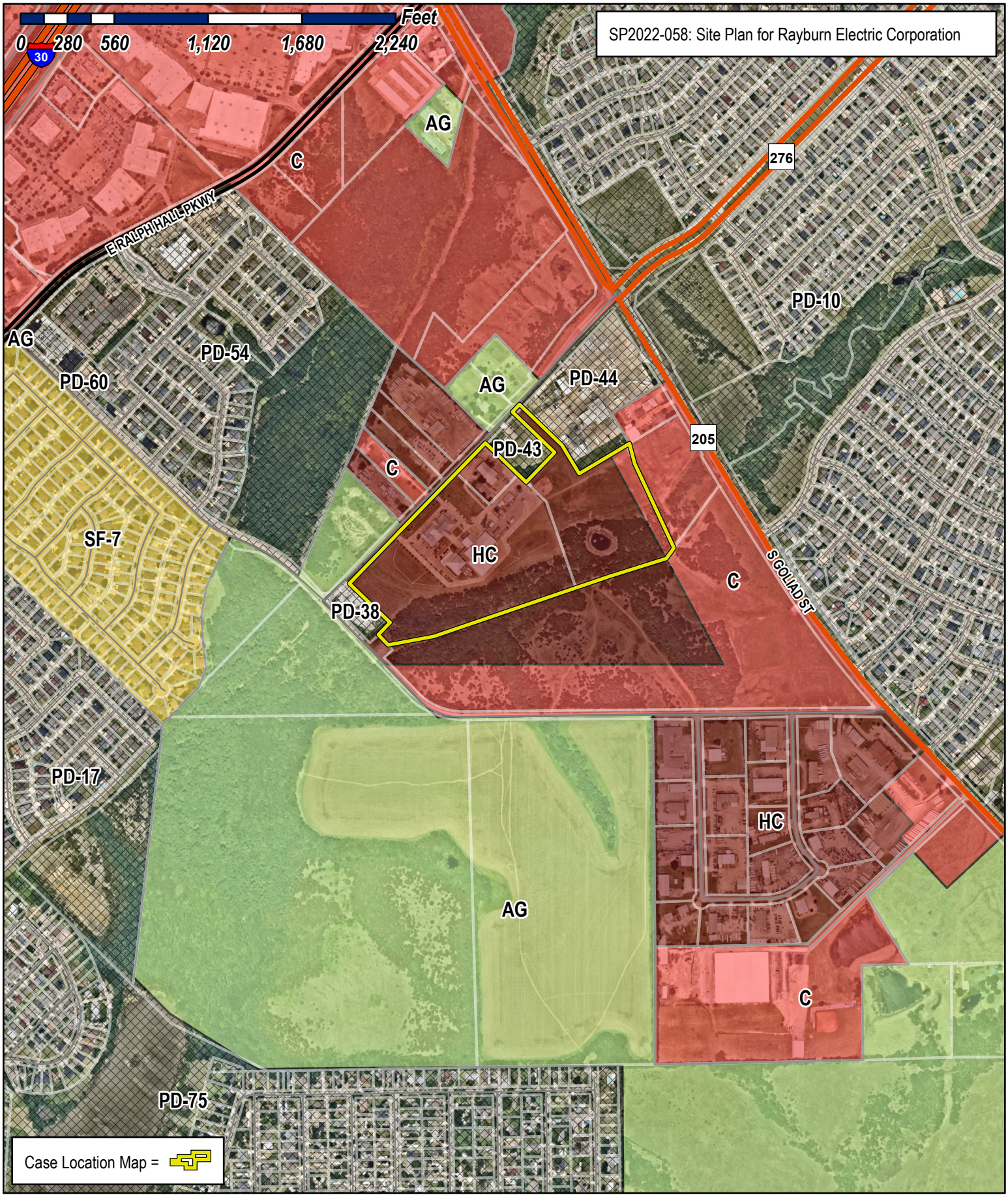
GIVEN UNDER MY HAND AND SEAL OF OFFICE ON THIS THE 12 *DAY OF* October *, 2022*

OWNER'S SIGNATURE Stephanie Hunt

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS Stephanie Hunt

STEPHANIE HUNT
Notary Public, State of Texas
Comm. Expires 09-01-2024
Notary ID 11508120

MY COMMISSION EXPIRES



City of Rockwall

Planning & Zoning Department
385 S. Goliad Street
Rockwall, Texas 75032
(P): (972) 771-7745
(W): www.rockwall.com

The City of Rockwall GIS maps are continually under development and therefore subject to change without notice. While we endeavor to provide timely and accurate information, we make no guarantees. The City of Rockwall makes no warranty, express or implied, including warranties of merchantability and fitness for a particular purpose. Use of the information is the sole responsibility of the user.

r.delta ENGINEERS

October 14, 2022

City of Rockwall, Texas
385 S. Goliad Street
Rockwall, Texas 75087

ATTENTION: **Mr. Henry Lee, AICP**
Planner

SUBJECT: **REC Campus Expansion – Case #SP2022-041**
Variance Requests

Dear Mr. Lee,

Pursuant to submittal of the project Site Plan and supporting documents and on behalf of Rayburn Country Electric Cooperative (REC); we request consideration of the following requests for variances to the City's development requirements and Unified Development Code (UDC):

- Above Ground Fuel Tank Screening: Subsection 01.05 of the UDC requires screening utilizing walls matching the main structure. The proposed fuel storage tank is internal to the site and not visible from any public right-of-way. We request that this requirement be waived since walls would serve purpose screening the fuel storage tank from public view.
- Mims Road Reconstruction: City Engineering comments on the Preliminary Plat indicate that the Owner must reconstruct Mims Road as a 29-foot wide paving section. REC requests that this requirement be deferred until such time as development of Lot 3. Block A occurs. At this time REC proposes only to connect one access drive to Mims Road. The access drive will be private, gated, and used for property maintenance access purposes.
- Driveway Spacing Variance: A variance to the minimum spacing requirement is requested for the proposed Access Drive connection to State Highway 205. Preliminary discussions with the Texas Department of Transportation indicate they would permit the reduced driveway spacing if the driveway connection is constructed in the "right in" "right out" configuration shown on the Site Plan. The proposed access drive connection to State Highway 205 will be gated and is intended mainly for egress of the REC Mobile Substation.

- Outdoor Storage Area Screening Variance: A partial variance for screening of the proposed gravel laydown yard from SH 205 is requested due to its distance from the roadway. We request that only canopy trees along a portion of the proposed access drive be required to screen the outdoor storage area as shown in the Landscape Plans in lieu of a masonry wall or the full landscape screening.

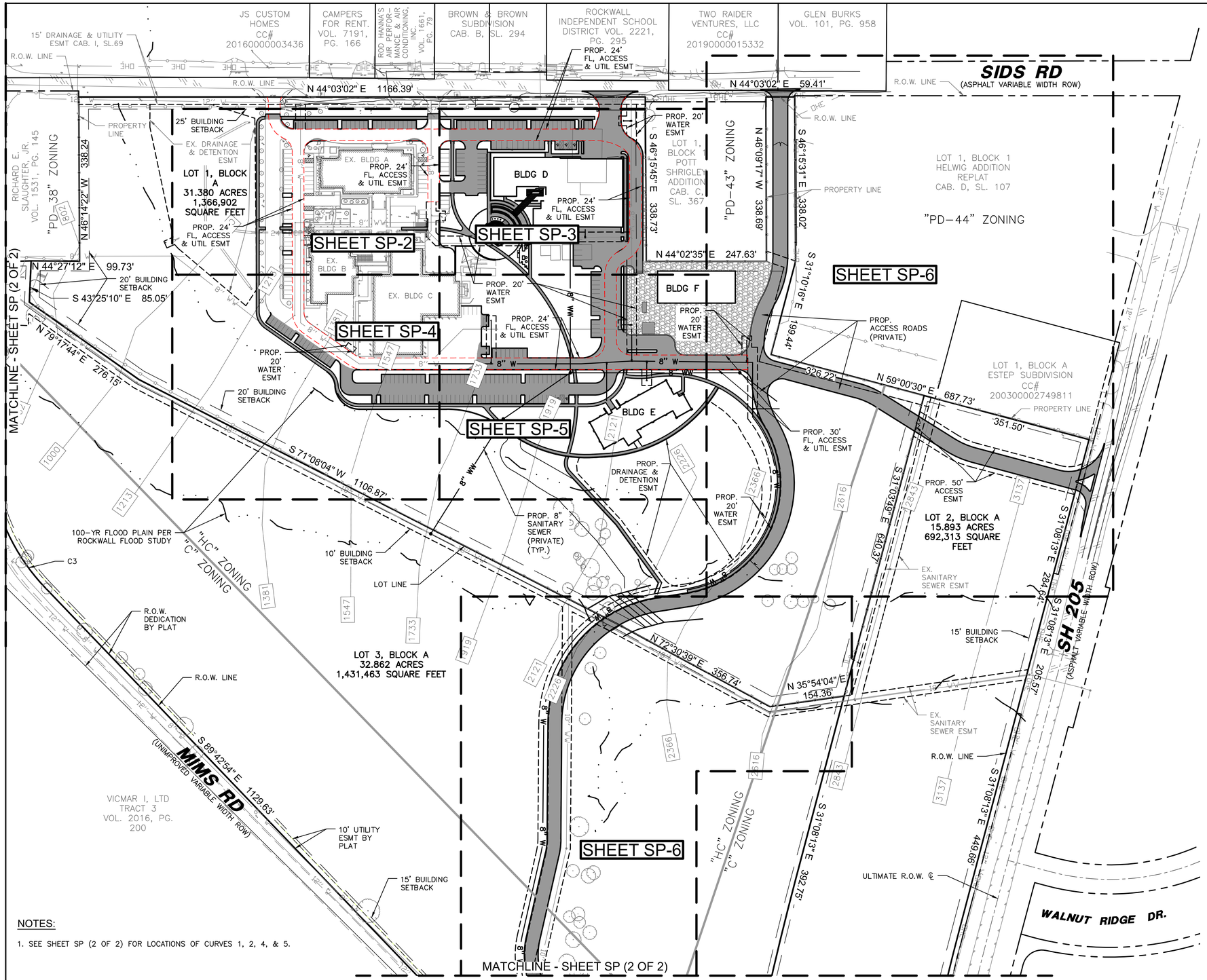
We greatly appreciate your consideration of these variance requests.

Best Regards,

R-DELTA ENGINEERS, INC.
TBPE Firm No. F-001515

Frank A. Polma, P.E.
President

Cc: Mr. Stephen Geiger, P.E. – Rayburn Electric Cooperative



LEGEND

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	PROPOSED CONCRETE PAVEMENT
	PROPOSED GRAVEL SURFACING

GRAPHIC SCALE IN FEET
SCALE: 1" = 100'

EXISTING SITE PARKING DATA

PUBLIC SPACES	ACCESSIBLE SPACES	TOTAL
125	5	130

PROPOSED SITE PARKING DATA

PUBLIC SPACES	ACCESSIBLE SPACES	TOTAL
262	9	271

SITE INFORMATION:

EXISTING ZONING: HEAVY COMMERCIAL (HC), COMMERCIAL (C), & AGRICULTURAL (AG)

PROPOSED ZONING: NO CHANGE

PROPOSED USE: EXPANSION OF EXISTING SITE TO INCLUDE 2 NEW OFFICE BUILDINGS, TRUCK WAREHOUSE, AND LAYDOWN STORAGE WAREHOUSE

TOTAL AREA LOT 1: 1,366,902 SQ FT 31.38 AC
TOTAL AREA LOTS 1-4: 4,146,392 SQ FT 95.19 AC

LOT 1 "HC" ZONING

MAXIMUM BUILDING HEIGHT: 60 FT
MAXIMUM LOT COVERAGE: 60%
MAXIMUM FLOOR AREA RATIO: 4:1
MAXIMUM IMPERVIOUS PARKING: 90-95%

PROPOSED MAX. BUILDING D HEIGHT: 40'
PROPOSED MAX. BUILDING E HEIGHT: 46'-4"
PROPOSED MAX. BUILDING F HEIGHT: 26'-8"
PROPOSED LOT COVERAGE: 106,281/1,366,902 = 7.8%
PROPOSED FLOOR AREA RATIO: 113,260/1,366,902 = 0.08:1
PROPOSED IMPERVIOUS PARKING: 67,476/1,366,902 = 4.9%

EXISTING PARKING:
EXISTING WAREHOUSE 23,520 SQ FT (1:1000) = 24 SPACES
EXISTING OFFICE 31,530 SQ FT (1:300) = 106 SPACES
REMOVED OFFICE 7,700 SQ FT (1:300) = -26 SPACES

EXISTING REQUIRED PARKING = 104 SPACES

REQUIRED PARKING:
PROPOSED WAREHOUSE D 12,750 SQ FT (1:1000) = 13 SPACES
PROPOSED OFFICE D 19,600 SQ FT (1:300) = 66 SPACES
PROPOSED OFFICE E 23,000 SQ FT (1:300) = 77 SPACES
PROPOSED WAREHOUSE F 10,560 SQ FT (1:1000) = 11 SPACES

TOTAL REQUIRED PARKING = 271 SPACES
TOTAL PROVIDED PARKING = 271 SPACES

NOTES:

1. SEE SHEET SP (2 OF 2) FOR LOCATIONS OF CURVES 1, 2, 4, & 5.

BOUNDARY CURVE DATA					
CURVE	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	11°11'01"	5,779.71'	1,128.15'	S 36°43'43" E	1,126.36'
C2	46°17'44"	450.00'	363.60'	N 66°34'02" W	353.79'
C3	36°44'03"	482.50'	309.35'	S 61°47'11" E	304.08'
C4	129°16'42"	40.00'	90.25'	S 23°55'53" W	72.29'
C5	7°41'42"	6,142.03'	824.89'	N 34°59'04" W	824.27'

APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ___ day of _____, 202_.

WITNESS OUR HANDS, this ___ day of _____, 202_.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

PAVEMENT INFORMATION:

ALL PAVEMENTS BELOW HAVE #3 BARS 24" O.C.E.W.

PAVEMENT TYPE	THICKNESS (INCHES)	28-DAY (PSI)	MIN. CEMENT (SACKS/CY) MACHINE	HAND
FIRE LANE	6"	3,600	6.0	6.5
DRIVEWAYS	6"	3,600	6.0	6.5
BARRIER FREE RAMPS	6"	3,600	6.0	6.5
DUMPSTER PADS	7"	3,600	6.0	6.5
SIDEWALKS	4"	3,000	N/A	5.5
PARKING LOT/ DRIVE AISLES	5"	3,000	5.0	5.5

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1-4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

HKS

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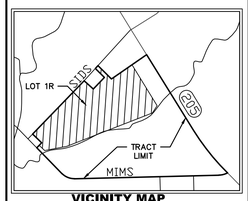

VICINITY MAP
NTS

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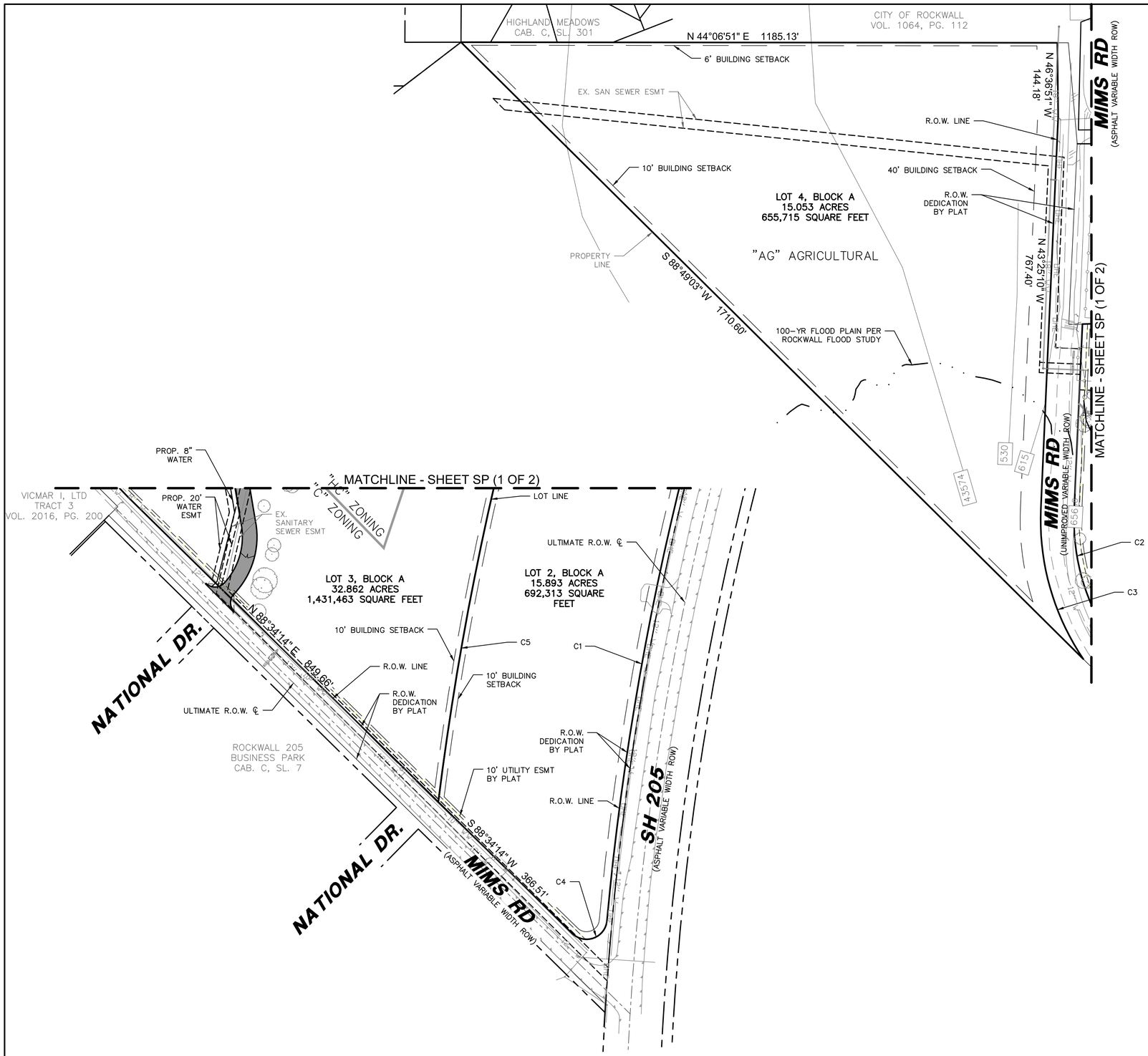
SP (1 OF 2)



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GRAPHIC SCALE IN FEET
SCALE: 1" = 100'

NOTES:

1. SEE SHEET SP (2 OF 2) FOR BOUNDARY CURVE DATA.

SITE INFORMATION:

SEE SP (1 OF 2)

PAVEMENT INFORMATION:

SEE SP (1 OF 2)

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
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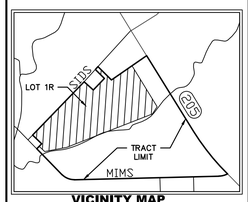

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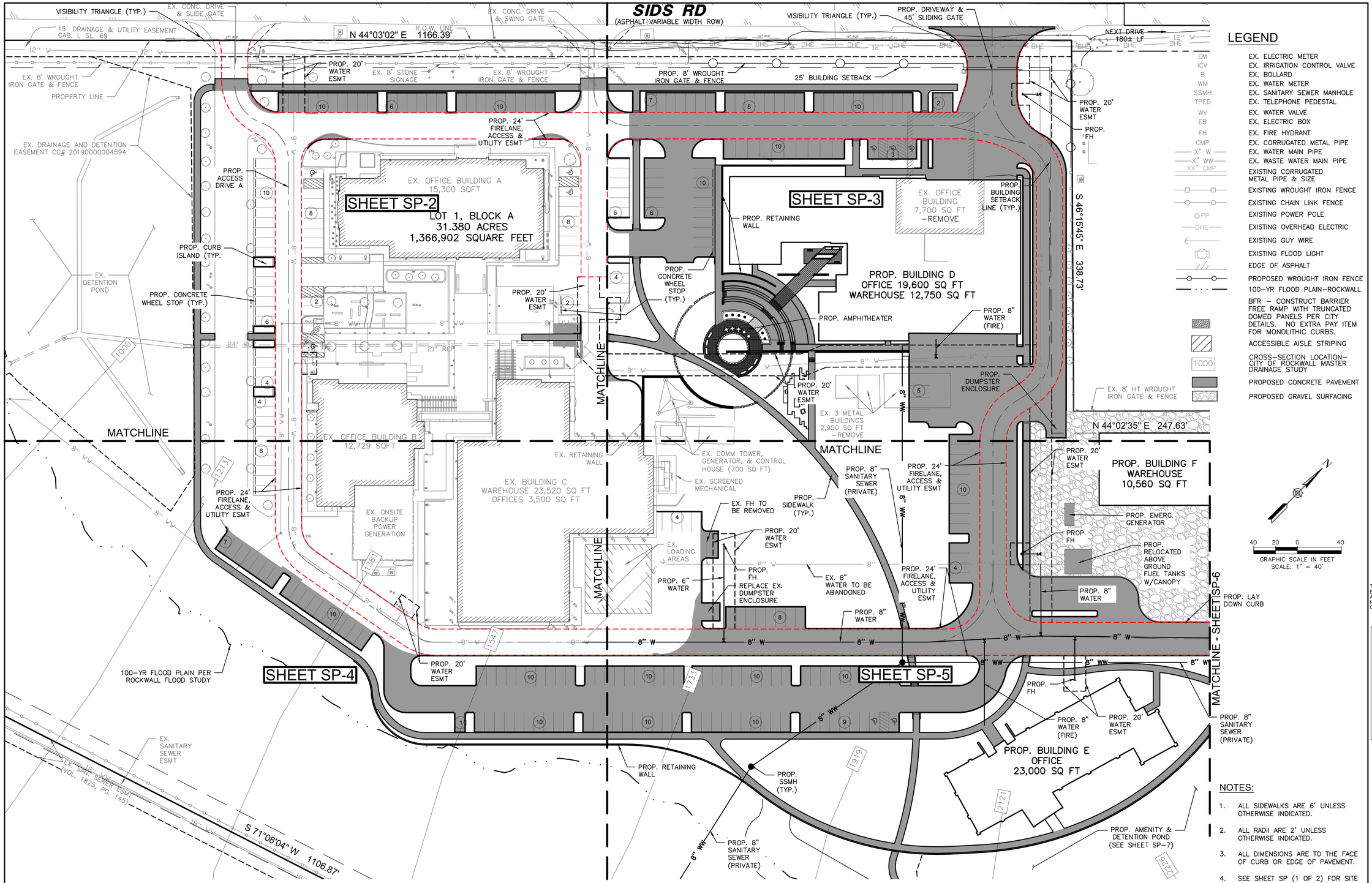
SP (2 OF 2)



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- PROPOSED GRAVEL SURFACING

NOTES:

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2. ALL RADII ARE 2' UNLESS OTHERWISE INDICATED.
3. ALL DIMENSIONS ARE TO THE FACE OF CURB OR EDGE OF PAVEMENT.
4. SEE SHEET SP (1 OF 2) FOR SITE INFORMATION AND PARKING INFORMATION.

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
TBPE No. F-1515

Rayburn Electric COOPERATIVE

STATE OF TEXAS
BRIAN PAUL PATRICK
80844
REGISTERED
PROFESSIONAL ENGINEER

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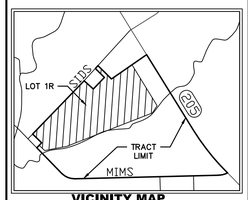


VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21

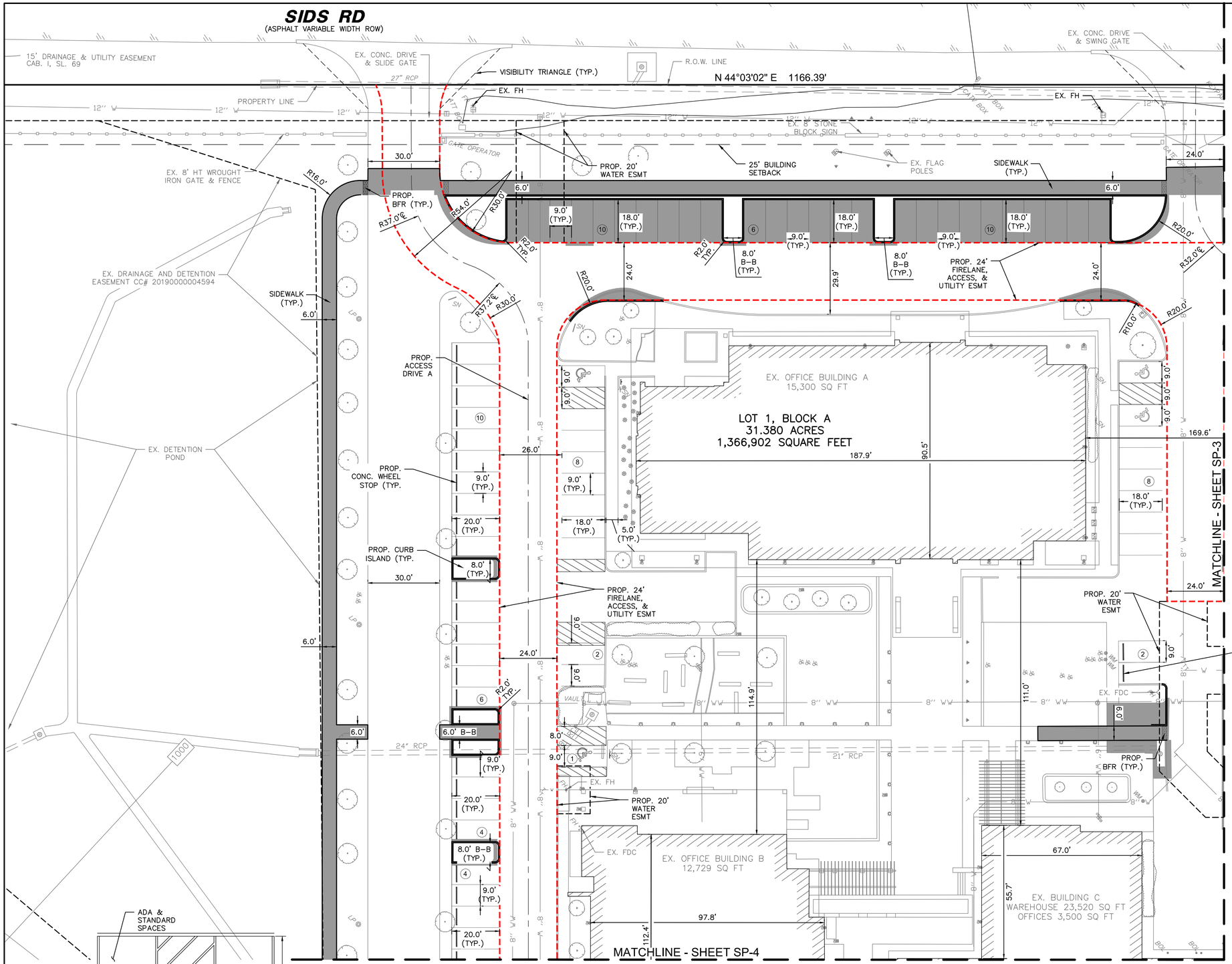
DATE
10/14/2022

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
SITE PLAN

CASE# SP2022-041

SHEET NO.
SP-1



GRAPHIC SCALE IN FEET
SCALE: 1" = 20'

LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
TPED	EX. TELEPHONE PEDESTAL
WV	EX. WATER VALVE
EB	EX. ELECTRIC BOX
FH	EX. FIRE HYDRANT
CMP	EX. CORRUGATED METAL PIPE
X" W	EX. WATER MAIN PIPE
X" WW	EX. WASTE WATER MAIN PIPE
XX" CMP	EXISTING CORRUGATED METAL PIPE & SIZE
	EXISTING WROUGHT IRON FENCE
	EXISTING CHAIN LINK FENCE
PP	EXISTING POWER POLE
OHE	EXISTING OVERHEAD ELECTRIC
	EXISTING GUY WIRE
	EXISTING FLOOD LIGHT
	EDGE OF ASPHALT
	PROPOSED WROUGHT IRON FENCE
	100-YR FLOOD PLAIN-ROCKWALL
	BFR – CONSTRUCT BARRIER FREE RAMP WITH TRUNCATED DOMED PANELS PER CITY DETAILS. NO EXTRA PAY ITEM FOR MONOLITHIC CURBS.
	ACCESSIBLE AISLE STRIPING
1000	CROSS-SECTION LOCATION- CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT

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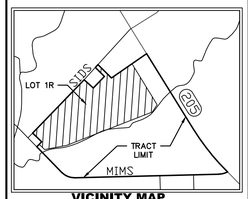

VICINITY MAP
NTS

REVISION

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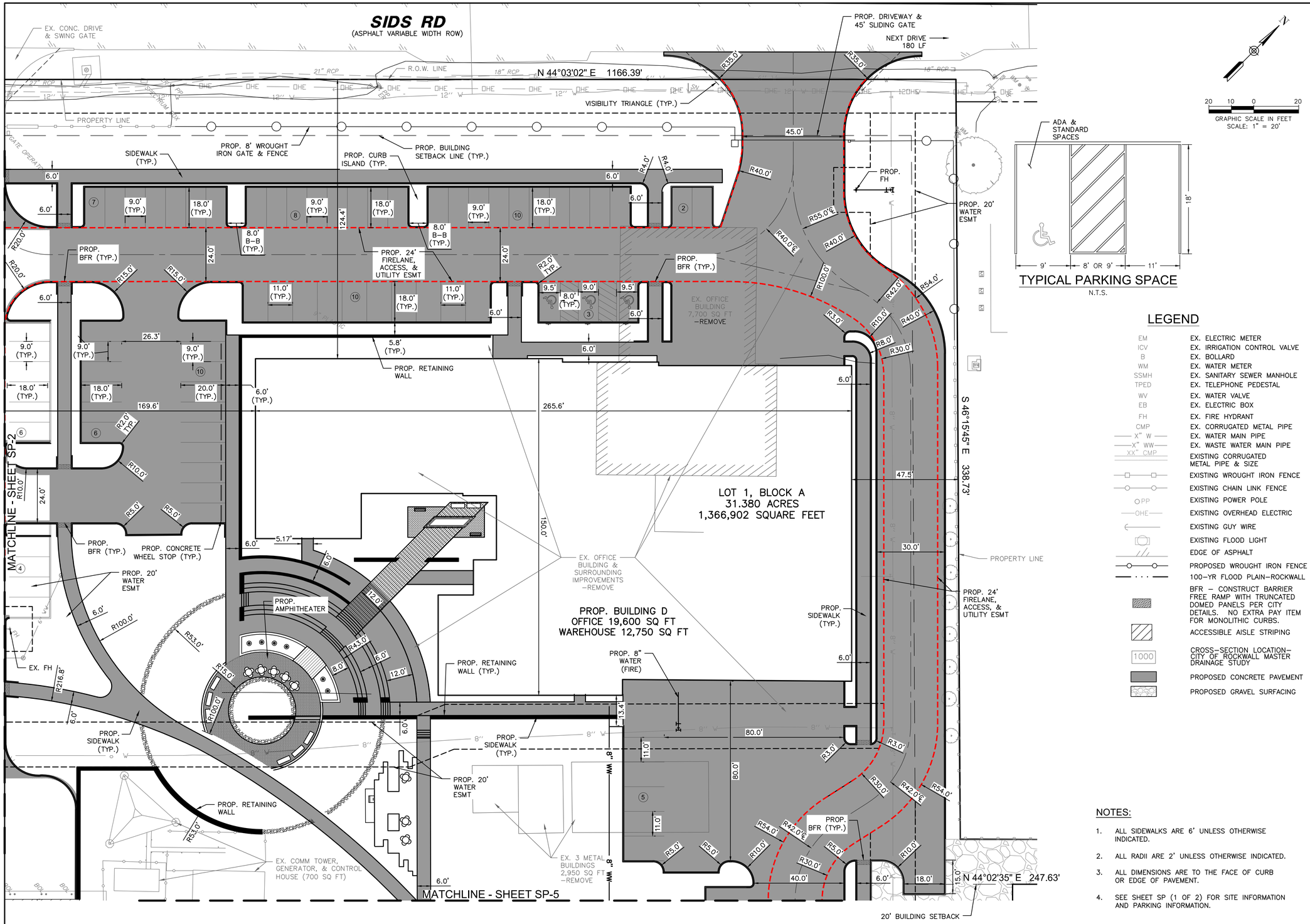
SHEET TITLE
SITE PLAN
CASE# SP2022-041

SHEET NO.
SP-2



TYPICAL PARKING SPACE
N.T.S.

LEGEND

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ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
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1000	CROSS–SECTION LOCATION– CITY OF ROCKWALL MASTER DRAINAGE STUDY
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469-402-2100

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Rayburn Electric COOPERATIVE

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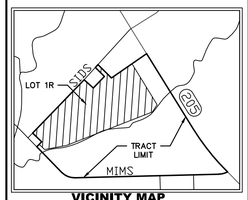

VICINITY MAP
NTS

REVISION

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PROJECT NUMBER
3036.21

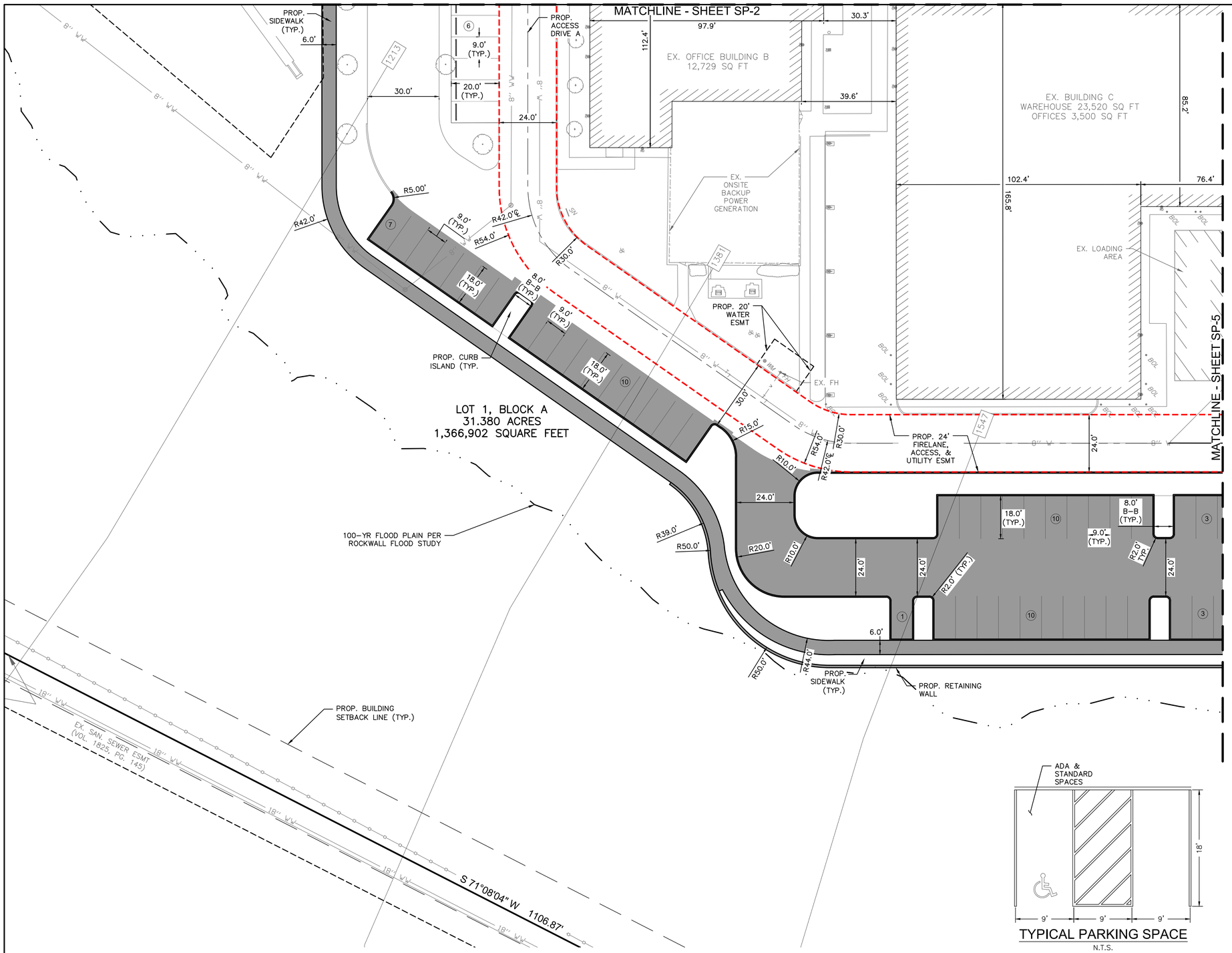
DATE
10/14/2022

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
SITE PLAN

CASE# SP2022-041

SHEET NO.
SP-3



LEGEND

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TYPICAL PARKING SPACE
N.T.S.

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HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

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MEP ENGINEERS
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DALLAS, TX 75206

OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
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REC Rayburn Electric COOPERATIVE

STATE OF TEXAS
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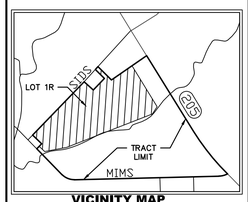

VICINITY MAP
NTS

REVISION

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3036.21
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ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SITE PLAN
CASE# SP2022-041

SHEET NO.
SP-4

MATCHLINE - SHEET SP-3

MATCHLINE - SHEET SP-4

MATCHLINE - SHEET SP-6

EX. BUILDING C
WAREHOUSE 23,520 SQ FT
OFFICES 3,500 SQ FT

PROP. BUILDING F
WAREHOUSE
10,560 SQ FT

PROP. BUILDING E
OFFICE
23,000 SQ FT

LOT 1, BLOCK A
31.380 ACRES
1,366,902 SQUARE FEET

PROP. ACCESS DRIVE A

PROP. ACCESS DRIVE B

PROP. 24' FIRELANE, ACCESS, & UTILITY ESMT

PROP. 8" SANITARY SEWER (PRIVATE)

PROP. SIDEWALK (TYP.)

SIDEWALK (TYP.)

PROP. CURB ISLAND (TYP.

PROP. OUTSIDE STORAGE

PROP. EMERG. GENERATOR

PROP. 20' WATER ESMT

PROP. RELOCATED ABOVE GROUND FUEL TANKS W/ CANOPY

PROP. FH

EX. 8" WATER TO BE ABANDONED

REPLACE EX. DUMPSTER ENCLOSURE

EX. LOADING AREA

PROP. BFR (TYP.)

PROP. SSMH (TYP.)

PROP. RETAINING WALL

PROP. AMENITY & DETENTION POND (SEE SHEET SP-7)

PROP. DRAINAGE & DETENTION ESMT (SEE SHEET SP-7)

100-YR FLOOD PLAIN PER ROCKWALL FLOOD STUDY

LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
TPED	EX. TELEPHONE PEDESTAL
WV	EX. WATER VALVE
EB	EX. ELECTRIC BOX
FH	EX. FIRE HYDRANT
CMP	EX. CORRUGATED METAL PIPE
X" W	EX. WATER MAIN PIPE
X" WW	EX. WASTE WATER MAIN PIPE
XX" CMP	EX. CORRUGATED METAL PIPE & SIZE
	EX. WROUGHT IRON FENCE
	EX. CHAIN LINK FENCE
PP	EX. POWER POLE
OHE	EX. OVERHEAD ELECTRIC
	EX. GUY WIRE
	EX. FLOOD LIGHT
	EDGE OF ASPHALT
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1000	CROSS-SECTION LOCATION-CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT
	PROPOSED GRAVEL SURFACING

GRAPHIC SCALE IN FEET
SCALE: 1" = 20'

NOTES:

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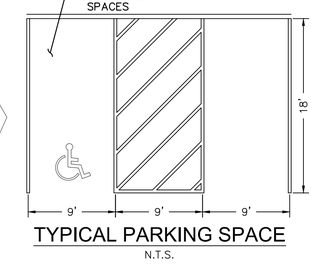

TYPICAL PARKING SPACE
N.T.S.

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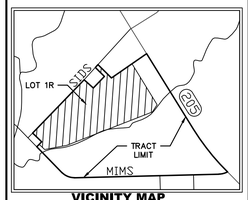

VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

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DATE
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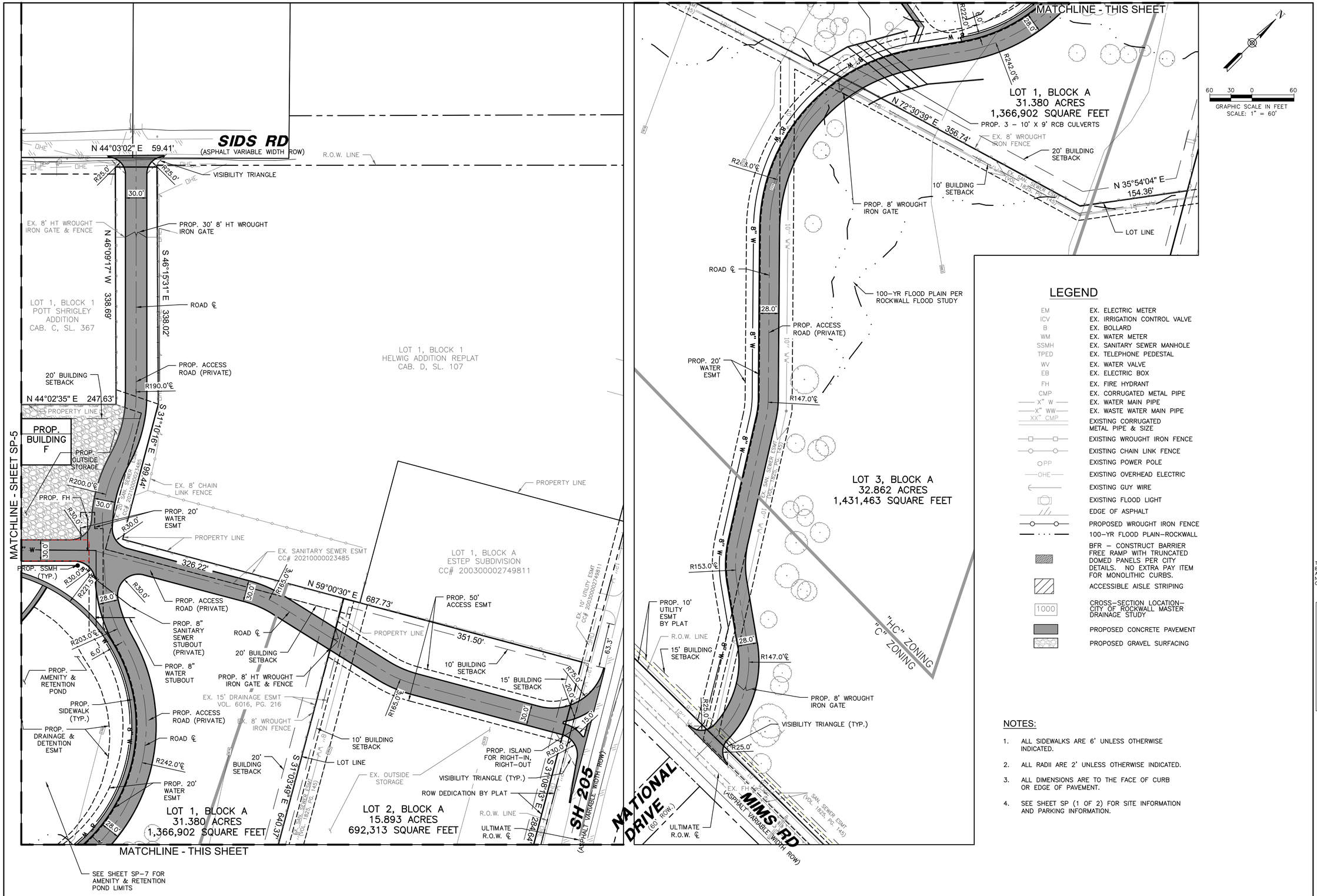
ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
SITE PLAN

CASE# SP2022-041

SHEET NO.
SP-5



LEGEND

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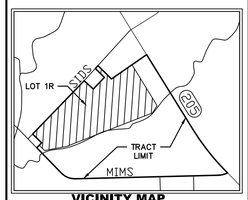

VICINITY MAP
NTS

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DATE
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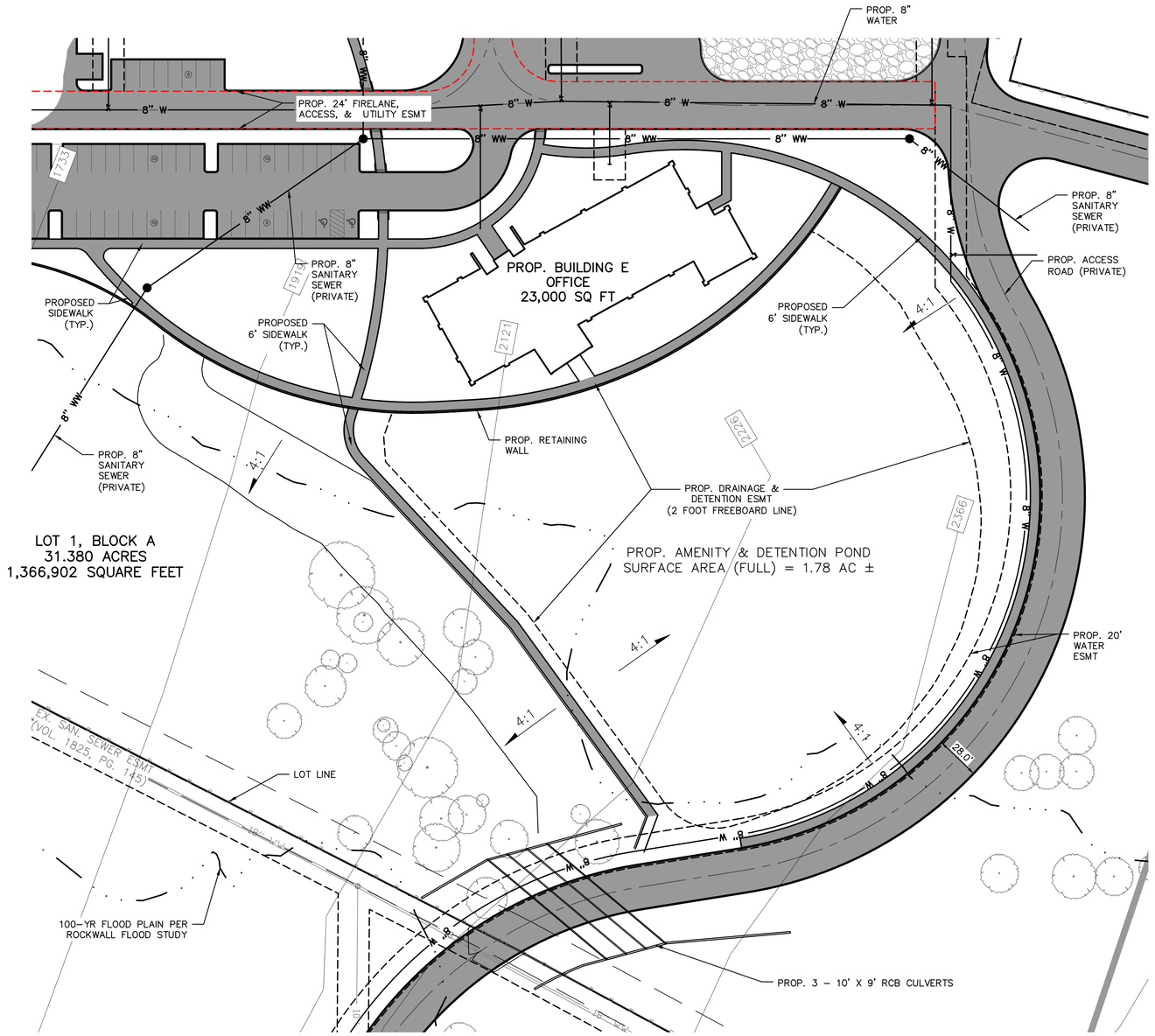
ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
SITE PLAN

CASE# SP2022-041

SHEET NO.
SP-6



40 20 0 40

GRAPHIC SCALE IN FEET
SCALE: 1" = 40'

LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
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DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

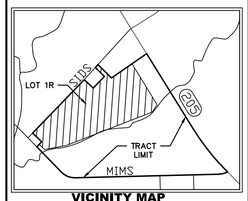
MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
TBPE No. F-1515

STATE OF TEXAS
BRIAN PAUL PATRICK
80844
REGISTERED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BRIAN PAUL PATRICK, P.E. 80844 ON 10/14/2022. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.



VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21
DATE
10/14/2022
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SITE PLAN
CASE# SP2022-041

SHEET NO.
SP-7

ELEVATION MATERIAL CALCULATIONS

MATERIAL:	AMOUNT (SF):	AMOUNT%:
**NORTH		
PORTLAND CEMENT PLASTER (PCP01)	460	16
WOOD SIDING (WD01)	160	6
STONE VENEER (ST01)	607	21
GLAZING (GL01)	710	24
TILT UP CONCRETE PANELS (PC01)	975	33
TOTAL:	2,912*	100
SOUTH		
PORTLAND CEMENT PLASTER (PCP01)	547	14
WOOD SIDING (WD01)	0	0
STONE VENEER (ST01)	635	16
GLAZING (GL01)	1,374	34
TILT UP CONCRETE PANELS (PC01)	1,457	36
TOTAL:	4,013*	100
EAST		
PORTLAND CEMENT PLASTER (PCP01)	54	1
WOOD SIDING (WD01)	0	0
STONE VENEER (ST01)	120	3
GLAZING (GL01)	475	11
TILT UP CONCRETE PANELS (PC01)	3540	85
TOTAL:	4189	100
WEST		
PORTLAND CEMENT PLASTER (PCP01)	1465	31
WOOD SIDING (WD01)	154	3
STONE VENEER (ST01)	680	14
GLAZING (GL01)	950	19
TILT UP CONCRETE PANELS (PC01)	1,629	33
TOTAL:	4878	100

** Designates elevations adjacent to Public ROW

EXTERIOR MATERIALS LEGEND

ST01:
a. STONE TYPE: LIMESTONE
b. STONE NAME: LEUDERS CHOPPED BUFF
c. GROUT/SEALANT COLOR: MATCH EXISTING
d. LOCATION: EXTERIOR STONE MASONRY VENEER

AMF01:
a. MATERIAL TYPE: ALUMINIUM
b. FINISH TYPE: ANODIZED
c. ANODIZED COLOR: DARK BRONZE
d. COATING COLOR: MATCH EXISTING
e. LOCATION: MULLIONS

AMF02:
a. MATERIAL TYPE: STEEL
b. FINISH TYPE: HIGH-PERFORMANCE ORGANIC FLUOROPOLYMER
c. COATING COLOR: MATCH PT02
d. LOCATION: EXPOSED TRELLIS COLUMNS

AMF03:
a. MATERAL TYPE: STEEL
b. COATING COLOR: MATCH EXISTING ROOF, BERRIDGE PREWEATHERED GALVALUME
c. MATTE FINISH
d. LOCATION: STANDING SEAM METAL ROOF

WD01:
a. SPECIES AND CUT: WESTERN RED CEDAR
b. FINISH: CLEAR MATTE FINISH
c. LOCATION: WOOD BEAM CLADDING. EXTERIOR SOFFITS, INTERIOR CEILINGS AND TRIM.

CSM01:
a. MATERIAL TYPE: CAST STONE
b. COLOR: NATURAL
c. AGGREGATE:
d. EXPOSED TEXTURE FINISH: [SMOOTH] [HONED] [SAND TEXTURE]
e. LOCATION: WAINSCOT SILL @ STONE, PARAPET CAP

PCP01:
a. MATERIAL TYPE: PORTLAND CEMENT PLASTER
b. COLOR: MATCH SW 9111 ANTLER VELVET

PC01:
a. MATERIAL TYPE: TILT UP CONCRETE PANELS
b. COLOR: MATCH SW 9111 ANTLER VELVET

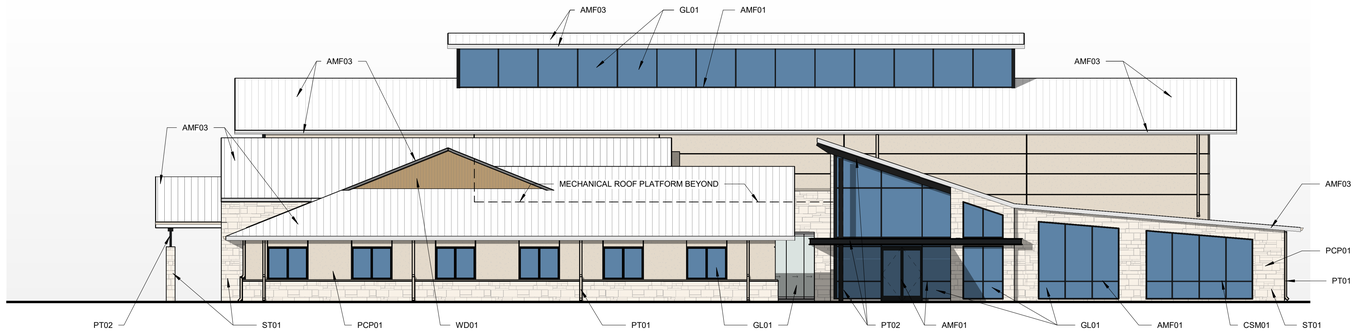
PT01:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: GUTTERS AND DOWNSPOUTS

PT02:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: EXPOSED STRUCTURAL STEEL & ENTRY CANOPIES

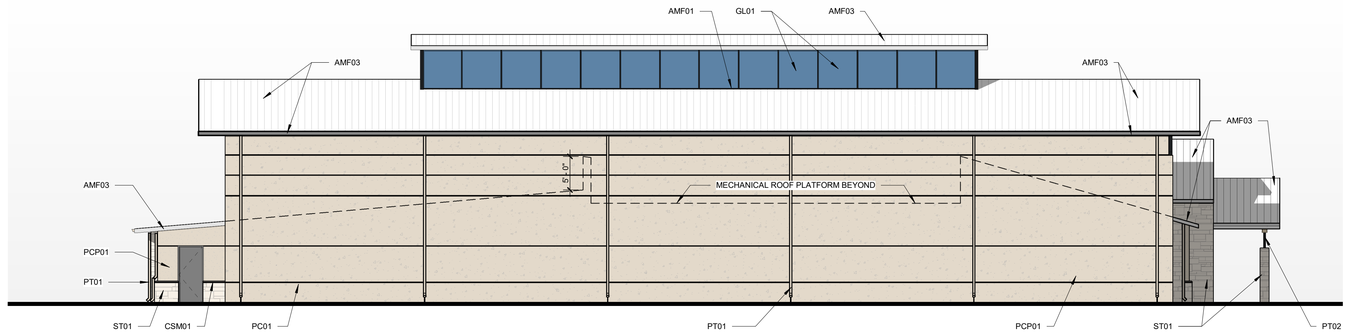
GL01: INSULATING COATED GLASS - VISION
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: CLEAR HS; 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE.
3) AIR SPACE: 1/2"; ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS

GL02: INSULATING COATED GLASS - SPANDREL
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: SPANDREL 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE.
3) AIR SPACE: 1/2"; ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS
COLOR: V908 GRAY

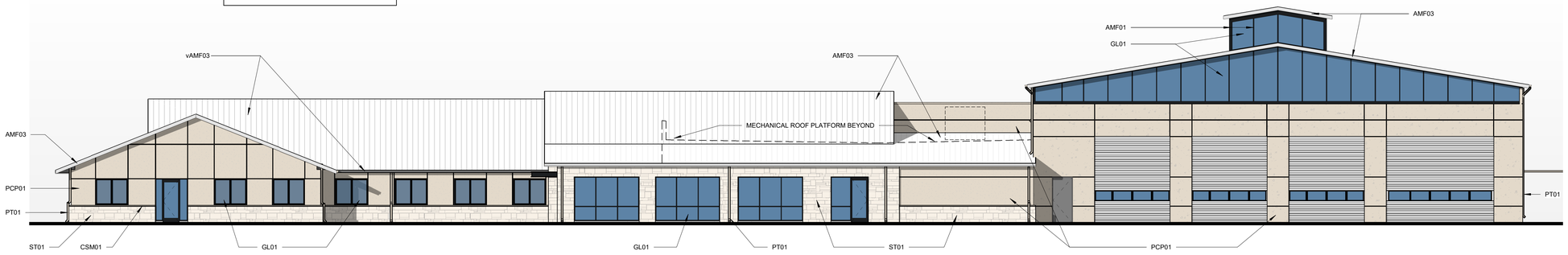
CMU01:
a. MANUFACTURER: FEATHERLITE
b. SPLIT FACE MASONRY BLOCK
c. COLOR: CREAM



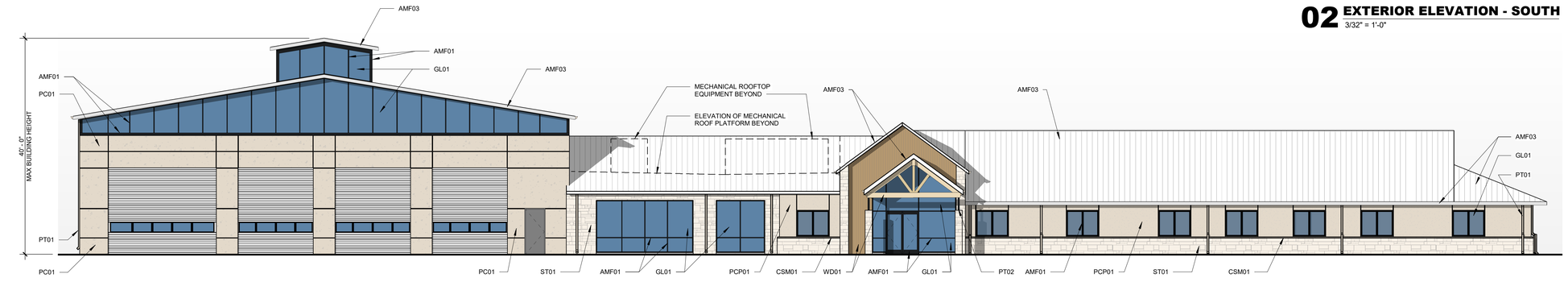
04 EXTERIOR ELEVATION - WEST
3/32" = 1'-0"



03 EXTERIOR ELEVATION - EAST
3/32" = 1'-0"



02 EXTERIOR ELEVATION - SOUTH
3/32" = 1'-0"



01 EXTERIOR ELEVATION - NORTH
3/32" = 1'-0"

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618 MAIN STREET
GARLAND, TEXAS 75040

Rayburn Electric COOPERATIVE

INTERIM REVIEW ONLY

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Architect:
Arch. Reg. No.:
Date:

KEY PLAN

REVISION
NO. DESCRIPTION DATE

HKS PROJECT NUMBER
25370.000
DATE
10/14/22
ISSUE

SHEET TITLE
EXTERIOR ELEVATIONS - BUILDING D
SHEET NO.
PA5.01

PLOT DATE: 10/14/2022 12:33:31 PM TEMPLATE VERSION: 21.0.0.20200831

ELEVATION MATERIAL CALCULATIONS

MATERIAL:	AMOUNT (SF):	AMOUNT%:
NORTH		
PORTLAND CEMENT PLASTER (PCP01)	270	4
WOOD SIDING (WD01)	180	2
STONE VENEER (ST01)	2560	34
GLAZING (GL01)	4366	60
TOTAL:	7376*	100
SOUTH		
PORTLAND CEMENT PLASTER (PCP01)	270	4
WOOD SIDING (WD01)	93	1
STONE VENEER (ST01)	2473	34
GLAZING (GL01)	4421	61
TOTAL:	7257	100
EAST		
PORTLAND CEMENT PLASTER (PCP01)	110	3
WOOD SIDING (WD01)	56	2
STONE VENEER (ST01)	1683	53
GLAZING (GL01)	1313	42
TOTAL:	3162	100
WEST		
PORTLAND CEMENT PLASTER (PCP01)	110	3
WOOD SIDING (WD01)	56	2
STONE VENEER (ST01)	1750	55
GLAZING (GL01)	1273	40
TOTAL:	3189	100

** Designates elevations adjacent to Public ROW

EXTERIOR MATERIALS LEGEND

ST01:
a. STONE TYPE: LIMESTONE
b. STONE NAME: LEUDERS CHOPPED BUFF
c. GROUT/SEALANT COLOR: MATCH EXISTING
d. LOCATION: EXTERIOR STONE MASONRY VENEER

AMF01:
a. MATERIAL TYPE: ALUMINIUM
b. FINISH TYPE: ANODIZED
c. ANODIZED COLOR: DARK BRONZE
d. COATING COLOR: MATCH EXISTING
e. LOCATION: MULLIONS

AMF02:
a. MATERIAL TYPE: STEEL
b. FINISH TYPE: HIGH-PERFORMANCE ORGANIC FLUOROPOLYMER
c. COATING COLOR: MATCH PT02
d. LOCATION: EXPOSED TRELLIS COLUMNS

AMF03:
a. MATERIAL TYPE: STEEL
b. COATING COLOR: MATCH EXISTING ROOF, BERRIDGE PREWEATHERED GALVALUME
c. MATTE FINISH
d. LOCATION: STANDING SEAM METAL ROOF

WD01:
a. SPECIES AND CUT: WESTERN RED CEDAR
b. FINISH: CLEAR MATTE FINISH
c. LOCATION: WOOD BEAM CLADDING. EXTERIOR SOFFITS, INTERIOR CEILINGS AND TRIM.

CSM01:
a. MATERIAL TYPE: CAST STONE
b. COLOR: NATURAL
c. AGGREGATE:
d. EXPOSED TEXTURE FINISH: [SMOOTH] [HONED] [SAND TEXTURE]
e. LOCATION: WAINSCOT SILL @ STONE, PARAPET CAP

PCP01:
a. MATERIAL TYPE: PORTLAND CEMENT PLASTER
b. COLOR: MATCH SW 9111 ANTLER VELVET

PC01:
a. MATERIAL TYPE: TILT UP CONCRETE PANELS
b. COLOR: MATCH SW 9111 ANTLER VELVET

PT01:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: GUTTERS AND DOWNSPOUTS

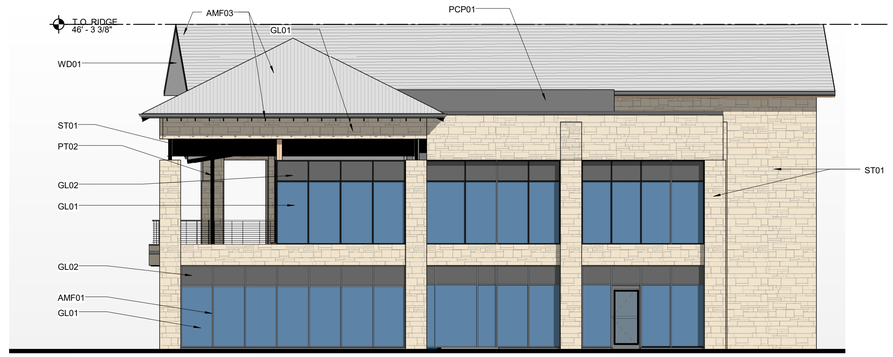
PT02:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: EXPOSED STRUCTURAL STEEL & ENTRY CANOPIES

GL01: INSULATING COATED GLASS - VISION
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: CLEAR HS; 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE
3) AIR SPACE: 1/2"; ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS

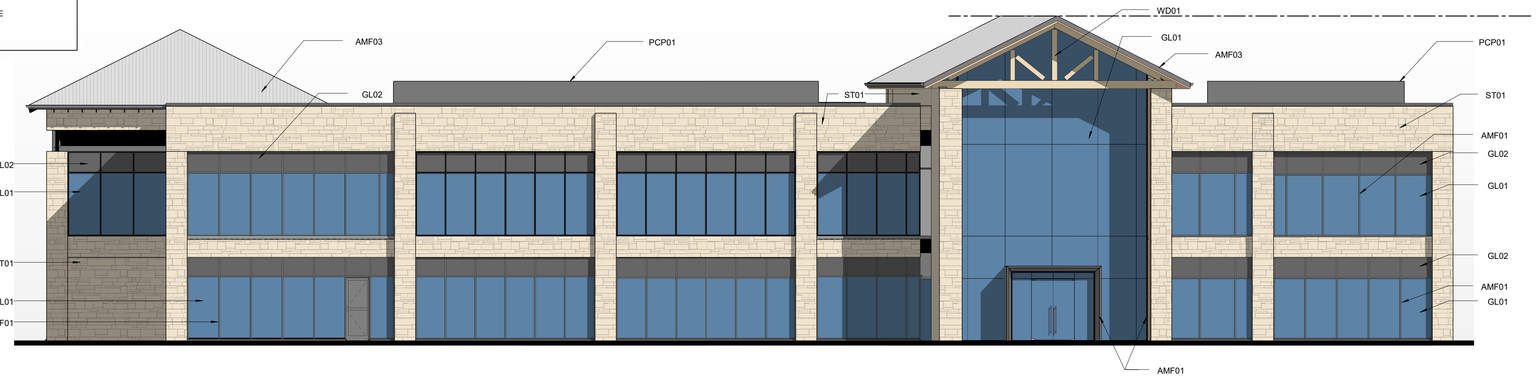
GL02: INSULATING COATED GLASS - SPANDREL
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: SPANDREL 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE
3) AIR SPACE: 1/2"; ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS
COLOR: V908 GRAY

CMU01:
a. MANUFACTURER: FEATHERLITE
b. SPLIT FACE MASONRY BLOCK
c. COLOR: CREAM

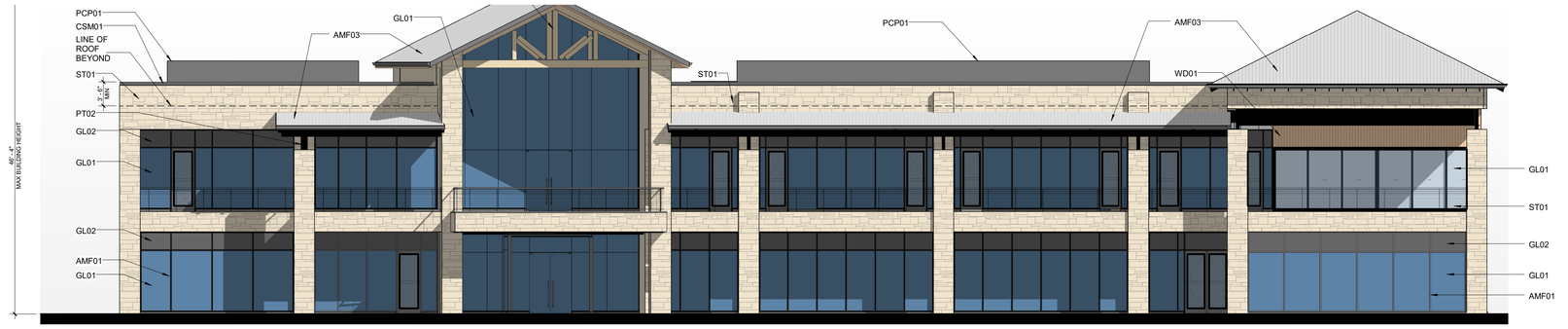
04 EXTERIOR ELEVATION - WEST SD
1/8" = 1'-0"



03 EXTERIOR ELEVATION - EAST SD
1/8" = 1'-0"



02 EXTERIOR ELEVATION - NORTH SD
1/8" = 1'-0



01 EXTERIOR ELEVATION - SOUTH SD
1/8" = 1'-0"

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VVVVPLOT DATE:
TEMPLATE VERSION:

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ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
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Architect: _____
Arch. Reg. No.: _____
Date: _____

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000
DATE
10/14/22
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
EXTERIOR ELEVATIONS - BUILDING E
SHEET NO.
PA5.02

ELEVATION MATERIAL CALCULATIONS

MATERIAL:	AMOUNT (SF):	AMOUNT%:
**NORTH		
CMU SPLIT FACE (CMU01)	2720	100
TOTAL:	2,720*	100
SOUTH		
ALL OPEN		
EAST		
CMU SPLIT FACE (CMU01)	1394	100
TOTAL:	1394	100
WEST		
CMU SPLIT FACE (CMU01)	1394	100
TOTAL:	1394	100

** Designates elevations adjacent to Public ROW

EXTERIOR MATERIALS LEGEND

ST01:
a. STONE TYPE: LIMESTONE
b. STONE NAME: LEUDERS CHOPPED BUFF
c. GROUT/SEALANT COLOR: MATCH EXISTING
d. LOCATION: EXTERIOR STONE MASONRY VENEER

AMF01:
a. MATERIAL TYPE: ALUMINIUM
b. FINISH TYPE: ANODIZED
c. ANODIZED COLOR: DARK BRONZE
d. COATING COLOR: MATCH EXISTING
e. LOCATION: MULLIONS

AMF02:
a. MATERIAL TYPE: STEEL
b. FINISH TYPE: HIGH-PERFORMANCE ORGANIC FLUOROPOLYMER
c. COATING COLOR: MATCH PT02
d. LOCATION: EXPOSED TRELLIS COLUMNS

AMF03:
a. MATERIAL TYPE: STEEL
b. COATING COLOR: MATCH EXISTING ROOF, BERRIDGE PREWEATHERED GALVALUME
c. MATTE FINISH
d. LOCATION: STANDING SEAM METAL ROOF

WD01:
a. SPECIES AND CUT: WESTERN RED CEDAR
b. FINISH: CLEAR MATTE FINISH
c. LOCATION: WOOD BEAM CLADDING. EXTERIOR SOFFITS, INTERIOR CEILINGS AND TRIM.

CSM01:
a. MATERIAL TYPE: CAST STONE
b. COLOR: NATURAL
c. AGGREGATE:
d. EXPOSED TEXTURE FINISH: [SMOOTH] [HONED] [SAND TEXTURE]
e. LOCATION: WAINSCOT SILL @ STONE, PARAPET CAP

PCP01:
a. MATERIAL TYPE: PORTLAND CEMENT PLASTER
b. COLOR: MATCH SW 9111 ANTLER VELVET

PC01:
a. MATERIAL TYPE: TILT UP CONCRETE PANELS
b. COLOR: MATCH SW 9111 ANTLER VELVET

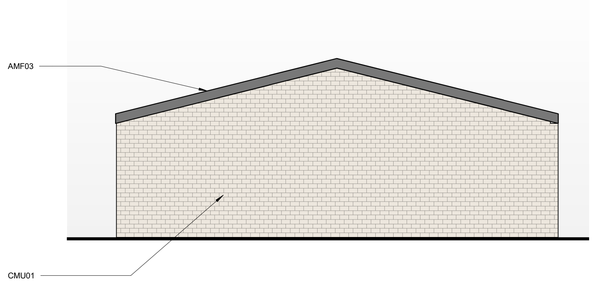
PT01:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: GUTTERS AND DOWNSPOUTS

PT02:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: EXPOSED STRUCTURAL STEEL & ENTRY CANOPIES

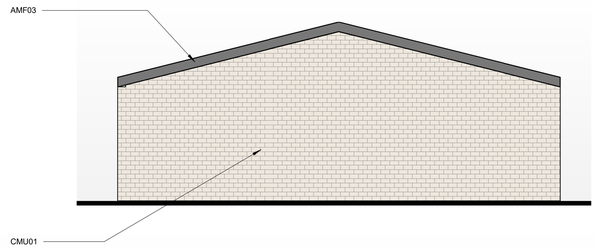
GL01: INSULATING COATED GLASS - VISION
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: CLEAR HS; 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE.
3) AIR SPACE: 1/2", ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS

GL02: INSULATING COATED GLASS - SPANDREL
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: SPANDREL 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE.
3) AIR SPACE: 1/2", ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS COLOR: V908 GRAY

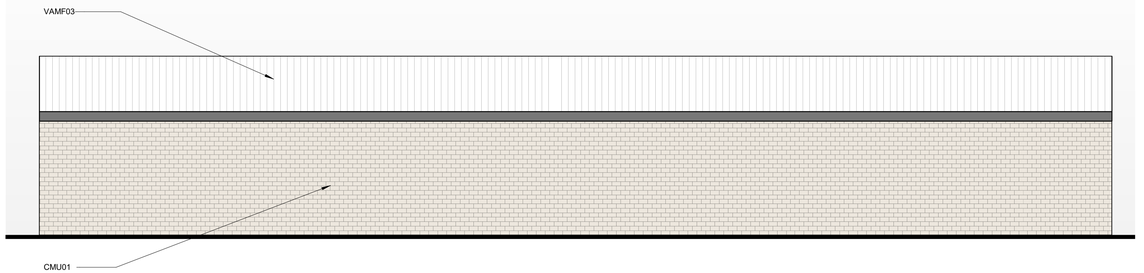
CMU01:
a. MANUFACTURER: FEATHERLITE
b. SPLIT FACE MASONRY BLOCK
c. COLOR: CREAM



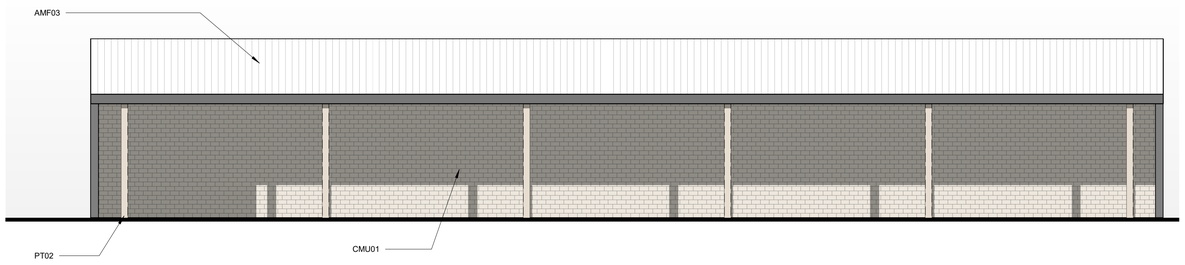
04 EXTERIOR ELEVATION - BUILDING F EAST
3/32" = 1'-0"



03 EXTERIOR ELEVATION - BUILDING F WEST
3/32" = 1'-0"



02 EXTERIOR ELEVATION - BUILDING F NORTH
3/32" = 1'-0"



01 EXTERIOR ELEVATION - BUILDING F SOUTH
3/32" = 1'-0"

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HKS

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Rayburn Electric COOPERATIVE

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Architect:
Arch. Reg. No.:
Date:

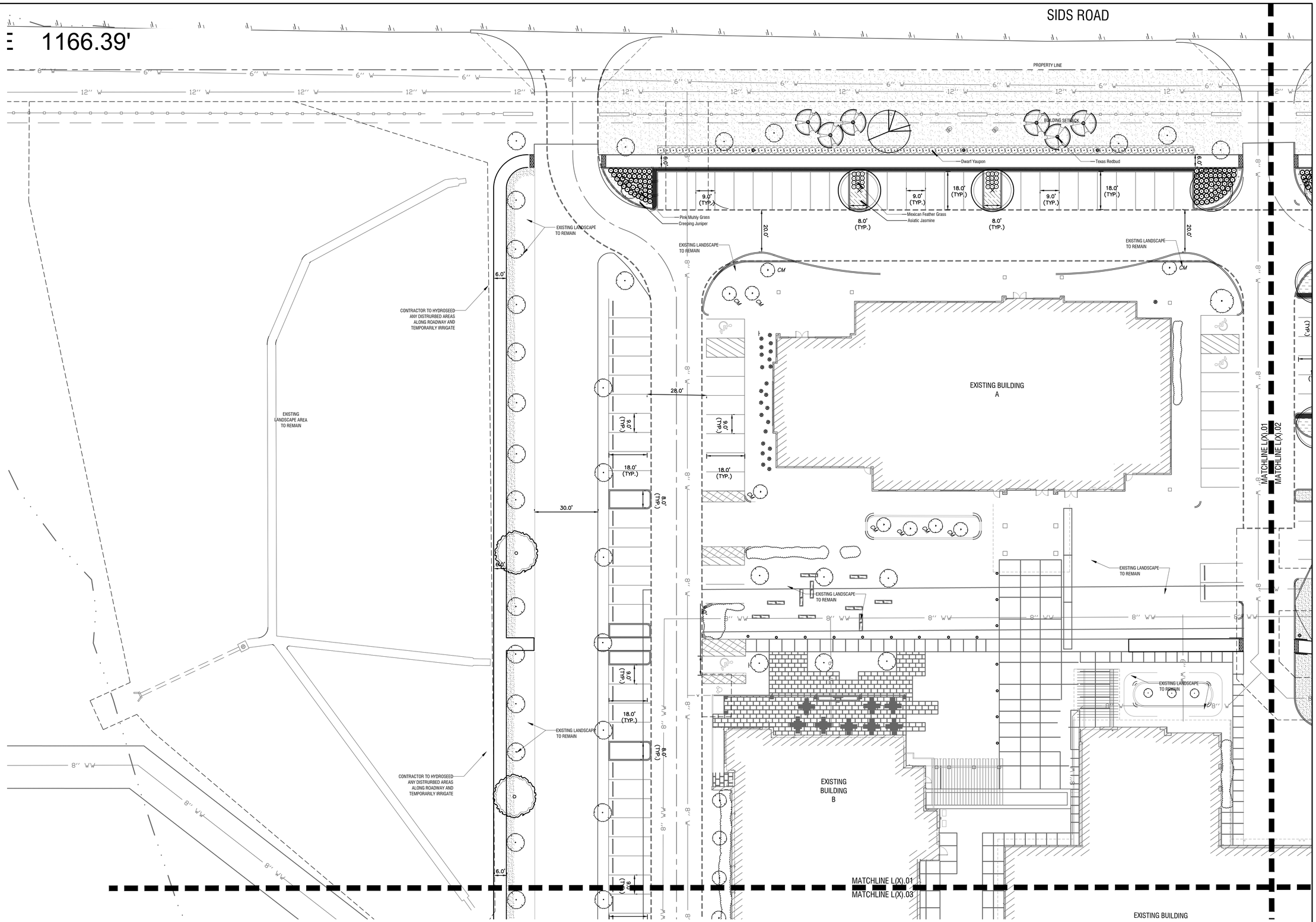
KEY PLAN

REVISION
NO. DESCRIPTION DATE

HKS PROJECT NUMBER
25370.000
DATE
10/14/2022
ISSUE

SHEET TITLE
EXTERIOR ELEVATIONS - BUILDING F
SHEET NO.
PA5.03

PLOT DATE: 10/14/2022 7:55:59 PM TEMPLATE VERSION: 21.0.0.20200831



PLOT DATE:

TEMPLATE VERSION:

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Rayburn Electric COOPERATIVE

PRELIMINARY
FOR REVIEW ONLY
Not for construction or permit purposes.
Kimley»Horn
P.L.A. LANDON R. HUCKINS
L.A. No. 3480 Date 10/14/2022

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

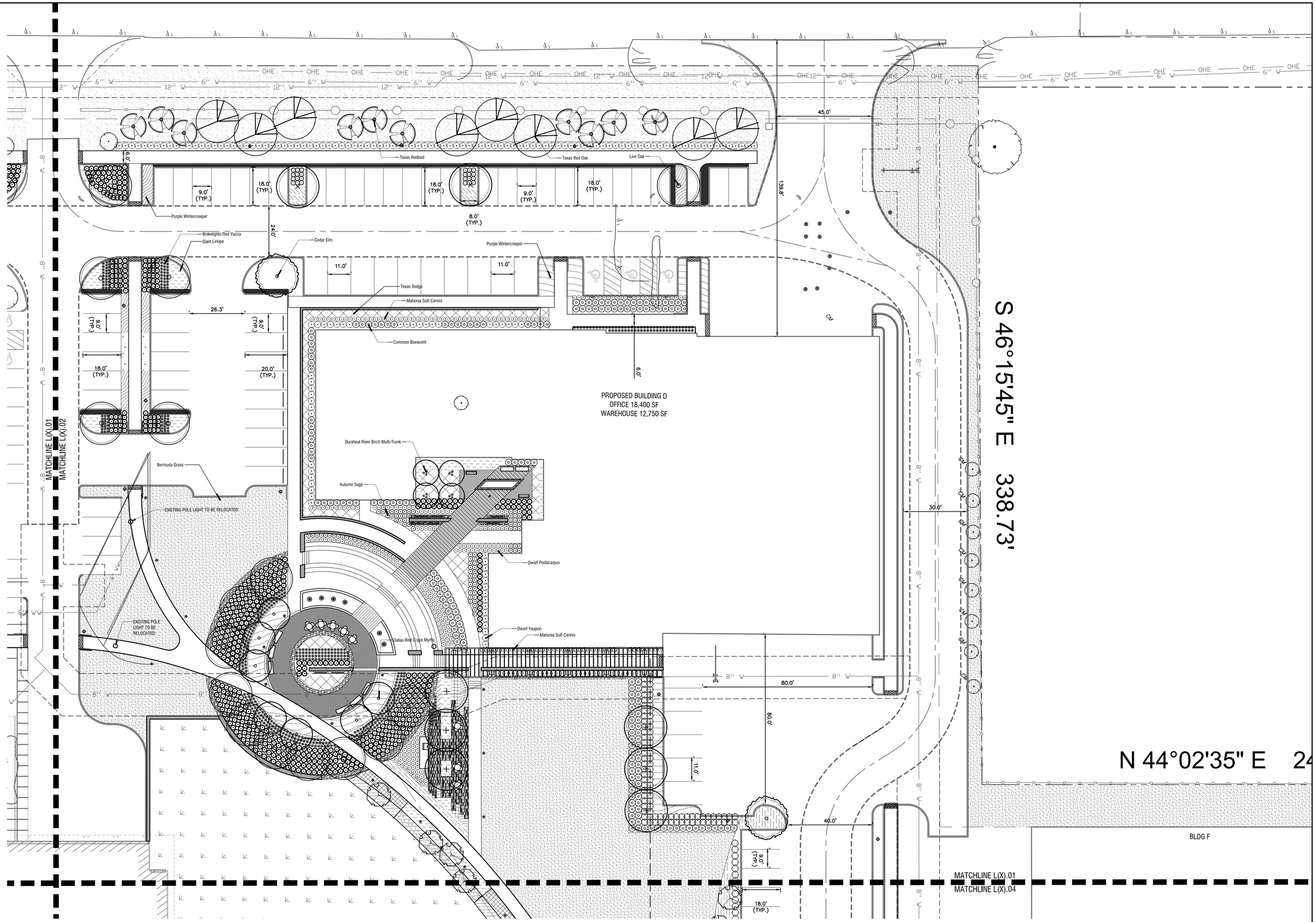
HKS PROJECT NUMBER
25370.000

DATE
10/14/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L5.01



Landscape Plan
Scale: 1" = 20' - 0"

A

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
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DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
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OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

PRELIMINARY
FOR REVIEW ONLY
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Kimley»Horn
P.L.A. LANDON R. HUCKINS
L.A. No. 3480 Date 10/14/2022

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000

DATE
10/14/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L5.02

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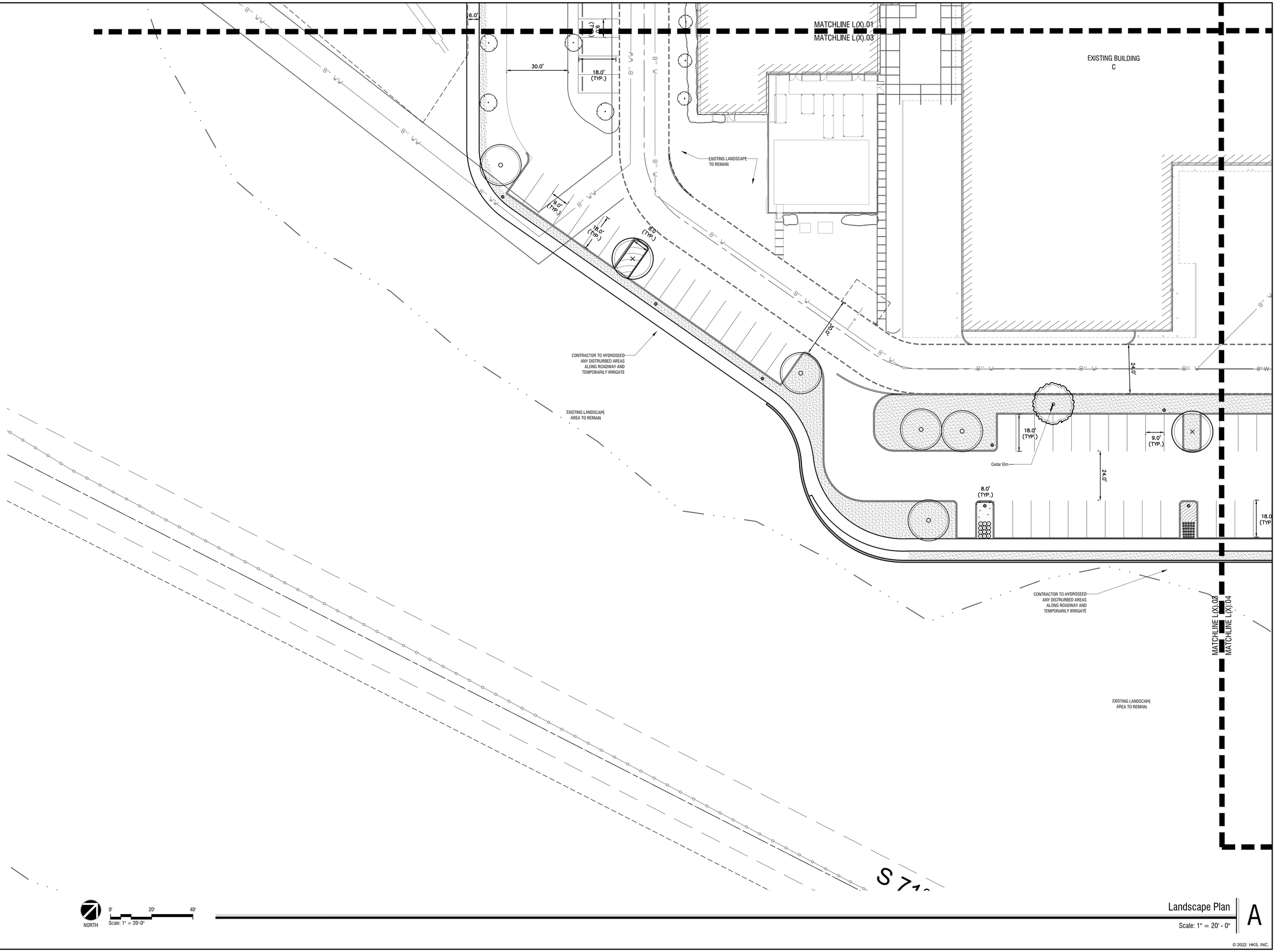

NORTH

0' 20' 40'

Scale: 1" = 20'-0"

Landscape Plan

Scale: 1" = 20' - 0"

A

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TEMPLATE VERSION:

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ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L5.03

MATCHLINE L(X).01
MATCHLINE L(X).04

18.0' (TYP.)
9.0' (TYP.)
18.0' (TYP.)
Lacebark Elm
8" W
EXISTING POLE LIGHT TO BE RELOCATED
9.0' (TYP.)
18.0' (TYP.)
11.0'
Purple Wintercreeper
24.0'
35.0'
8.0' (TYP.)
18.0' (TYP.)
9.0' (TYP.)
Yaupon Holly
Fountain Grass
Mexican Feather Grass
Littoral Planting Upland Mix
PROPOSED BUILDING E
31,350 SF (OFFICE)
Little Gem Dwarf Southern Magnolia
CONTRACTOR TO HYDROSEED ANY DISTURBED AREAS ALONG ROADWAY AND TEMPORARILY IRRIGATE
Littoral Planting Upland Mix
PROPOSED DETENTION POND

MATCHLINE L(X).03
MATCHLINE L(X).04
MATCHLINE L(X).04
MATCHLINE L(X).05
MATCHLINE L(X).04
MATCHLINE L(X).06

NORTH
0' 20' 40'
Scale: 1" = 20'-0"

Landscape Plan
Scale: 1" = 20' - 0"
A

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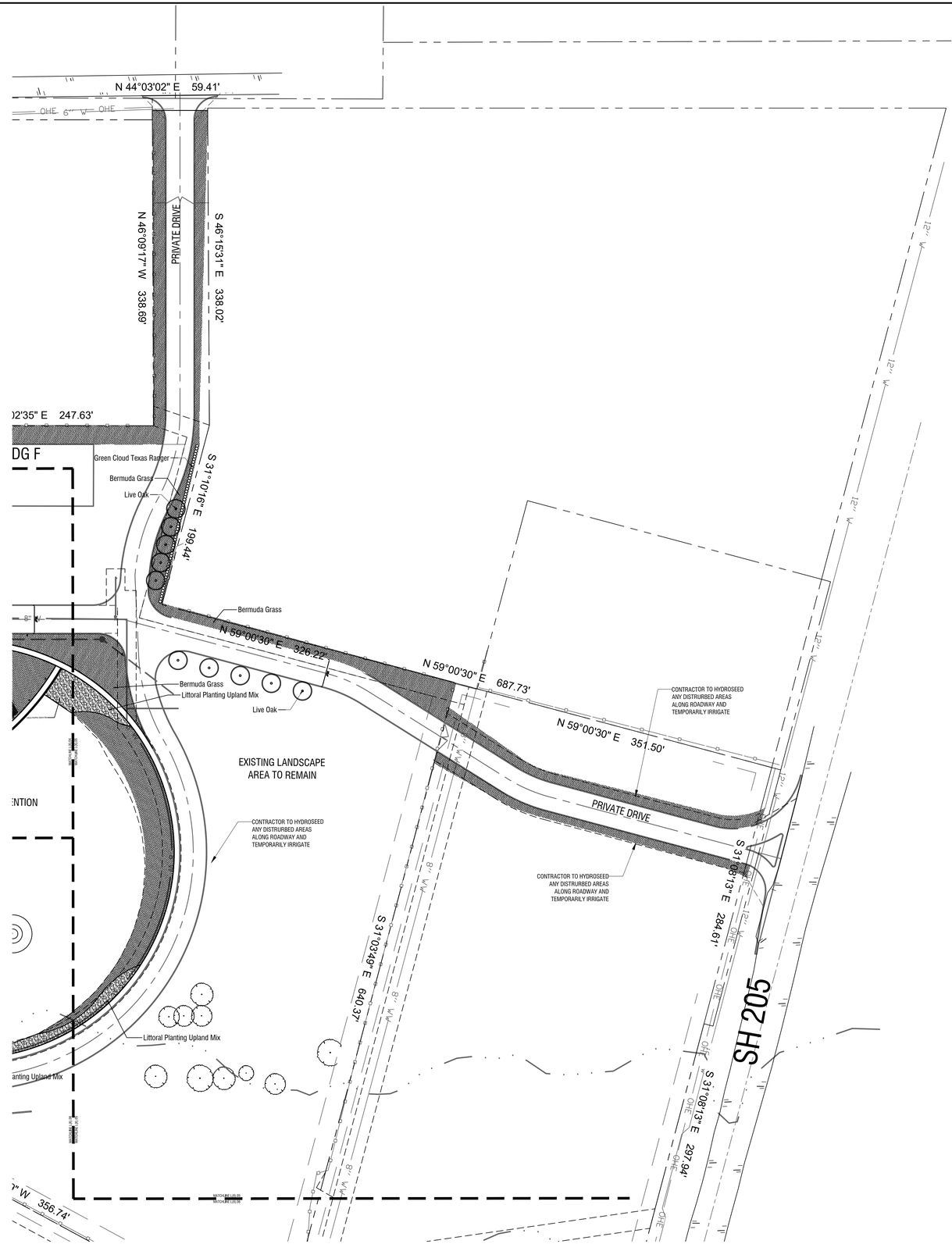

NORTH

0' 60' 120'

Scale: 1" = 60'-0"

Landscape Plan

Scale: 1" = 60' - 0"

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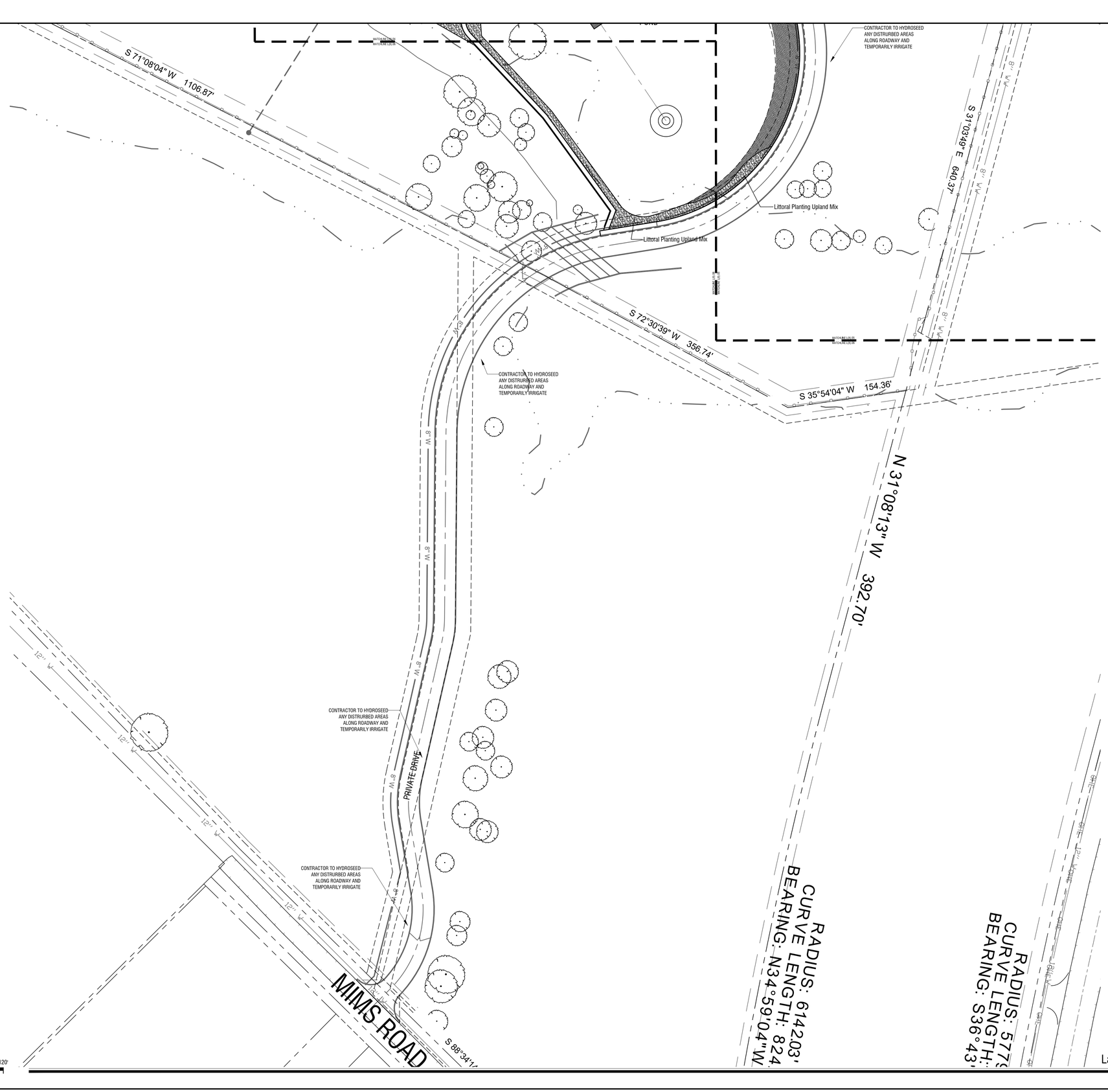

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L.A. No. 3480 Date 10/14/2022

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SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L5.06

Rayburn Co-Op - Rockwall Code Calculations Chart		
Site Data	**AC**	**SF**
Total Site Area	31.38	1,366,902
Surface Parking Spaces	271	
Site Landscape Area	**Required (% / SF)**	**Provided (% / SF)**
15% of site to be landscaped (Heavy Commercial zoning district)*	15%	16%
**includes Existing Landscape Area to Remain*	205,035	214,086
Street Frontage	**Required**	**Provided**
Sids Road - 832 LF(773 LF Frontage + 59.41 LF of Drive connection)		
10' Buffer	YES	YES
1 Canopy Tree/ 50 LF (Min. 4" Cal.)	17	17 (8 Existing)
1 Accent Tree/ 50LF (4' ht. Min.)	17	17
Continuous row of shrubs (min. 30" ht.- 3 Gal.)	YES	YES
SH 205 - Drive connection 200LF		
1 Canopy Tree/ 50 LF (Min. 4" Cal.)	N/A	N/A
Mims Road - Drive connection 76 LF		
1 Canopy Tree/ 50 LF (Min. 4" Cal.)	N/A	N/A
Parking Lot	**Required**	**Provided**
1 Large Canopy Tree/ 10 parking spaces	27	35
One tree within 80' of each parking space	YES	YES
Headlight Screening (min. 2' ht. berm with evergreen shrubs)	YES	YES
Total Trees	**Required**	**Provided**
Total Canopy Trees		74
Total Trees Existing		33
Total Trees		148

EXISTING SITE PARKING DATA

PUBLIC SPACES	ACCESSIBLE SPACES	TOTAL
125	5	130

PROPOSED SITE PARKING DATA

PUBLIC SPACES	ACCESSIBLE SPACES	TOTAL
262	9	271

SITE INFORMATION:

EXISTING ZONING: HEAVY COMMERCIAL (HC), COMMERCIAL (C), & AGRICULTURAL (AG)

PROPOSED ZONING: NO CHANGE

PROPOSE USE: EXPANSION OF EXISTING SITE TO INCLUDE 2 NEW OFFICE BUILDINGS, TRUCK WAREHOUSE, AND LAYDOWN STORAGE WAREHOUSE

TOTAL AREA LOT 1: 1,366,902 SQ FT 31.38 AC
TOTAL AREA LOTS 1–4: 4,146,392 SQ FT 95.19 AC

LOT 1 "HC" ZONING

MAXIMUM BUILDING HEIGHT: 60 FT
MAXIMUM LOT COVERAGE: 60%
MAXIMUM FLOOR AREA RATIO: 4:1
MAXIMUM IMPERVIOUS PARKING: 90–95%

PROPOSED MAX. BUILDING HEIGHT: 40 FT (BUILDING D)
PROPOSED LOT COVERAGE: 106,281/1,366,902 = 7.8%
PROPOSED FLOOR AREA RATIO: 113,260/1,366,902 = 0.08:1
PROPOSED IMPERVIOUS PARKING: 67,476/1,366,902 = 4.9%

EXISTING PARKING:
EXISTING WAREHOUSE 23,520 SQ FT (1:1000) = 24 SPACES
EXISTING OFFICE 31,530 SQ FT (1:300) = 106 SPACES
REMOVED OFFICE 7,700 SQ FT (1:300) = –26 SPACES

EXISTING REQUIRED PARKING = 104 SPACES

REQUIRED PARKING:
PROPOSED WAREHOUSE D 12,750 SQ FT (1:1000) = 13 SPACES
PROPOSED OFFICE D 19,600 SQ FT (1:300) = 66 SPACES
PROPOSED OFFICE E 23,000 SQ FT (1:300) = 77 SPACES
PROPOSED WAREHOUSE F 10,560 SQ FT (1:1000) = 11 SPACES

TOTAL REQUIRED PARKING = 271 SPACES
TOTAL PROVIDED PARKING = 271 SPACES

PLANT SCHEDULE

TREES	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	QTY	REMARKS
	Cedar Elm / Ulmus crassifolia	4" cal	12`-14`	As Shown	13	B&B, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, STRONG CENTRAL LEADER
	Duraheat River Birch Multi-Trunk / Betula nigra `Duraheat`	65 gal	10`-12` ht		11	CONTAINER, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, MULTI-TRUNK (3-5 TRUNKS)
	Lacebark Elm / Ulmus parvifolia	4" cal	14`-16`	As Shown	15	B&B, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, STRONG CENTRAL LEADER
	Live Oak / Quercus virginana	4" cal	12`-14` ht	As Shown	28	B&B, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, STRONG CENTRAL LEADER
	Texas Red Oak / Quercus texana	4" cal	12`-14` ht	As Shown	9	B&B, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, STRONG CENTRAL LEADER

ORNAMENTAL TREES	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	QTY	REMARKS
	Dallas Red Crape Myrtle / Lagerstroemia indica 'Dallas Red'	65 gal	10`-12`		7	CONTAINER, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED
	Little Gem Dwarf Southern Magnolia / Magnolia grandiflora 'Little Gem'	65 gal	8`-10` ht	As Shown	3	CONTAINER, NURSERY GROWN, MATCHED, FULL TO BASE, WELL-BRANCHED, STRONG CENTRAL LEADER
	Texas Redbud / Cercis canadensis texensis	45 gal	8`-10`	As Shown	16	CONTAINER, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED
	Yaupon Holly / Ilex vomitoria	45 Gal.	8`-10`	As Shown	22	CONTAINER, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, MULTI-TRUNK (3 MIN.), TREE FORM

SHRUBS	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	QTY	REMARKS
	Autumn Sage / Salvia greggii	3 gal	12" h X 18" w	24" OC	169	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Brakelights Red Yucca / Hesperaloe parviflora `Brakelights` TM	3 gal	12" h X 12" w	18" OC	949	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Common Boxwood / Buxus sempervirens	3 gal	24" h x 24" w	36" OC	289	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Dwarf Podocarpus / Podocarpus macrophyllus `Pringles`	3 gal	24" h x 18" w	24" OC	257	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Dwarf Yaupon / Ilex vomitoria `Nana`	3 gal min.	24" h x 24" w	36" OC	235	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Green Cloud Texas Ranger / Leucophyllum frutescens `Green Cloud` TM	3 gal min.	24" h x 24" w	36" OC	305	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Mahonia Soft Caress / Mahonia eurybracteata `Soft Caress`	3 gal	18" h X 18" w	24" OC	125	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Mexican Feather Grass / Nassella tenuissima	3 gal min.	12" h X 12" w	24" OC	125	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Pink Muhly Grass / Muhlenbergia capillaris	3 gal	18" h X 18" w	30" OC	711	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED

SHRUB AREAS	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	SPACING	QTY	REMARKS
	Littoral Planting Upland Mix	SEED				10,493 sf	
	Fountain Grass / Cenchrus advena	3 gal	12" Ht. x 12" W	24" OC	24" o.c.	304	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Little Spire Russian Sage / Perovskia atriplicifolia 'Little Spire'	1 gal	12" Ht. x 12" W	24" O.C.	24" o.c.	266	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Switch Grass / Panicum virgatum	3 gal	18" Ht. 12" Spr.	36" O.C.	36" o.c.	118	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED

GROUND COVERS	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	QTY	
	Hydroseed	HYDROMULCH			27,926 sf	REFER TO SPECIFICATIONS
	Asiatic Jasmine / Trachelospermum asiaticum	1 gal	8"h x 8"w	18" o.c.	1,050	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Bermuda Grass / Cynodon dactylon	sod			130,384 sf	REFER TO SPECIFICATIONS
	Creeping Juniper / Juniperus horizontalis	1 gal	8"h x 8"w	18" o.c.	232	
	Giant Liriope / Liriope gigantea	1 gal	12" h x 12" w	18" o.c.	1,056	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Little Bluestem Grass / Schizachyrium scoparium	3 gal	24" h x 18" w	24" o.c.	170	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Purple Wintercreeper / Euonymus fortunei 'Coloratus'	1 gal	8"h x 8"w	18" o.c.	1,251	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Texas Sedge / Carex texensis	1 gal	12" h x 12" w	18" o.c.	1,079	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED

NOTE: PLANT QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. IN THE CASE OF A DISCREPANCY, THE DRAWING SHALL TAKE PRECEDENCE.

NOTE: PLANTS ARE SPECIFIED BY HEIGHT, SPREAD AND CONTAINER SIZE. ALL PLANTINGS ARE EXPECTED TO MEET ALL SPECIFICATIONS PROVIDED.

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KEY PLAN

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HKS PROJECT NUMBER
25370.000
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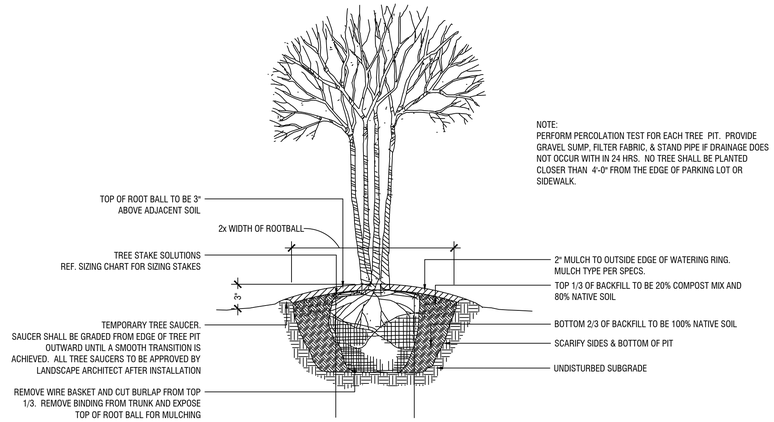
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
PLANTING SCHEDULE

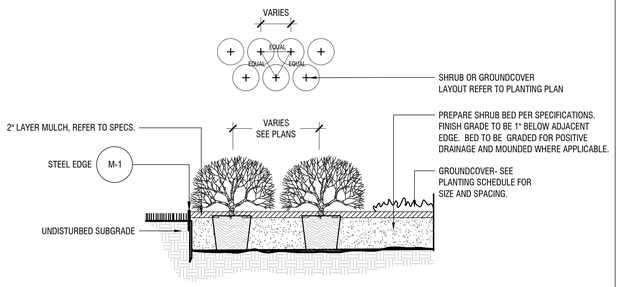
SHEET NO.
L5.07

PLOT DATE:
TEMPLATE VERSION:



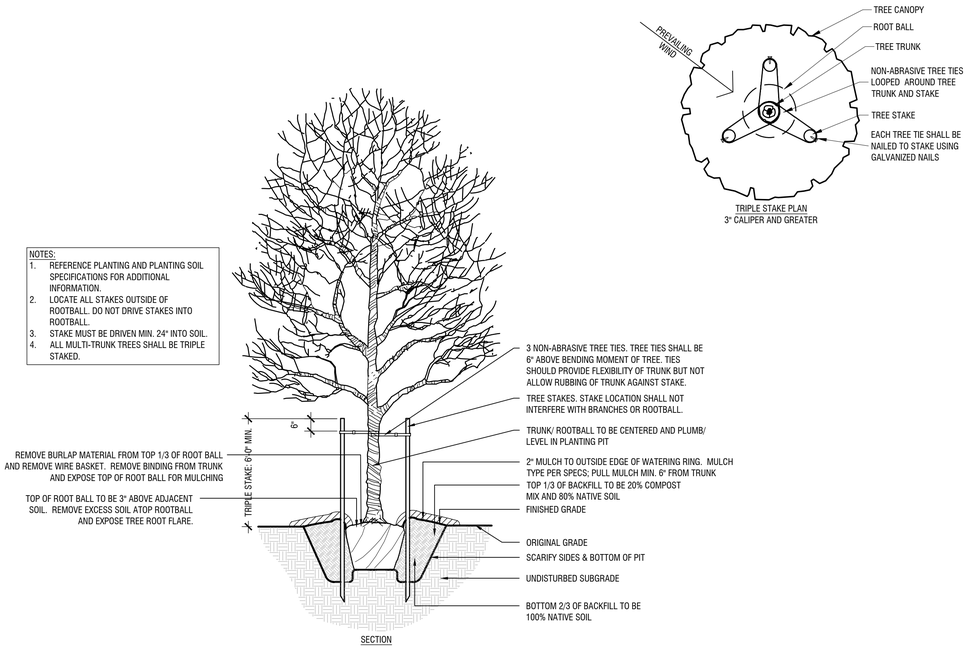
Multi-trunk / Ornamental Tree — B

Scale: 1/2" = 1'-0"



Shrubs & Groundcover — D

Scale: 1/2" = 1'-0"



Canopy Tree (Above Grade Stakes) — A

Scale: 1/2"=1'-0"

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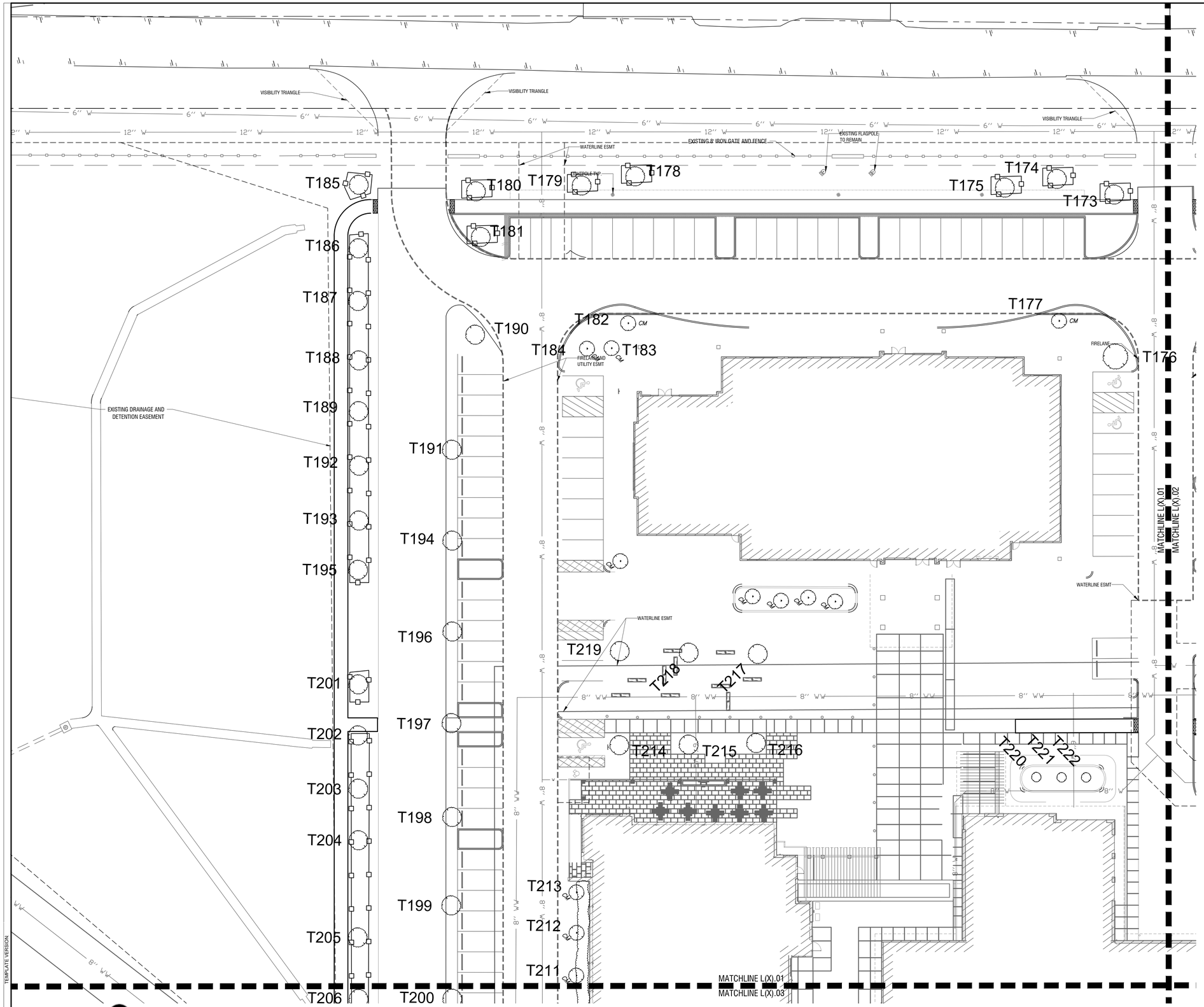
SHEET TITLE
PLANTING DETAILS

SHEET NO.
L5.08



LEGEND

- T40 — EXISTING TREE TAG NUMBER
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCING

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SHEET TITLE
TREESCAPE PLAN

SHEET NO.
L7.01

Treescape Plan
Scale: 1" = 20' - 0"
A

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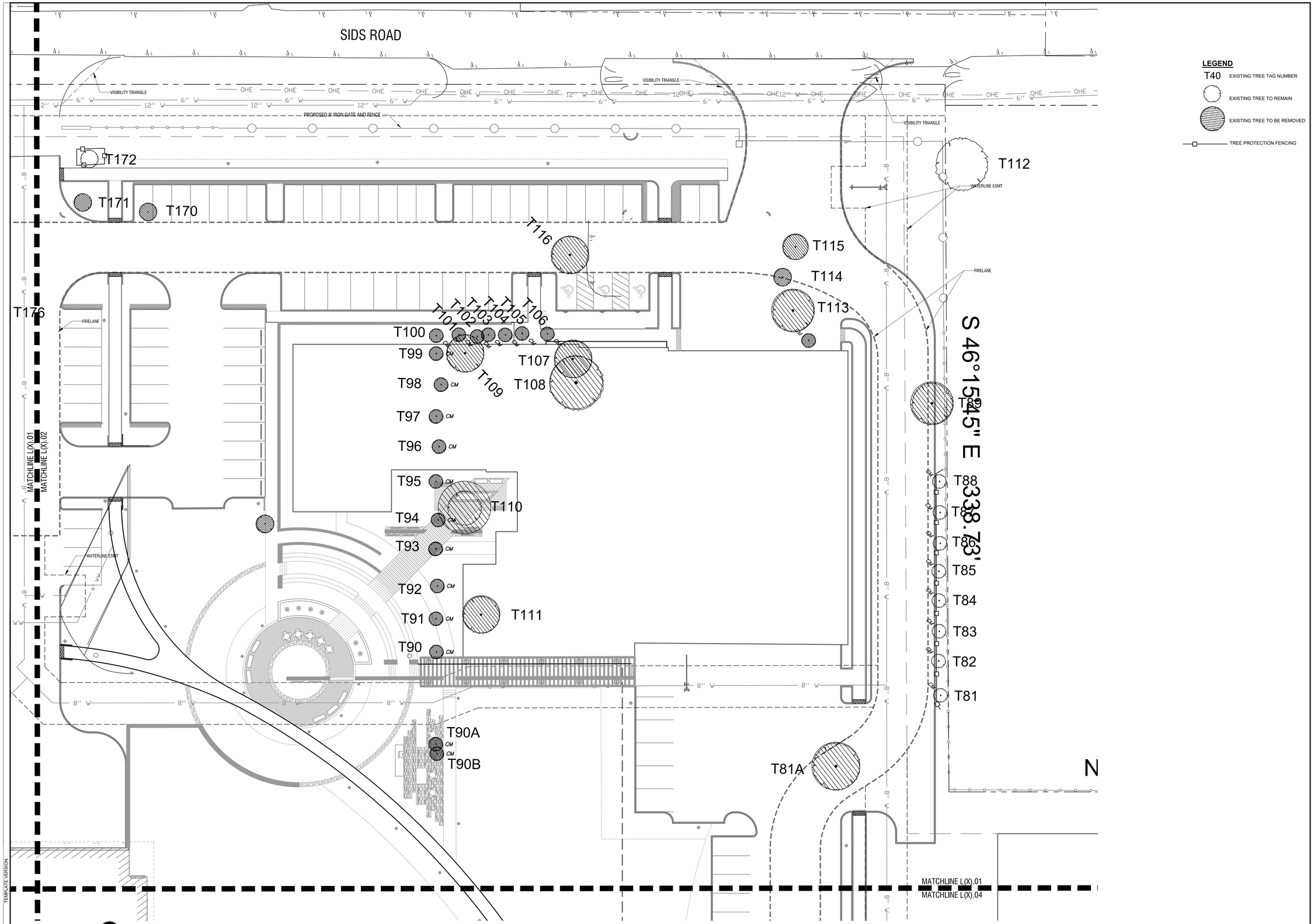
PLOT DATE:
TEMPLATE VERSION:



LEGEND

- T40 — EXISTING TREE TAG NUMBER
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCING

Treescape Plan

Scale: 1" = 20' - 0"

A

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ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
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DALLAS, TX 75206

OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

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Kimley»Horn
P.L.A. LANDON R. HUCKINS
L.A. No. 3480 Date 10/14/2022

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000

DATE
10/14/22

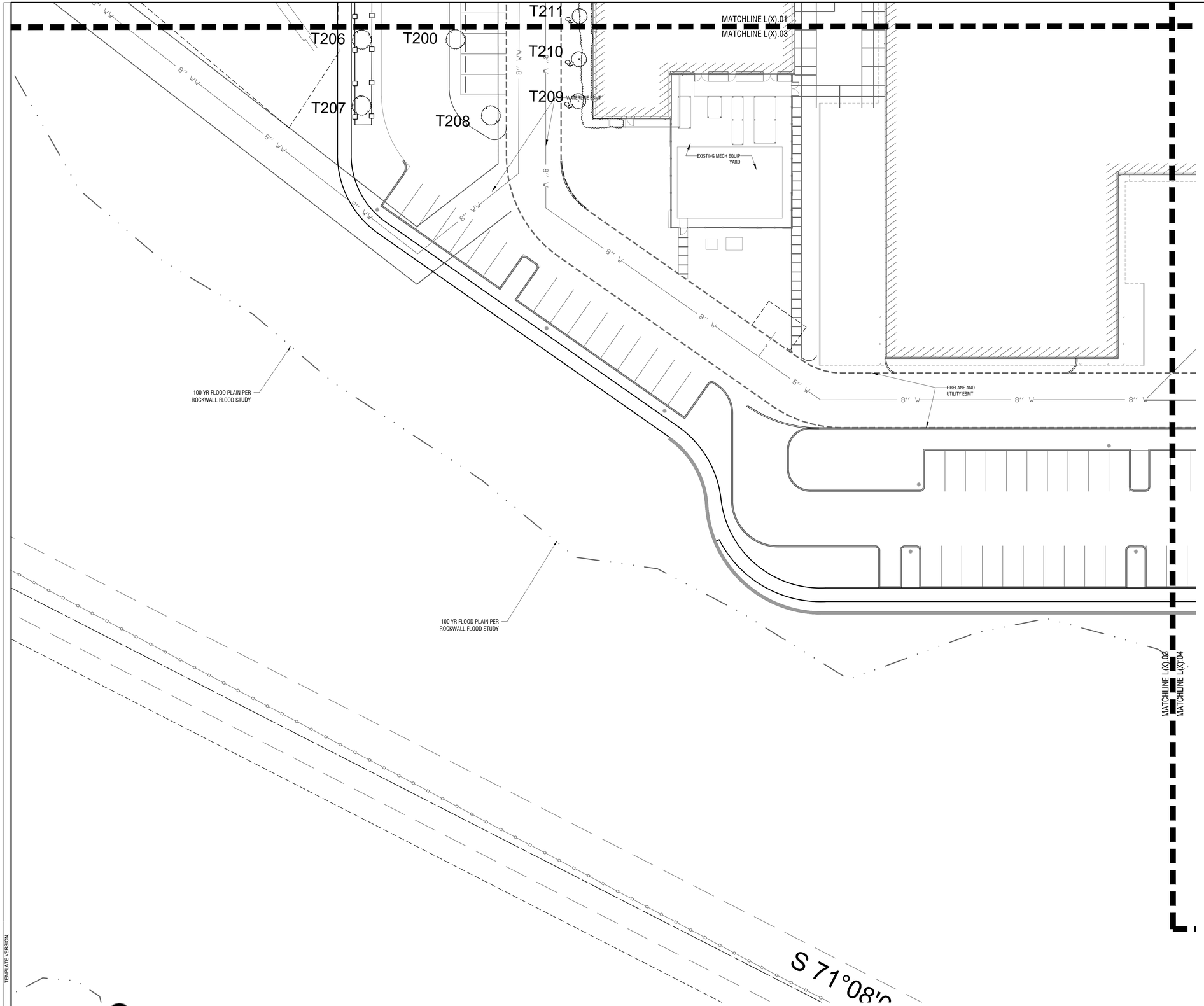
ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
TREESCAPE PLAN

SHEET NO.
L7.02

TEMPLATE VERSION:

PLOT DATE:



LEGEND

T40 EXISTING TREE TAG NUMBER

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED

TREE PROTECTION FENCING

Treescape Plan

Scale: 1" = 20' - 0"

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L.A. No. 3480 Date 10/14/2022

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NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000

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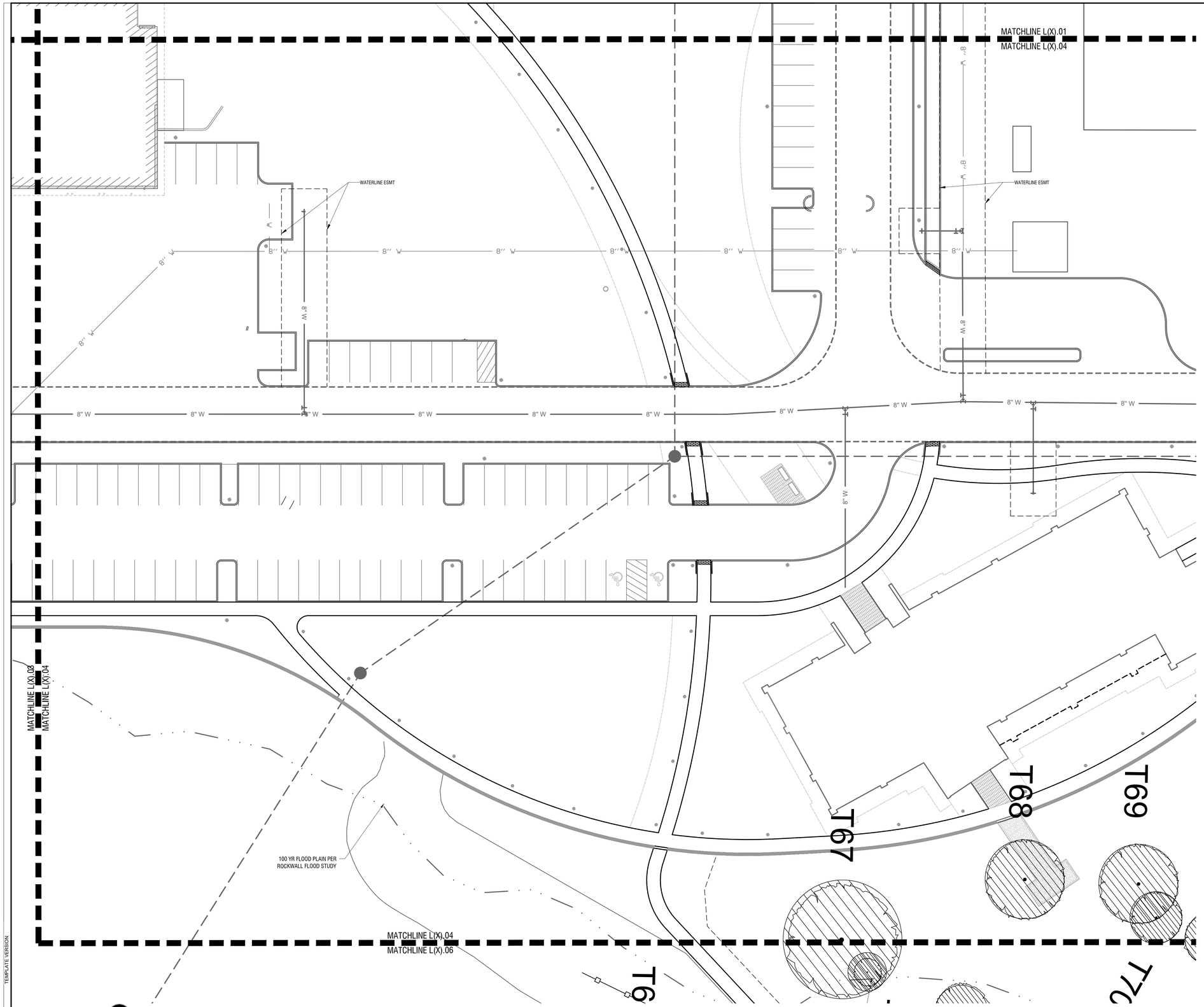
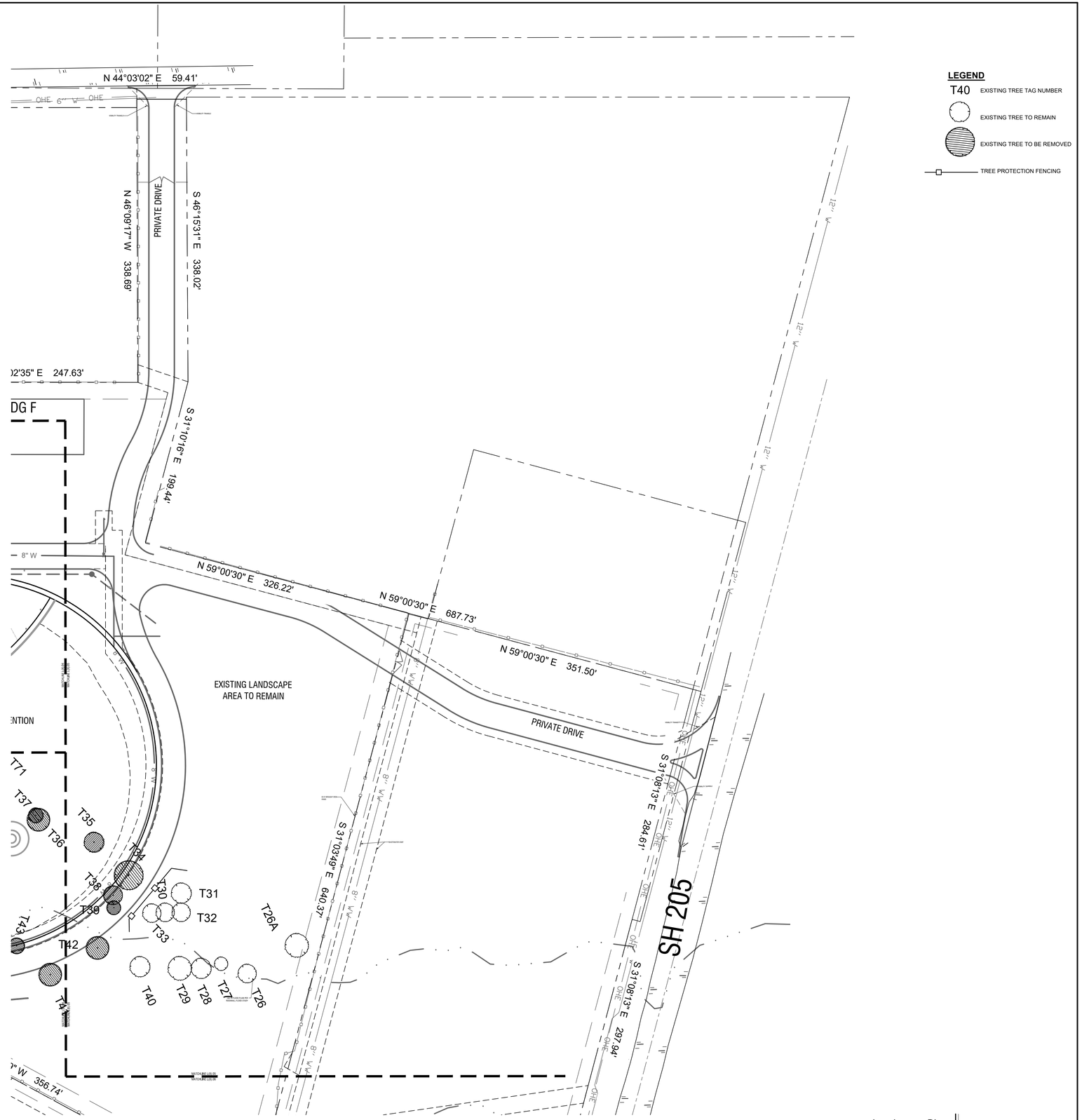
SHEET TITLE
TREESCAPE PLAN

SHEET NO.
L7.03

PLOT DATE:

TEMPLATE VERSION:


MATCHLINE L(X).01
MATCHLINE L(X).04
WATERLINE ESMT
WATERLINE ESMT
8" W
8" W
8" W



LEGEND

- T40 — EXISTING TREE TAG NUMBER
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCING

NORTH

0' 60' 120'

Scale: 1" = 60'-0"

Landscape Plan

Scale: 1" = 60' - 0"

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DATE
10/14/22

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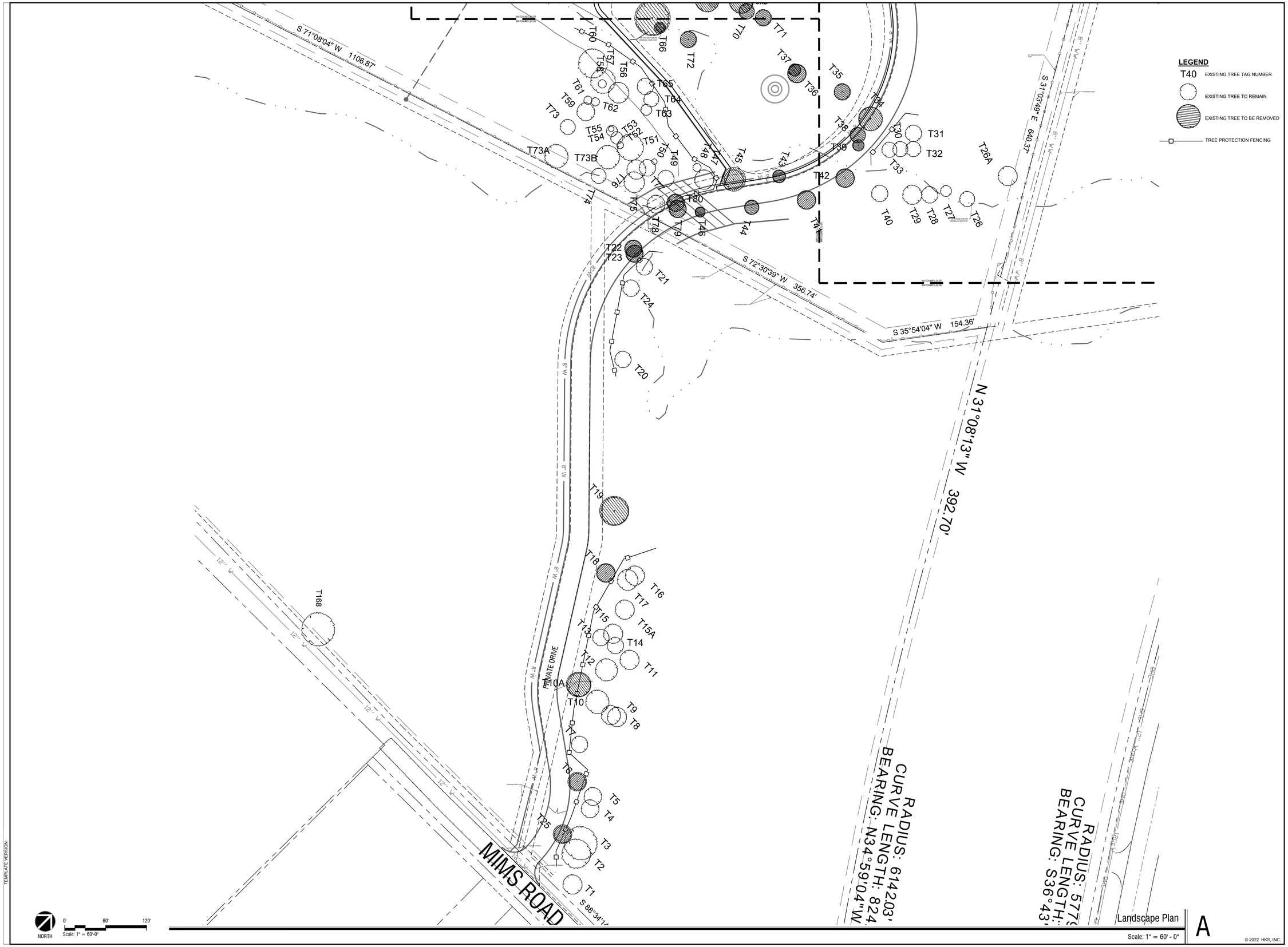
SHEET TITLE
TREESCAPE PLAN

SHEET NO.
L7.05



Landscape Plan

Scale: 1" = 60' - 0"

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ISSUE
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SHEET TITLE
TREESCAPE PLAN

SHEET NO.
L7.06

Location Key	Size DBH (Inches)	Description	Common Name	Comments	Tree Designation				Removal Status	Replacement Caliper Inches
					Feature	Primary	Secondary	Non-Protected		
T1	14	M.T.	Bois D'Arc					X		
T2	24	M.T.	Bois D'Arc					X		
T3	24		Bois D'Arc					X		
T4	16	M.T.	Hackberry				X			
T5	13		American Elm			X				
T6	12		Eastern Red Cedar				X		Removed	6
T7	12		Eastern Red Cedar				X			
T8	14		Hackberry				X			
T9	15	M.T.	Bois D'Arc					X		
T10	18	M.T.	American Elm			X				
T10A	30		Cottonwood					X	Removed	
T11	14		Black Willow					X		
T12	16		Black Willow					X		
T13	12		Eastern Red Cedar				X			
T14	15	M.T.	Hackberry	Dying and Covered with Poison Ivy			X			
T15	14		Hackberry	Diseased Crown			X			
T15A	14	M.T.	Hackberry				X			
T16	14		Hackberry				X			
T17	15		American Elm			X				
T18	13		Hackberry				X		Removed	6.5
T19	14	M.T.	Bois D'Arc	Tagged as "20"				X	Removed	
T20	12		Eastern Red Cedar				X			
T21	13	M.T.	Eastern Red Cedar				X			
T22	12		Eastern Red Cedar				X		Removed	6
T23	12		Eastern Red Cedar				X		Removed	6
T24	12		Eastern Red Cedar				X			
T25	12		Eastern Red Cedar				X		Removed	6
T26A	9		Cedar Elm			X				
T26	11		Eastern Red Cedar				X			
T27	8		White Ash			X				
T28	13	M.T.	Eastern Red Cedar				X			
T29	14	M.T.	Eastern Red Cedar				X			
T30	11		Eastern Red Cedar				X			
T31	12		Eastern Red Cedar				X			
T32	11		Eastern Red Cedar	Branched to Ground			X			
T33	11		Eastern Red Cedar				X			
T34	17		White Ash			X			Removed	17
T35	12		Eastern Red Cedar	Only Top 1/4 of Tree is Alive.			X		Removed	6
T36	13		Eastern Red Cedar	Entirely Dead			X		Removed	6.5
T37	9		White Ash			X			Removed	9
T38	11		Hackberry				X		Removed	5.5
T39	8		Slippery Elm	Entire Tree is Wilted.		X			Removed	8
T40	12		Hackberry				X			
T41	13		Hackberry				X		Removed	6.5
T42	14	M.T.	Eastern Red Cedar				X		Removed	7
T43	8		Hackberry					X	Removed	
T44	10"		Bois D'Arc					X	Removed	
T45	14		American Elm			X			Removed	14
T46	7		Slippery Elm			X			Removed	7
T47	14		White Ash			X				
T48	6		Cedar Elm			X				
T49	12		Eastern Red Cedar				X			
T50	4		Bois D'Arc					X		
T51	19		Bois D'Arc					X		
T52	5		Persimmon			X				
T53	9		Persimmon			X				
T54	8		Black Willow					X		
T55	4		Persimmon			X				
T56	15		White Ash			X				
T57	18		Bois D'Arc					X		
T58	6		Bois D'Arc					X		
T59	14	M.T.	Bois D'Arc					X		
T60	21	M.T.	Bois D'Arc					X		
T61	6		Bois D'Arc	Tagged as "62"				X		
T62	6		Bois D'Arc	Tagged as "63"				X		
T63	8		American Elm			X				
T64	8	M.T.	Hackberry					X		
T65	12		White Ash			X				
T66	6		Bois D'Arc					X	Removed	
T67	24	M.T.	Bois D'Arc					X	Removed	
T68	17	M.T.	Hackberry				X		Removed	8.5
T69	15	M.T.	Hackberry				X		Removed	7.5
T70	11		Hackberry				X		Removed	5.5
T71	12		Bois D'Arc					X	Removed	
T72	14		Hackberry				X		Removed	7
T73	11		Cedar Elm			X				
T73A	8		American Elm			X				
T73B	12		Eastern Red Cedar				X			
T74	15		Eastern Red Cedar				X			
T75	15		Eastern Red Cedar				X			
T76	14		Eastern Red Cedar				X			
T77	12		Black Willow					X		
T78	13		Eastern Red Cedar				X			
T79	12		Eastern Red Cedar				X		Removed	6
T80	12		Eastern Red Cedar				X		Removed	6
T81	12	M.T.	'Natchez' Crape Myrtle					X		
T81A	18		Live Oak			X			Removed	18
T82	7	M.T.	'Natchez' Crape Myrtle					X		
T83	6	M.T.	'Natchez' Crape Myrtle					X		
T84	11	M.T.	'Natchez' Crape Myrtle					X		
T85	16	M.T.	'Natchez' Crape Myrtle					X		
T86	18	M.T.	'Natchez' Crape Myrtle					X		
T87	15	M.T.	'Natchez' Crape Myrtle					X		
T88	11	M.T.	'Natchez' Crape Myrtle					X		
T89	15		Bradford Pear			X			Removed	15
T90	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T90A	20	M.T.	'Natchez' Crape Myrtle					X	Removed	
T90B	9	M.T.	'Watermelon Red' Crape Myrtle					X	Removed	
T91	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T92	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T93	15	M.T.	'Natchez' Crape Myrtle					X	Removed	
T94	9	M.T.	'Natchez' Crape Myrtle					X	Removed	
T95	19	M.T.	'Natchez' Crape Myrtle					X	Removed	
T96	7	M.T.	'Watermelon Red' Crape Myrtle					X	Removed	
T96	7	M.T.	'Watermelon Red' Crape Myrtle					X	Removed	
T97	19	M.T.	'Natchez' Crape Myrtle					X	Removed	
T98	9	M.T.	'Watermelon Red' Crape Myrtle					X	Removed	
T99	13	M.T.	'Natchez' Crape Myrtle					X	Removed	
T100	8	M.T.	'Natchez' Crape Myrtle					X	Removed	
T101	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T102	7	M.T.	'Natchez' Crape Myrtle					X	Removed	
T103	10	M.T.	'Natchez' Crape Myrtle					X	Removed	
T104	7	M.T.	'Natchez' Crape Myrtle					X	Removed	
T105	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T106	6	M.T.	'Natchez' Crape Myrtle					X	Removed	
T107	18		Red Oak			X			Removed	18
T108	22		Bradford Pear			X			Removed	22
T109	12		Bradford Pear	Diseased		X			Removed	12
T110	15		Bradford Pear	Wind Damaged		X				
T111	15		Live Oak			X			Removed	15
T112	17		Live Oak			X				
T113	13		Live Oak	Bad Freeze Damaged Trunk		X			Removed	13
T114	5		Magnolia			X			Removed	5
T115	9		Live Oak	Bad Freeze Damaged Trunk		X			Removed	9
T116	12		Texas Red Oak	Substantial Trunk Damage with Borer Infestation		X			Removed	12
T138	18	M.T.	Hackberry				X			
T141	12		Eastern Red Cedar				X			
T142	14		Eastern Red Cedar				X			
T143	17	M.T.	Eastern Red Cedar				X			
T144	4		Cedar Elm			X				
T145	16		Eastern Red Cedar				X			
T146	11		Eastern Red Cedar				X			
T147	14		Eastern Red Cedar				X			
T148	12		Eastern Red Cedar				X			
T149	12		Eastern Red Cedar				X			
T150	12		Eastern Red Cedar				X			
T151	12	M.T.	Eastern Red Cedar				X			
T152	15		Eastern Red Cedar				X			
T153	11		Eastern Red Cedar				X			
T155	16		Eastern Red Cedar				X			
T156	12		Eastern Red Cedar				X			
T157	14		Eastern Red Cedar				X			
T158	8		Cedar Elm			X				
T158A	7		Cedar Elm			X				
T159	8		Locust					X		
T160	5		White Ash			X				
T161	5		Cedar Elm			X				
T162	4		White Ash			X				
T163	4		Cedar Elm			X				
T164	8		Cedar Elm			X				
T164A	7		Cedar Elm			X				
T164B	10	M.T.	Cedar Elm			X				
T164C	6		Cedar Elm			X				
T165	7		Black Willow					X		
T166	20		Black Willow					X		
T168	19	M.T.	Eastern Red Cedar				X			
T168A	23	M.T.	Eastern Red Cedar				X			
T170	6		Live Oak			X			Removed	6
T171	6		Live Oak			X				
T172	6		Bur Oak			X				
T173	6		Bur Oak			X				
T174	6		Bur Oak			X				
T175	6		Bur Oak			X				
T176	7		Live Oak			X				
T177	8	M.T.	'Natchez' Crape Myrtle					X		
T178	6		Bur Oak			X				
T179	6		Bur Oak			X				
T180	6		Bur Oak			X				
T181	6		Live Oak	Stunted- Old Sapsucker Damage		X				
T182	10	M.T.	'Natchez' Crape Myrtle					X		
T183	7.5	M.T.	'Natchez' Crape Myrtle					X		
T184	7	M.T.	'Natchez' Crape Myrtle					X		
T185	6		Bald Cypress			X				
T186	6		Bald Cypress			X				
T187	6		Bald Cypress			X				
T188	6		Bald Cypress			X				
T189	6		Bald Cypress			X				
T190	6		Live Oak	Stunted- Old Sapsucker Damage		X				
T191	6		Live Oak			X				
T192	6		Bald Cypress			X				
T193	6		Bald Cypress			X				
T194	6		Live Oak			X				
T195	6		Bald Cypress			X				
T196	6		Live Oak			X				
T197	6		Live Oak			X				
T198	6		Live Oak			X				
T199	6		Live Oak			X				
T200	6		Live Oak			X				
T201	6		Bald Cypress			X				
T202	6		Bald Cypress			X				
T203	6		Bald Cypress			X				
T204	6		Bald Cypress			X				
T205	6		Bald Cypress			X				
T206	6		Bald Cypress			X				
T207	6		Bald Cypress			X				
T208	6		Live Oak			X				
T209	-		Crape Myrtle	Dead, Coming Back From Roots						
T210	3.5	M.T.	'Natchez' Crape Myrtle					X		
T211	2.5	M.T.	'Natchez' Crape Myrtle					X		
T212	2.5	M.T.	'Natchez' Crape Myrtle					X		
T213	3	M.T.	'Natchez' Crape Myrtle					X		
T214	6		Live Oak	Weeping Habit		X				
T215	6		Live Oak	Weeping Habit		X				
T216	6		Live Oak	Weeping Habit		X				
T217	6		Live Oak	Weeping Habit		X				
T218	6		Live Oak	Weeping Habit		X				
T219	6		Live Oak	Weeping Habit		X				
T223	14		Black Willow					X		
TOTAL	**2,210**									

TOTAL REPLACEMENT INCHES REQUIRED:	302.5
MITIGATION INCHES PROVIDED ON SITE:	513
MITIGATION INCHES REMAINING:	-210.5

NOTE: REFER TO L5.08 FOR TREE PROTECTION FENCING DETAIL.

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PLOT DATE:

TEMPLATE VERSION:

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P.L.A. ____ LANDON R. HUCKINS
L.A. No. 3480 Date 10/14/2022

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000

DATE
10/14/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
TREESCAPE TABLE

SHEET NO.
L7.07

RAYBURN ELECTRIC COOPERATIVE

LANDSCAPE PLANS
FOR
BUILDING D AND E CAMPUS EXPANSION
ROCKWALL, TX

HARDSCAPE, LANDSCAPE, IRRIGATION

		Drawings Issued										
		30% PROGRESS SET (ISSUE DATE - 09.01.22)	65% PROGRESS SET (ISSUE DATE - 09.26.22)	PSP SUBMITTAL (ISSUE DATE - 10.11.22)								
Sheet Number	Sheet Title											
L0.00	SHEET INDEX		●	●								
GENERAL												
L1.00	GENERAL NOTES & MATERIALS LEGEND		●	●								
L1.01	OVERALL PLAN		●	●								
HARDSCAPE												
L2.01	HARDSCAPE PLAN		●	●								
L2.02	HARDSCAPE PLAN		●	●								
L2.03	HARDSCAPE PLAN		●	●								
L2.04	HARDSCAPE PLAN		●	●								
L2.05	HARDSCAPE PLAN		●	●								
L2.06	HARDSCAPE PLAN		●	●								
DETAILS												
L4.01	HARDSCAPE DETAILS		●	●								
PLANTING												
L5.01	LANDSCAPE PLAN	●	●	●								
L5.02	LANDSCAPE PLAN	●	●	●								
L5.03	LANDSCAPE PLAN	●	●	●								
L5.04	LANDSCAPE PLAN	●	●	●								
L5.05	LANDSCAPE PLAN	●	●	●								
L5.06	LANDSCAPE PLAN	●	●	●								
L5.07	PLANTING SCHEDULE	●	●	●								
L5.08	PLANTING DETAILS	●	●	●								
TREE PRESERVATION												
L7.01	TREESCAPE PLAN	●	●	●								
L7.02	TREESCAPE PLAN		●	●								
L7.03	TREESCAPE PLAN		●	●								
L7.04	TREESCAPE PLAN		●	●								
L7.05	TREESCAPE PLAN		●	●								
L7.06	TREESCAPE PLAN		●	●								
L7.07	TREESCAPE TABLE	●	●	●								

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MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

RayburnElectric COOPERATIVE

PRELIMINARY
FOR REVIEW ONLY
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Kimley»Horn
P.L.A. LANDON R. HUCKINS
L.A. No. 3480 Date 10/14/2022

KEY PLAN

REVISION
NO. DESCRIPTION DATE

HKS PROJECT NUMBER
25370.000
DATE
10/14/22
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SHEET INDEX

SHEET NO.
L0.00

PLOT DATE:
TEMPLATE VERSION:

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GENERAL NOTES:

1. WRITTEN DIMENSIONS PREVAIL OVER SCALED DIMENSIONS. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
2. THE CONTRACTOR BEARS ALL RESPONSIBILITY FOR VERIFYING ALL UNDERGROUND UTILITIES, PIPES, STRUCTURES, AND LINE RUNS IN THE FIELD PRIOR TO CONSTRUCTION. ANY DAMAGE TO UTILITIES THAT ARE TO REMAIN SHALL BE REPAIRED IMMEDIATELY AT NO EXPENSE TO THE OWNER. LANDSCAPE ARCHITECT ASSUMES NO RESPONSIBILITY FOR ANY NOT SHOWN ON PLANS.
3. ALL PROPOSED AND FINISHED GRADES ARE BASED ON INFORMATION PROVIDED BY THE OWNER'S SURVEY AND/OR CIVIL ENGINEER. ANY DISCREPANCIES IN ACTUAL FIELD MEASUREMENTS ARE TO BE REPORTED TO THE LANDSCAPE ARCHITECT IMMEDIATELY.
4. PRIOR TO COMMENCEMENT OF HARDSCAPE CONSTRUCTION, ALL PIERS, FOOTINGS, AND WALLS ARE TO BE SURVEYED, LAID OUT, AND STAKED IN FIELD FOR REVIEW BY LANDSCAPE ARCHITECT. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY DEMOLITION, ADJUSTMENTS, OR RECONSTRUCTION RESULTING FROM UNAUTHORIZED CONSTRUCTION ACTIVITIES.
5. CONTRACTOR IS RESPONSIBLE FOR ALL QUANTITIES PER DRAWINGS AND SPECIFICATIONS. ANY QUANTITIES PROVIDED BY LANDSCAPE ARCHITECT ARE PROVIDED FOR CONVENIENCE ONLY. CONTRACTORS ARE TO BID THEIR OWN VERIFIED QUANTITIES. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
6. EASEMENTS SETBACKS, BUILDING, CURB AND GUTTER, UNDERGROUND UTILITIES HAVE BEEN SUPPLIED TO LANDSCAPE ARCHITECT BY THE PROJECT CIVIL ENGINEER. REFER TO CIVIL ENGINEERS DRAWINGS FOR ADDITIONAL INFORMATION.
7. **DESIGN BUILD FOUNTAIN CONTRACTOR TO PROVIDE ALL DESIGN & ENGINEERING FOR POOL AND FOUNTAIN TO INCLUDE ALL MEP AND STRUCTURE DESIGN.**

IRRIGATION NOTES:

1. AN AUTOMATIC IRRIGATION SYSTEM SHALL BE PROVIDED FOR ALL PLANTING AREAS. OVER SPRAY ON STREETS AND WALKS IS PROHIBITED.
2. IRRIGATION SYSTEMS SHALL BE MAINTAINED AND REPLACED AS NECESSARY.
3. ALL PLANTING AREAS TO BE FULLY IRRIGATED.
4. IRRIGATION SYSTEM TO HAVE A FULLY AUTOMATED CONTROL SYSTEM.
5. ANY EXISTING PLANTING DAMAGED DURING CONSTRUCTION IS TO BE REPLACED AT NO COST THE OWNER.
6. IF THE EXISTING IRRIGATION SYSTEM IS DAMAGED OR TURNED OFF DURING CONSTRUCTION ACTIVITIES, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAND WATER ALL PLANT MATERIAL AS NEEDED.

PLANTING NOTES:

1. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UNDERGROUND UTILITIES, PIPES, STRUCTURES, AND LINE RUNS IN THE FIELD PRIOR TO THE INSTALLATION OF ANY PLANT MATERIAL.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADVISE THE LANDSCAPE ARCHITECT OF ANY CONDITION FOUND ON THE SITE WHICH PROHIBITS INSTALLATION AS SHOWN ON THESE DRAWINGS.
3. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AND MUST BE REPLACED WITH PLANT MATERIAL OF SAME VARIETY AND SIZE IF DAMAGED, DESTROYED, OR REMOVED.
4. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR FINE GRADING AND REMOVAL OF DEBRIS PRIOR TO PLANTING IN ALL AREAS.
5. FINAL FINISH GRADING SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL TOPSOIL REQUIRED TO CREATE A SMOOTH CONDITION PRIOR TO PLANTING.
6. ALL PLANT QUANTITIES LISTED ARE FOR INFORMATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FULL COVERAGE IN ALL PLANTING AREAS AS SPECIFIED IN THE PLANT SCHEDULE AND VERIFY ALL QUANTITIES.
7. LANDSCAPE CONTRACTOR TO PROVIDE STEEL EDGING (REFER TO MATERIALS PAGE) BETWEEN ALL PLANTING BEDS AND LAWN AREAS.
8. ALL PLANT MATERIAL SHALL CONFORM TO THE SPECIFICATIONS AND SIZES GIVEN IN THE PLANT LIST AND SHALL BE NURSERY GROWN IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK. LATEST EDITION AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS. ANY PLANT SUBSTITUTION SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PURCHASE.
9. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ANY COORDINATION WITH OTHER CONTRACTORS ON SITE AS REQUIRED TO ACCOMPLISH ALL PLANTING OPERATIONS.
10. ALL NEW PLANTING AREAS TO BE AMENDED PER SPECIFICATIONS.
11. ANY PLANT MATERIAL THAT DOES NOT SURVIVE SHALL BE REPLACED WITH AN EQUIVALENT SIZE AND SPECIES WITHIN THIRTY (30) DAYS.
12. PLANT MATERIAL SHALL BE PRUNED AS NECESSARY TO CONTROL SIZE BUT NOT TO DISRUPT THE NATURAL GROWTH PATTERN OR CHARACTERISTIC FORM OF THE PLANT EXCEPT AS NECESSARY TO ACHIEVE HEIGHT CLEARANCE FOR VISIBILITY AND PEDESTRIAN PASSAGE OR TO ACHIEVE A CONTINUOUS OPAQUE HEDGE IF REQUIRED.
13. LANDSCAPED AREAS SHALL BE KEPT FREE OF TRASH, WEEDS, DEBRIS, AND DEAD PLANT MATERIAL.
14. ALL LIME STABILIZED SOIL & INORGANIC SELECT FILL FOR BUILDING SHOULD BE REMOVED FROM PLANTING AREAS TO A DEPTH OF 24" & REPLACED WITH ORGANIC IMPORTED TOPSOIL FILL.
15. TREES OVERHANGING PEDESTRIAN WALKWAYS AND PARKING SHALL HAVE 7' CLEAR TRUNK HEIGHT TO MEET ACCESSIBILITY REQUIREMENTS. TREES OVERHANGING PUBLIC STREETS AND FIRE LANE SHALL HAVE A 14' MIN. CLEAR TRUNK HEIGHT.
16. CONTRACTOR TO PROVIDE 12 MONTH WARRANTY AFTER FINAL ACCEPTANCE.
17. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITY (NOT ALREADY INCLUDED IN PLANTING PLANS) TO BE FINE GRADED, AND PLANTED WITH PLANTED WITH PLANTS OR SOD TO MATCH EXISTING CONDITIONS.

MATERIAL LEGEND:

PAVING

P-1 CONCRETE PAVING (STANDARD)

COLOR:	NATURAL GRAY
FINISH:	MEDIUM BROOM FINISH
CONTROL JOINTS:	SAWCUT (1/4 DEPTH OF CONCRETE) @ REGULAR INTERVALS (TYPICAL JOINT SPACING TO BE EQUAL TO WIDTH OF WALK)
EXPANSION JOINTS:	GENERALLY 30' O.C. MAX. (SEE PLANS FOR LOCATION)
JOINT SEALANT:	COLOR TO MATCH CONCRETE
IMPORTANT:	**REPLACE ALL COARSE AGGREGATE WITH 3/8" CRUSHED WHITE LIMESTONE**
APPROVAL:	***MOCKUP, EJ SEALANT SAMPLE***

P-2 CONCRETE PAVING (INTEGRAL COLOR)

COLOR:	TBD (SCOFIELD, CHROMIX ADMIXTURE)
FINISH:	HEAVY ROCK SALT (50% COVERAGE)
CONTROL JOINTS:	SAWCUT (1/4 DEPTH OF CONCRETE) REGULAR INTERVALS (JOINT SPACING REFERENCE PLAN)
EXPANSION JOINTS:	GENERALLY 30' O.C. MAX. (SEE PLANS FOR EXACT LOCATION)
JOINT SEALANT:	COLOR TO MATCH CONCRETE
APPROVAL:	***COLOR SAMPLE, EJ SEALANT SAMPLE, MOCKUP***

P-3 CONCRETE PAVING (AMPHITHEATER SEATING)

COLOR:	TBD (SCOFIELD, CHROMIX ADMIXTURE)
FINISH:	ARCHITECTURAL FINISH
CONTROL JOINTS:	SAWCUT (1/4 DEPTH OF CONCRETE) REGULAR INTERVALS (JOINT SPACING REFERENCE PLAN)
EXPANSION JOINTS:	GENERALLY 30' O.C. MAX. (SEE PLANS FOR EXACT LOCATION)
JOINT SEALANT:	COLOR TO MATCH CONCRETE
INSTALL:	PHENOLIC FACED HIGH DENSITY OVERLAY PLYFORM (REF. SPECS). TIE HOLES SPACED 12" FROM WALL TOP AND ENDS, SPACED EQUALLY WITHIN WALL FIELD AT 24" O.C. MAX. PROVIDE SAW CUT CONTROL JOINTS CENTERED BETWEEN EVERY OTHER ROW OF TIE HOLES (APPROX. 4'-0" O.C. MAX) WALL TOP TO BE TROWELED SMOOTH. PROVIDE SHARP 90° CORNERS. NO CHAMFERED OR RADIUS CORNERS WILL BE ACCEPTED. ON ARCHITECTURALLY FINISHED CONCRETE, EXCESSIVELY LARGE OR FREQUENT BUGHOLES AND/OR OTHER SURFACE DEFECTS WILL BE CAUSE FOR REJECTION OF MOCKUP.
APPROVAL:	***COLOR SAMPLE, EJ SEALANT SAMPLE, MOCKUP***

P-4 UNIT PAVER (ENTRY WALKWAY)

TYPE:	VERONA
COLOR:	PEWTER(33%), ANTIQUE PEWTER (33%), SLATE (33%)
SIZE:	3" x 18" x 80mm
PATTERN:	RANDOM 1/3 RUNNING BOND
INSTALL:	REF. DETAILS
SUPPLIER:	KEYSTONE HARDSCAPES
CONTACT:	JOEY GUEDEA (214.684.4427)
APPROVAL:	***CUT SHEET, SAMPLE, MOCKUP***

P-5 UNIT PAVER (UPPER COURTYARD)

TYPE:	VERONA
COLOR:	SAND HILL BLEND
SIZE:	8" x 16" x 80mm
PATTERN:	*RUNNING BOND*
INSTALL:	REF. DETAILS
SUPPLIER:	KEYSTONE HARDSCAPES
CONTACT:	JOEY GUEDEA (214.684.4427)
APPROVAL:	***CUT SHEET, SAMPLE, MOCKUP***

P-6 UNIT PAVER (OUTDOOR KITCHEN PAVING)

TYPE:	VERONA
COLOR:	CHARCOAL
SIZE:	3" x 18" x 80mm
PATTERN:	RANDOM STACKED BOND
INSTALL:	REF. DETAILS
SUPPLIER:	KEYSTONE HARDSCAPES
CONTACT:	JOEY GUEDEA (214.684.4427)
APPROVAL:	***CUT SHEET, SAMPLE, MOCKUP***

P-7 UNIT PAVER (LOWER COURTYARD)

TYPE:	HOLLAND
COLOR:	ANTIQUE PEWTER (50% FIELD), SAND HILL BLEND (50% FIELD), CHARCOAL (BORDER)
SIZE:	4" x 8" x 60mm
PATTERN:	HERRINGBONE WITH SINGLE SOLDIER COURSE BORDER
INSTALL:	REF. DETAILS
SUPPLIER:	KEYSTONE HARDSCAPES
CONTACT:	JOEY GUEDEA (214.684.4427)
APPROVAL:	***CUT SHEET, SAMPLE, MOCKUP***

P-8 UNIT PAVER (TRUNCATED)

TYPE:	TRUNCATED DOME CONCTETE PAVER
COLOR:	CHARCOAL
SIZE:	4" x 8" x 60mm
PATTERN:	RUNNING BOND
INSTALL:	REF. DETAILS
SUPPLIER:	KEYSTONE HARDSCAPES
CONTACT:	JOEY GUEDEA (214.684.4427)
APPROVAL:	***CUT SHEET, SAMPLE, MOCKUP***

AGGREGATES

AG-1 DECORATIVE GRAVEL

TYPE:	TEJAS BLACK GRAVEL
SIZE:	2"-4"
INSTALL:	REFER DETAILS
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***SAMPLE, MOCKUP***

AG-2 DECOMPOSED GRANITE

TYPE:	NATURAL
SIZE:	3/4" - FINES
INSTALL:	REFER DETAILS
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***SAMPLE, MOCKUP***

METALS

M-1 STEEL EDGE

MATERIAL:	*PLANTING:* 3/16" x 4" STEEL PLATE *HARDSCAPE:* 1/4" x 6" STEEL PLATE
COLOR:	*PLANTING:* POWDERCOAT BLACK *HARDSCAPE:* POWDERCOAT BLACK
SIZE:	LENGTHS PER PLAN, ALL SEAMS TO BE FLUSH AND LEVEL
INSTALL:	REF. DETAILS

M-3 HANDRAIL

MATERIAL:	STAINLESS STEEL (TYPE 304)
FINISH:	BRUSHED
SIZE:	1.5" DIA.
INSTALL:	REF. DETAILS

SITE AMENITIES

A-1 GRILL

TYPE:	PGS T
MODEL:	S36T
FINISH:	STAINLESS STEEL
SUPPLIER:	AEI CORPORATION
INSTALL:	PROVIDE ALL PRODUCTS REQUIRED FOR NATURAL GAS HOOKUP, PROVIDE STAINLESS TIMER WALL SWITCH
APPROVAL:	***CUT SHEET***

A-2 COUNTERTOP

MATERIAL:	CONCRETE
COLOR / FINISH:	TBD
SIZE:	2" THICK
INSTALL:	REF. DETAILS
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***SAMPLE, SHOP DRAWINGS***

A-3 BENCH

TYPE:	GENERATION 50 (ANGLE END ARMS W/ BACK)
FINISH / COLOR:	THERMALLY MODIFIED ASH/BLUE ASH
INSTALL:	SURFACE MOUNT
SUPPLIER:	LANDSCAPE FORMS
CONTACT:	LARA MOFFET (972.740.3373)
APPROVAL:	***CUT SHEET***

A-4 LITTER/ RECYCLING RECEPTACLE

TYPE:	GENERATION 50 (ANGLE END ARMS W/ BACK)
FINISH / COLOR:	THERMALLY MODIFIED ASH/BLUE ASH
INSTALL:	PER MANUFACTURER'S SPECIFICATIONS
SUPPLIER:	LANDSCAPE FORMS
CONTACT:	LARA MOFFET (972.740.3373)
APPROVAL:	***CUT SHEET***

A-5 CAFE DINING TABLE

TYPE:	CHIPMAN ROUND
FINISH / COLOR:	WHITE
INSTALL:	SURFACE MOUNT
SUPPLIER:	LANDSCAPE FORMS
CONTACT:	LARA MOFFET (972.740.3373)
APPROVAL:	***CUT SHEET***

A-6 STONE BLOCK SEATING

TYPE:	LUEDERS LIMESTONE BLOCK
FINISH / COLOR:	*HONED TOP, BOTTOM, AND ENDS W/ ROUGHBACK SIDES*
SIZE:	24" HT. x 18" W. x 6' LENGTH
INSTALL:	REF. DETAILS
SUPPLIER:	MOTHERROCK STONE GROUP
CONTACT:	CLINT HART (214.205.6491)
APPROVAL:	***CUT SHEET***

A-7 OUTDOOR KITCHEN STONE

TYPE:	LUEDERS LIMESTONE VENEER
FINISH / COLOR:	*TBD*
SIZE:	TBD
INSTALL:	REF. DETAILS
SUPPLIER:	MOTHERROCK STONE GROUP
CONTACT:	CLINT HART (214.205.6491)
APPROVAL:	***CUT SHEET***

WALL SYSTEMS/FINISHES

W-1 STONE RETAINING WALLS

TYPE:	STONE VENEER WITH CONCRETE CORE
MATERIAL:	CUT LUEDERS LIMESTONE (TO MATCH EXISTING BUILDINGS/WALLS
COLOR/FINISH:	ROUGHBACK, ASHLAR PATTERN
SIZE:	*CAP* - 12" X 24" X 3" THICK *FIELD* - VARIED SIZES, REF. PLAN FOR WALL HEIGHTS
INSTALL:	REF. DETAILS
SUPPLIER:	MOTHERROCK STONE GROUP
CONTACT:	CLINT HART (214.205.6491)
APPROVAL:	***SAMPLE, SHOP DRAWINGS, MOCKUP***

W-2 FEATURE WALLS

TYPE:	STONE VENEER WITH CONCRETE CORE
MATERIAL:	LUEDERS LIMESTONE
COLOR/FINISH:	HONED FINISH, RUNNING BOND PATTERN
SIZE:	CAP - 12" x 24" X 3" THICK FIELD - 12" x 24"
INSTALL:	REF. DETAILS
SUPPLIER:	MOTHERROCK STONE GROUP
CONTACT:	CLINT HART (214.205.6491)
APPROVAL:	***SAMPLE, SHOP DRAWINGS, MOCKUP***

WOOD

WD-1 WOOD DECKING

TYPE:	IPE
FINISH:	TBD
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***SAMPLE, SHOP DRAWINGS, MOCKUP***

DRAINS

D-1 AREA DRAIN

MODEL:	*TBD*
SIZE:	6" SQUARE
FINISH:	STAINLESS STEEL OR BRONZE
COLOR:	BLACK
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***CUT SHEET***

D-2 PLANTER DRAIN

MODEL:	*TBD*
SIZE:	12" SQUARE WITH ATRIUM GRATE TOP
FINISH:	CAST IRON
COLOR:	BLACK
SUPPLIER:	TBD
CONTACT:	TBD
APPROVAL:	***CUT SHEET***

LIGHTING

L-1 POLE LIGHT

TYPE:	LITHONIA CSX1 LED (TO MATCH EXISTING)
COLOR/FINISH:	BROWN TO MATCH EXISTING
CONTACT:	ALA, REF. ARCH PLANS

L-2 LIT BOLLARD

TYPE:	LITHONIA CSX1 LED (TO MATCH EXISTING)
COLOR/FINISH:	BROWN TO MATCH EXISTING
CONTACT:	ALA, REF. ARCH PLANS

L-3 TREE UPLIGHT

MANUFACTURER:	BK
MODEL:	DS-LED-E65-MFL-A9-BLP-12-11-A/PP-S-18-B-BLP-SF
COLOR/FINISH:	TBD
INSTALL:	PER MANUFACTURERS SPECIFICATIONS
SUPPLIER:	ALA LIGHTING
CONTACT:	TIM GALVIN (214.658.9024)

L-4 ACCENT WALL LIGHT (RECESSED WALL WASH)

MANUFACTURER:	LUMENPULSE
MODEL:	LOG RO 120-24-30K-80X30-UMP-SI-DIM IP68 RATED LIGHT. LIGHT TO BE INSTALLED BELOW FINISH GRADE, REF. DETAILS
COLOR/FINISH:	SILVER SANDTEX
INSTALL:	PER MANUFACTURERS SPECIFICATIONS
SUPPLIER:	ALA LIGHTING
CONTACT:	TIM GALVIN (214.658.9024)

L-5 WALL STEP LIGHT

MANUFACTURER:	BEGA
MODEL:	RECESSED WALL LUMINAIRE (SHIELDED)
COLOR/FINISH:	BRUSHED STAINLESS STEEL
INSTALL:	PER MANUFACTURERS SPECIFICATIONS
SUPPLIER:	ALA LIGHTING
CONTACT:	TIM GALVIN (214.658.9024)

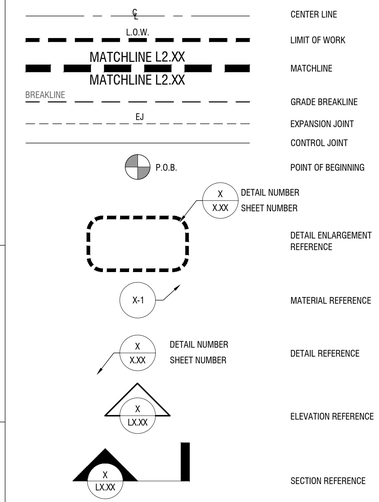
MISCELLANEOUS

MI-1 BUBBLER

MANUFACTURER:	CRYSTAL FOUNTAINS
MODEL:	TBD (FOAM JET W/ FIBER OPTIC LIGHT)
FINISH:	BRONZE
INSTALL:	TOP OF NOZZLE TO BE SET FLUSH WITH POOL FINISH, INSTALL PER MANUFACTURER RECOMMENDATIONS
APPROVAL:	***CUT SHEET***

SYMBOLS LEGEND:

GENERAL



CENTER LINE
LIMIT OF WORK
MATCHLINE
GRADE BREAKLINE
EXPANSION JOINT
CONTROL JOINT
POINT OF BEGINNING
DETAIL NUMBER / SHEET NUMBER
DETAIL ENLARGEMENT REFERENCE
MATERIAL REFERENCE
DETAIL NUMBER / SHEET NUMBER
DETAIL REFERENCE
ELEVATION REFERENCE
SECTION REFERENCE

ABBREVIATIONS

735.46	PROPOSED SPOT GRADE
⊕ 735.46	EXISTING SPOT GRADE
TW	TOP OF WALL
BW	BOTTOM OF WALL
TF	TOP OF FOOTING
COL	TOP OF COLUMN
TS	TOP STEP
BS	BOTTOM STEP
TR	TOP OF RAMP
BR	BOTTOM OF RAMP
TC	TOP OF CURB
BC	BOTTOM OF CURB
TB	TOP OF BAND
TP	TOP OF PAVEMENT
TGr	TOP OF GRAVEL
TG	TOP OF GRADE
FL	FLOWLINE/INVERT ELEVATION
EJ	EXPANSION JOINT
CJ	CONTROL JOINT
CL	CENTER LINE
POB	POINT OF BEGINNING

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HKS

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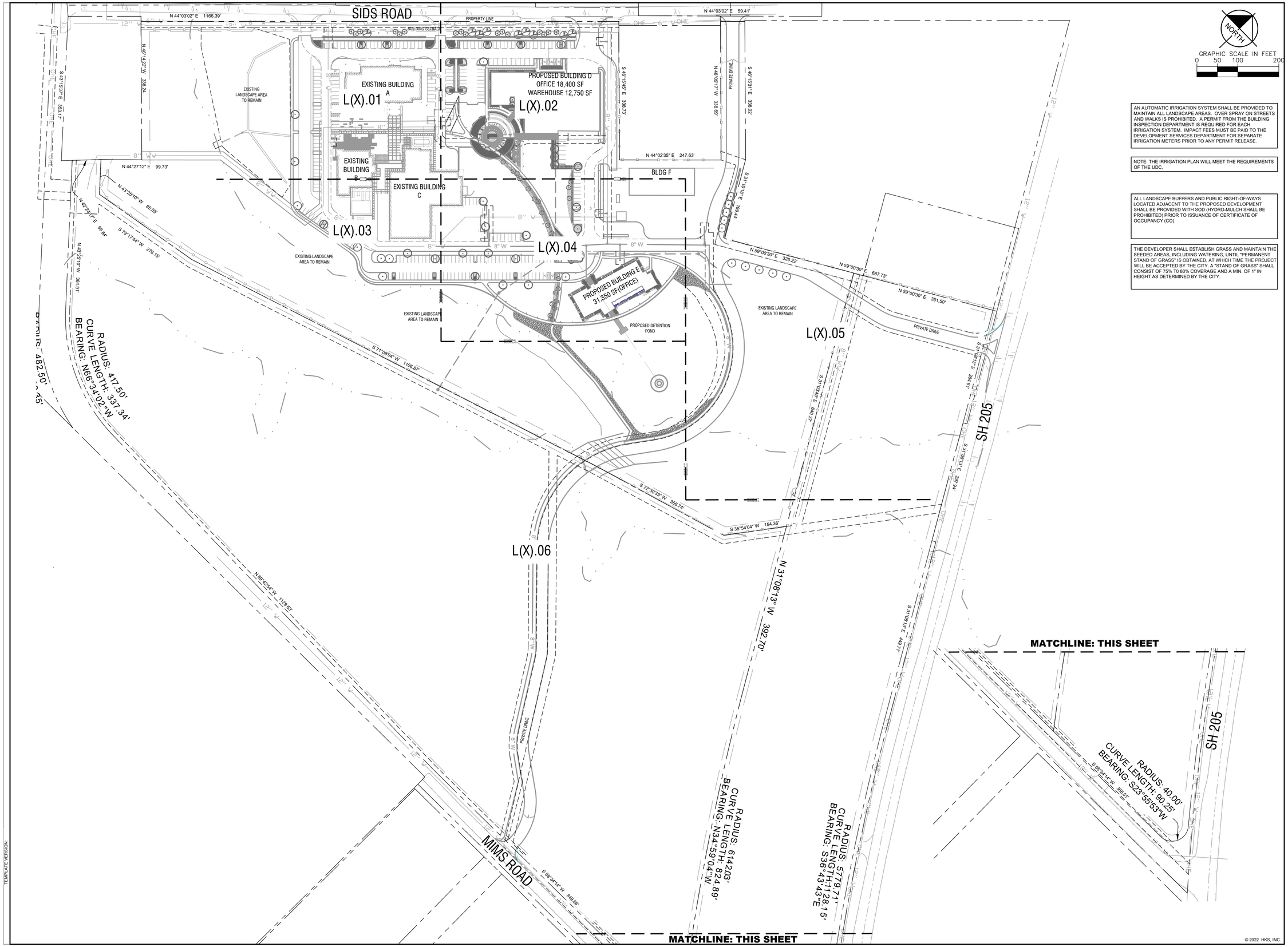

GRAPHIC SCALE IN FEET
0 50 100 200

AN AUTOMATIC IRRIGATION SYSTEM SHALL BE PROVIDED TO MAINTAIN ALL LANDSCAPE AREAS. OVER SPRAY ON STREETS AND WALKS IS PROHIBITED. A PERMIT FROM THE BUILDING INSPECTION DEPARTMENT IS REQUIRED FOR EACH IRRIGATION SYSTEM. IMPACT FEES MUST BE PAID TO THE DEVELOPMENT SERVICES DEPARTMENT FOR SEPARATE IRRIGATION METERS PRIOR TO ANY PERMIT RELEASE.

NOTE: THE IRRIGATION PLAN WILL MEET THE REQUIREMENTS OF THE UDC.

ALL LANDSCAPE BUFFERS AND PUBLIC RIGHT-OF-WAYS LOCATED ADJACENT TO THE PROPOSED DEVELOPMENT SHALL BE PROVIDED WITH SOD (HYDRO-MULCH SHALL BE PROHIBITED) PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY (CO).

THE DEVELOPER SHALL ESTABLISH GRASS AND MAINTAIN THE SEEDED AREAS, INCLUDING WATERING, UNTIL "PERMANENT STAND OF GRASS" IS OBTAINED, AT WHICH TIME THE PROJECT WILL BE ACCEPTED BY THE CITY. A "STAND OF GRASS" SHALL CONSIST OF 75% TO 80% COVERAGE AND A MIN. OF 1" IN HEIGHT AS DETERMINED BY THE CITY.

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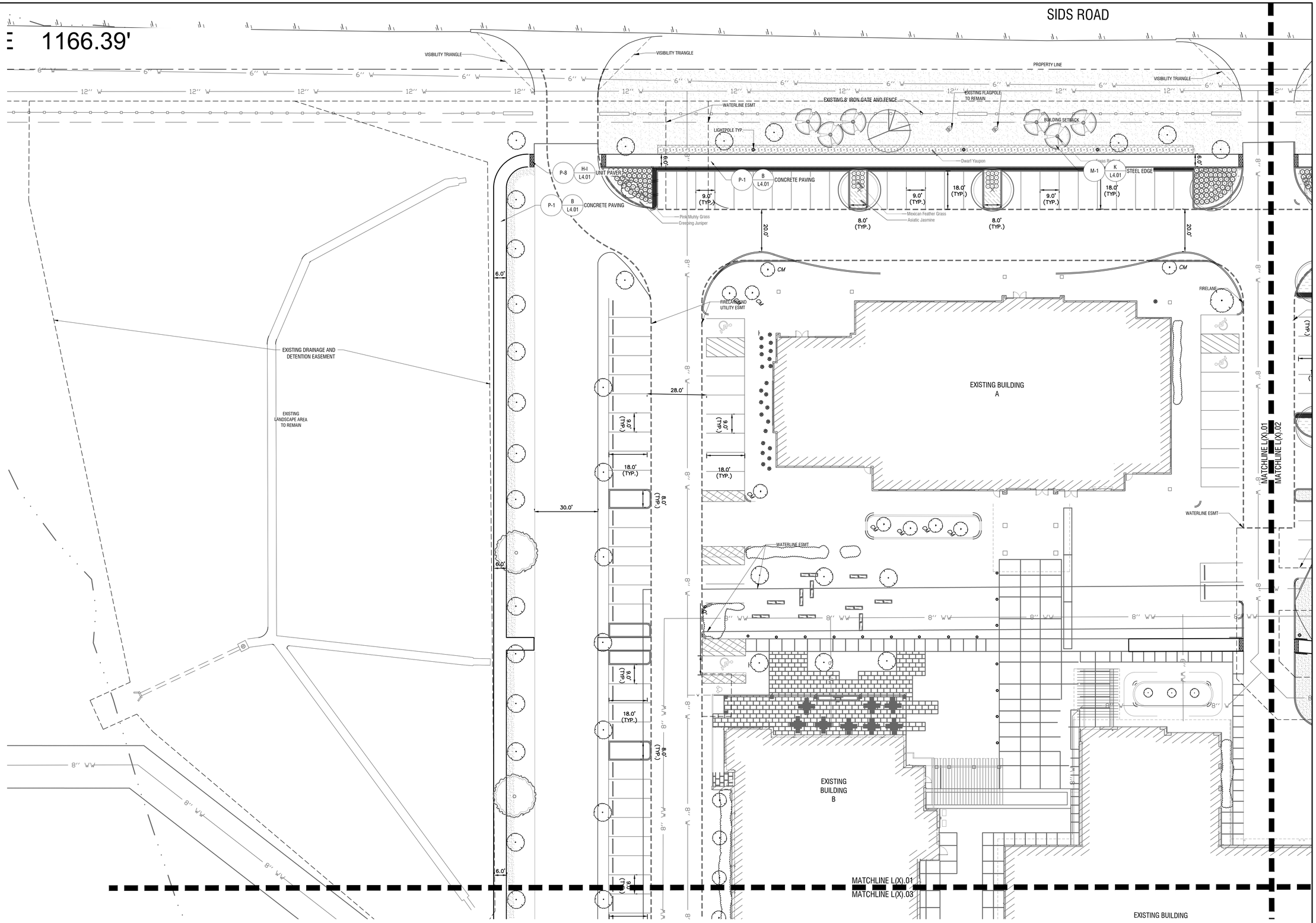

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SHEET TITLE
HARDSCAPE PLAN

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L2.01

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TEMPLATE VERSION:
PLOT DATE:

SIDS ROAD

VISIBILITY TRIANGLE

PROPOSED 8' IRON GATE AND FENCE

Texas Redbud

Texas Red Oak

Live Oak

Purple Wintercreeper

Brakelights Red Yucca

Giant Liriope

Cedar Elm

Texas Sage

Mahonia Soft Caress

Common Boxwood

Bermuda Grass

Autumn Sage

Multi-Trunk

Dallas Red Crape Myrtle

WATERLINE ESMT

FIRELANE

BISTRO TABLES A-5

STONE BLOCK SEATING A-6

DECORATIVE GRAVEL J L4.01 A6-2

M-1 K L4.01 STEEL EDGE

AG-1 J L4.01 DECOMPOSED GRANITE

P-1 B L4.01 CONCRETE PAVING

P-3

P-4 E L4.01 UNIT PAVER

P-5 E L4.01 UNIT PAVER

P-6 E L4.01 UNIT PAVER

P-7 E L4.01 UNIT PAVER

P-8 H-I L4.01 UNIT PAVER

W-1 X LX.XX STONE RETAINING WALLS

W-2 X LX.XX FEATURE WALLS

WD-1 X LX.XX WOOD DECKING

A-3 BENCH

A-6 STONE BLOCK SEATING

A6-2 J L4.01 DECORATIVE GRAVEL

A-7 X LX.XX OUTDOOR KITCHEN STONE

PROPOSED BUILDING D
OFFICE 18,400 SF
WAREHOUSE 12,750 SF

S 46°15'45" E 338.73'

N 44°02'35" E 24

BLDG F

MATCHLINE L(X).01
MATCHLINE L(X).02
MATCHLINE L(X).01
MATCHLINE L(X).04

NORTH
0' 20' 40'
Scale: 1" = 20'-0"

Hardscape Plan
Scale: 1" = 20' - 0"

A

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PLOT DATE:
TEMPLATE VERSION:

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
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KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

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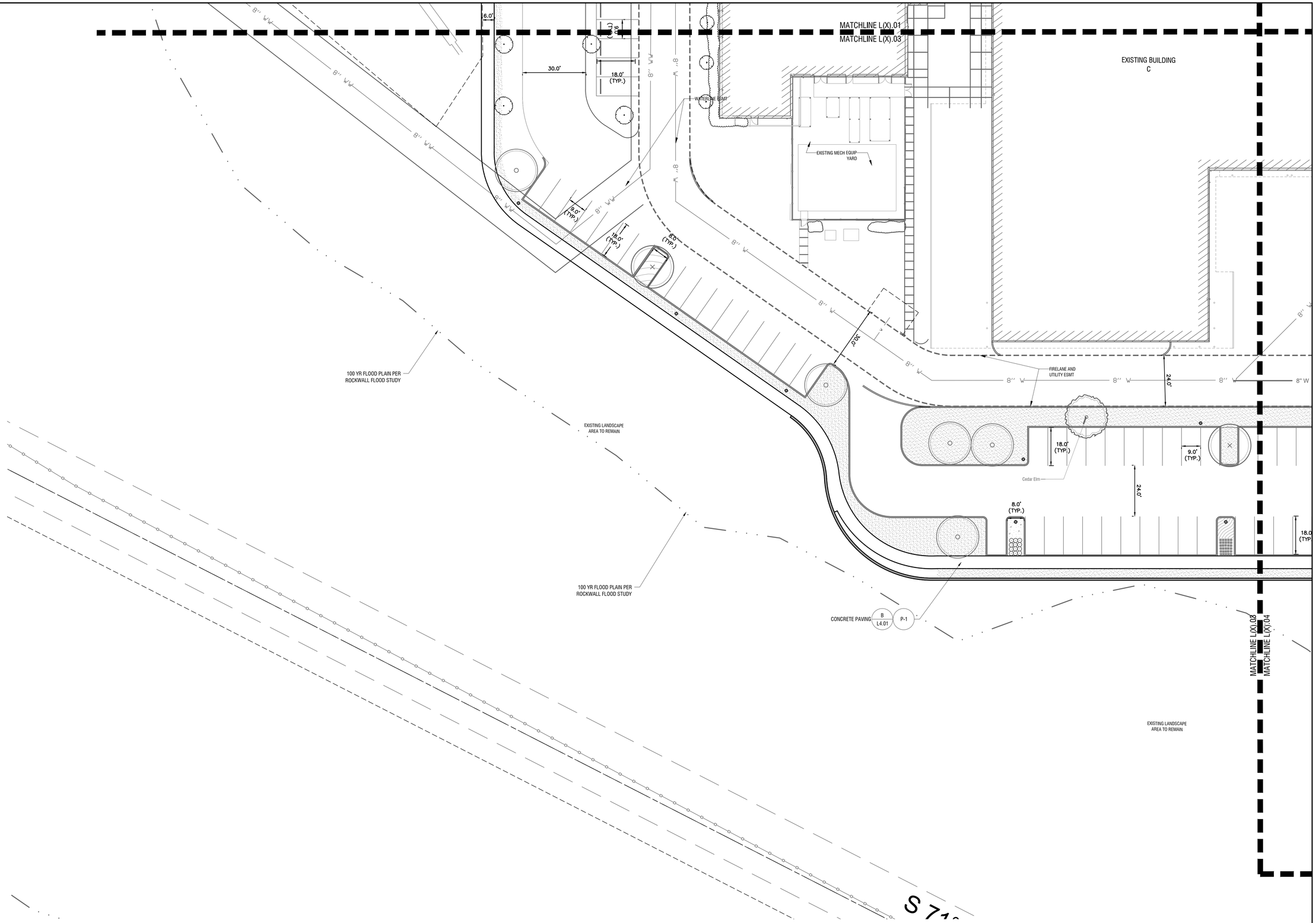
SHEET TITLE
HARDSCAPE PLAN

SHEET NO.
L2.02



NORTH

0' 20' 40'

Scale: 1" = 20'-0"

Hardscape Plan

Scale: 1" = 20' - 0"

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SHEET TITLE
HARDSCAPE PLAN

SHEET NO.
L2.03

MATCHLINE L(X).01
MATCHLINE L(X).04

18.0' (TYP.)
9.0' (TYP.)
18.0' (TYP.)
Lacebark Elm
WATERLINE ESMT
8" W
8' W
9.0' (TYP.)
18.0' (TYP.)
11.0'
24.0'
Purple Wintercreeper
P-8
H-I
L4.01
UNIT PAVER
35.0'
WATERLINE ESMT
A-6
STONE BLOCK SEATING
P-4
Yaupon Holly
Fountain Grass
Mexican Feather Grass
Littoral Planting Upland Mix
PROPOSED BUILDING E
31,350 SF(OFFICE)
M-1
K
L4.01
STEEL EDGE
W-1
X
LX.XX
STONE RETAINING WALLS
WD-1
X
LX.XX
WOOD DECKING
CONCRETE PAVING
B
L4.01
P-1
100 YR FLOOD PLAIN PER
ROCKWALL FLOOD STUDY
8.0' (TYP.)
18.0' (TYP.)
9.0' (TYP.)
24.0'
MATCHLINE L(X).03
MATCHLINE L(X).04
MATCHLINE L(X).04
MATCHLINE L(X).05
MATCHLINE L(X).04
MATCHLINE L(X).06
PROPOSED DETENTION

NORTH
0' 20' 40'
Scale: 1" = 20'-0"

Hardscape Plan
Scale: 1" = 20' - 0"
A

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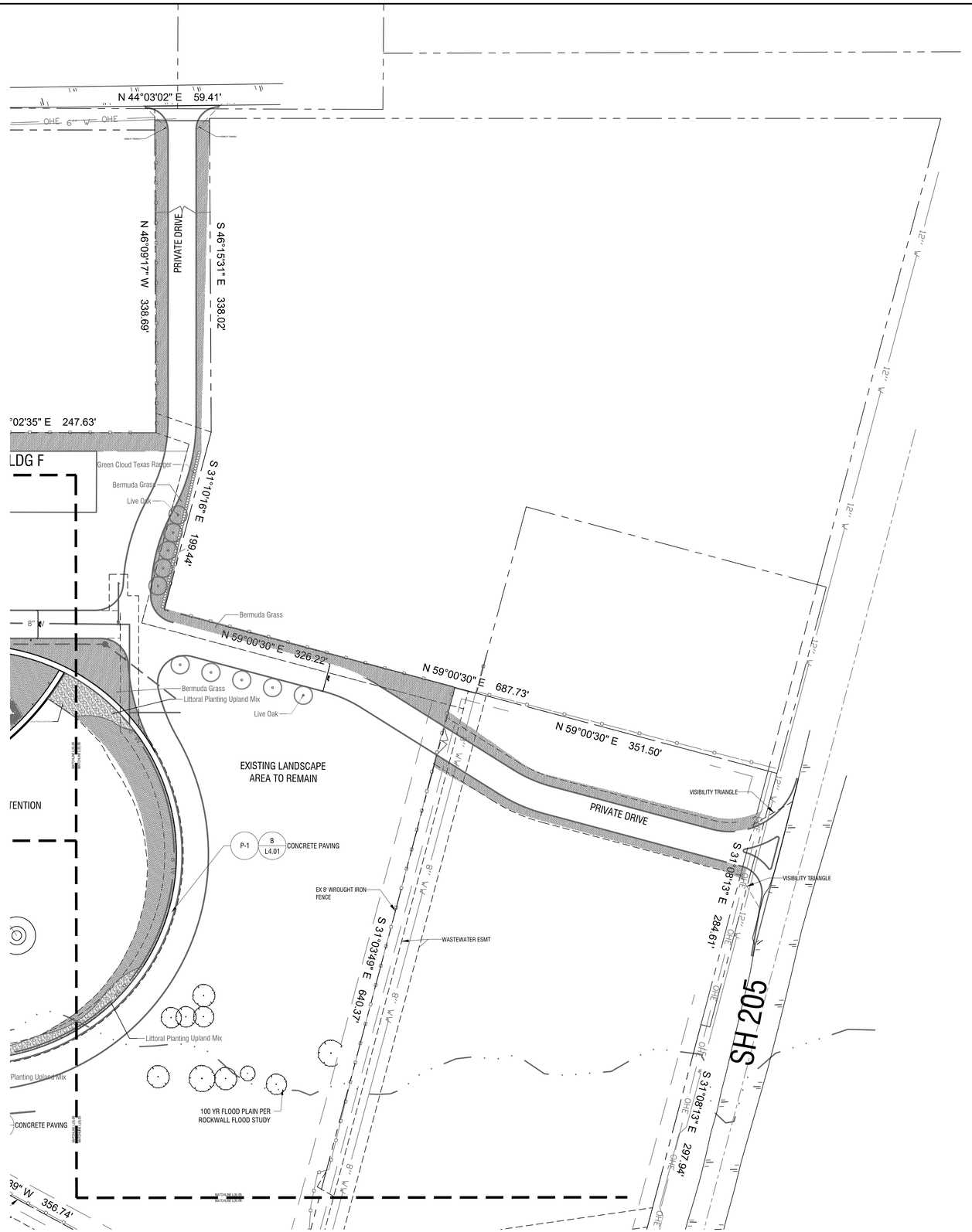
HARDSCAPE PLAN

SHEET NO.
L2.04



NORTH

0' 60' 120'

Scale: 1" = 60'-0"

Hardscape Plan

Scale: 1" = 60' - 0"

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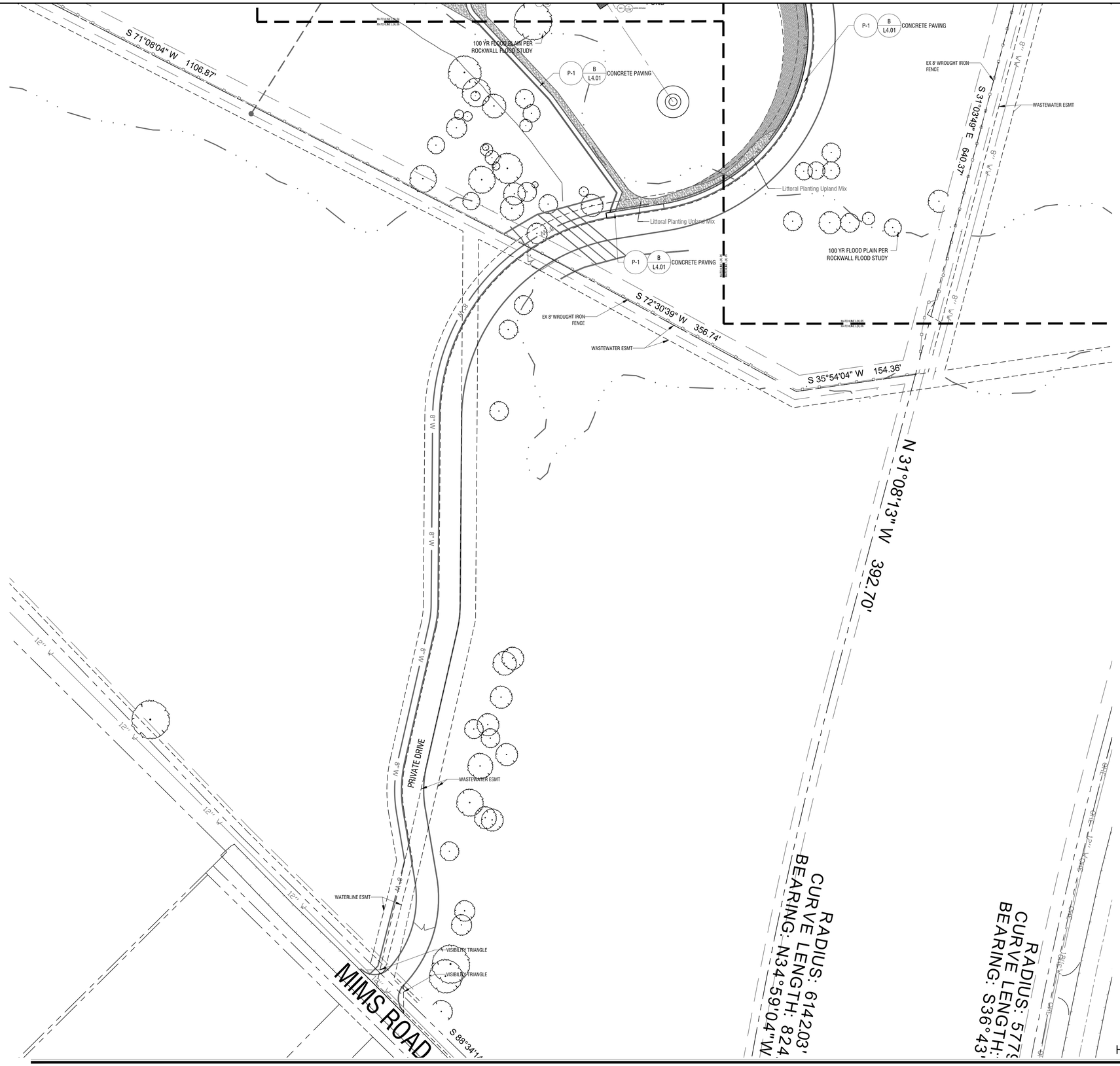

Hardscape Plan

Scale: 1" = 60' - 0"

A

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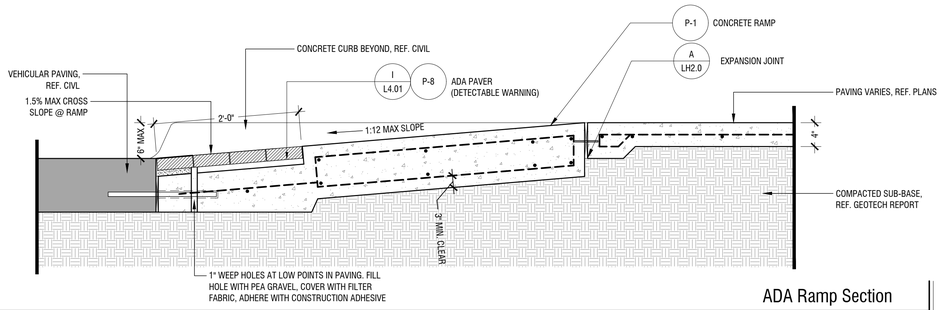
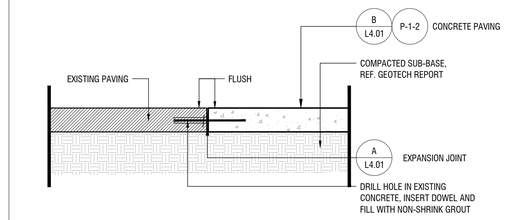
SHEET TITLE
HARDSCAPE PLAN

SHEET NO.
L2.06



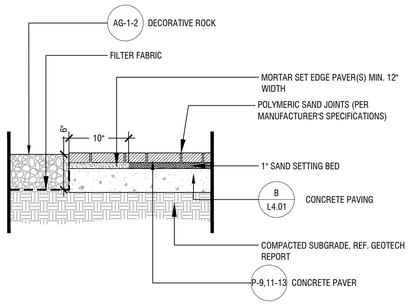
ADA Ramp Section — H

Scale: 1" = 1'-0"



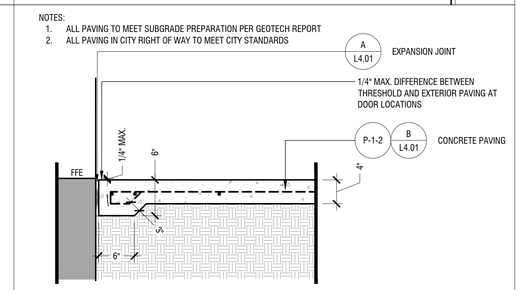
Concrete to Existing Sidewalk — D

Scale: 1" = 1'-0"



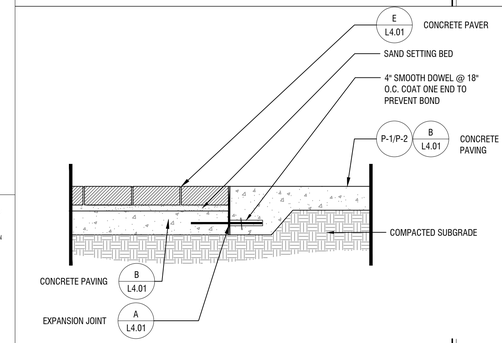
Paver to Decorative Rock Transition — G

Scale: 1"=1'-0"



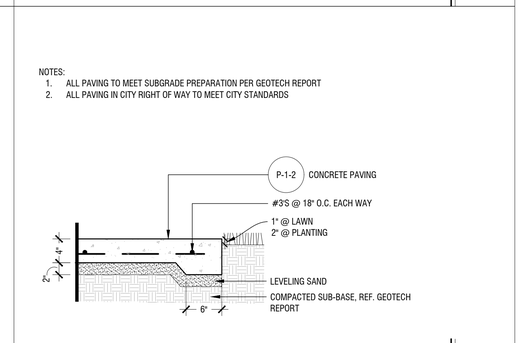
Concrete Paving @ Building — C

Scale: 1" = 1'-0"



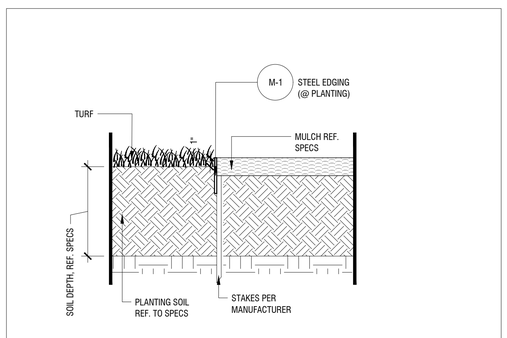
Concrete Paver to Concrete Paving Transition — F

Scale: 1" = 1'-0"



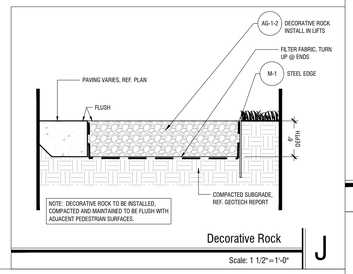
Typ. Concrete Paving — B

Scale: 1" = 1'-0"



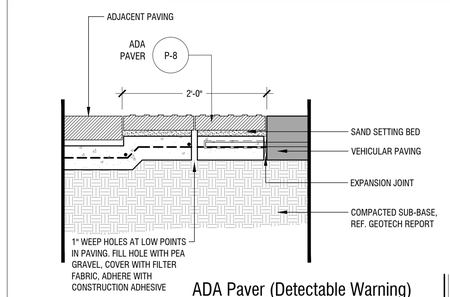
Steel Edge — K

Scale: 1 1/2" = 1'-0"



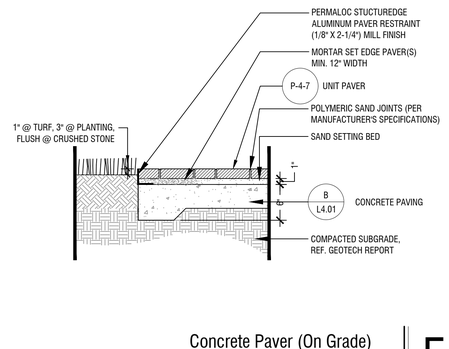
Decorative Rock — J

Scale: 1 1/2" = 1'-0"



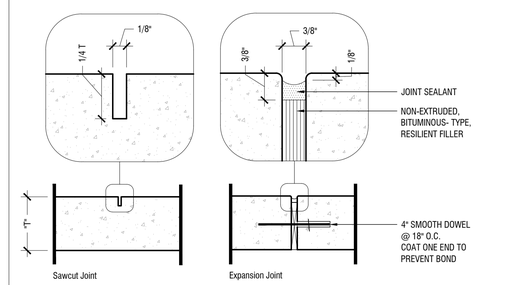
ADA Paver (Detectable Warning) — I

Scale: 1" = 1'-0"



Concrete Paver (On Grade) — E

Scale: 1" = 1'-0"



Concrete Paving Joints — A

N.T.S.

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MEP ENGINEERS
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OWNER
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950 SIDS ROAD
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L.A. No. 3480 Date 10/14/2022

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
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DATE
10/14/22

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SHEET TITLE
HARDSCAPE DETAILS

SHEET NO.
L4.01

PLOT DATE:

TEMPLATE VERSION:

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Luminaire Schedule								
Symbol	Type	Qty	Manufacturer / Catalog Number	Total Lumen Output	Total Input Watts	Ballast Factor	Light Lost Factor	User Defined Factor
	AA	51	LITHONIA CSX1 LED 60C 700 40K T4M HS	12377	134	1.000	0.900	1.000
	BB	40	LITHONIA KBD8 LED 12C 350 40K ASY MVOLT	809	16	1.000	0.900	1.000
	CC	2	LITHONIA DSXW2 LED 20C 350 40K T2S MVOLT	2988	25	1.000	0.900	1.000

Calculation Summary						
Calculation Grid Location	Calc. Height (Ft.)	Units	Avg	Max	Min	Avg/Min
GROUND_Planar	0	Fc	0.78	5.0	0.0	N.A.
PARKING LOT 1		Fc	2.69	4.1	1.4	1.92
PARKING LOT 2 & ROADWAY		Fc	2.90	5.0	0.8	3.63

AA

CSX1 LED
LED Area Luminaire

Specifications
EPA: 0.7 ft² (65 m²)
Length: 23-1/2" (597 mm)
Width: 18-1/2" (470 mm)
Height: 5-7/8" (149 mm)
Weight (max): 37 lbs (16 kg)

BB

KBA8 LED
LED Specification Bollard

Specifications
8" Round (203 mm)
Height: 42" (106.7 cm)
Weight (max): 27 lbs (12.25 kg)

CC

D-Series Size 2
LED Wall Luminaire

Specifications
Luminaire
Width: 18-1/2" (470 mm) Weight: 21 lbs (9.5 kg)
Depth: 10" (254 mm)
Height: 7-5/8" (194 mm)
Back Box (BBW)
Width: 5-1/2" (140 mm) BBW Weight: 1 lbs (0.5 kg)
Depth: 1-1/2" (38 mm)
Height: 4" (102 mm)

PARKING LOT 1

Illuminance (Fc)
Average = 2.69
Maximum = 4.1
Minimum = 1.4
Avg/Min Ratio = 1.92
Max/Min Ratio = 2.93

PARKING LOT 2 & ROADWAY

Illuminance (Fc)
Average = 2.90
Maximum = 5.0
Minimum = 0.8
Avg/Min Ratio = 3.63
Max/Min Ratio = 6.25

BLDG A (EXISTING)

BLDG B (EXISTING)

BLDG C (EXISTING)

BLDG D

BLDG E

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GARLAND, TEXAS 75040

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SHEET TITLE
SITE LIGHTING - PHOTOMETRIC CALCS

SHEET NO.
SL.00

VP:LOT DATE:
TEMPLATE VERSION:

Traffic Impact Analysis

Rayburn Electric Cooperative
Rockwall, Texas

October 13, 2022

Kimley-Horn and Associates, Inc.
Dallas, Texas

Project #67075002
Registered Firm F-928

Kimley»Horn

Traffic Impact Analysis

Rayburn Electric Cooperative Campus Expansion
Rockwall, Texas

Prepared by:

Kimley-Horn and Associates, Inc.
13455 Noel Road, Two Galleria Tower, Suite 700
Dallas, Texas 75240
Registered Firm F-928

10/13/2022

Contact:
Christian DeLuca, P.E., PTOE
972-770-1300
October 13, 2022

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EXECUTIVE SUMMARY

The proposed Rayburn Electric Cooperative (REC) Campus Expansion development is located within the block bounded by Goliad Street, Sims Road, and Mims Road in Rockwall, Texas. The site is proposed to be built as a distribution center. This study is intended to identify traffic generation characteristics, identify potential traffic related impacts on the local street system, and to develop mitigation measures required for identified impacts. The following existing intersections were selected to be part of this study:

- Goliad Street & Sids Road
- Mims Road & Sids Road
- Goliad Street & Mims Road
- Mims Road & National Drive

The analysis also included the following driveways having access in and out of the site:

- Drive 1, which is an existing full-access driveway for the REC Campus to Sids Road
- Drive 2, which is an existing full-access driveway for the REC Campus to Sids Road. The driveway is across from the driveway for Air Performance.
- Drive 3, which is an existing full-access driveway for the REC Campus to Sids Road. The driveway is across from the driveway for Rockwall ISD school bus parking lot.
- Drive 4, which is an existing full-access driveway for the REC Campus to Sids Road
- Drive 5, which is a proposed right-in right-out driveway to Goliad Street.
- Drive 6, which is an existing full-access driveway for the REC Campus to Mims Road. The driveway is across from the existing roadway, National Drive.

Traffic operations were analyzed at the study intersections for existing volumes and 2024 background traffic volumes and 2024 background plus site-generated traffic volumes. The future years correspond to the expected buildout year of the site. Conditions were analyzed for the weekday AM and PM peak hours. The background traffic conditions include existing traffic with compound growth rates.

The REC campus expansion development is expected to generate approximately 26 new weekday AM peak hour one-way vehicle trips and 37 new weekday PM peak hour one-way vehicle trips at buildout. The distribution of the site-generated traffic volumes onto the street system was based on the surrounding roadway network, existing traffic patterns, and the project's proposed access locations.

Based on the analysis presented in this report, the proposed Rayburn Electric Cooperative Campus Expansion development can be successfully incorporated into the surrounding roadway network. The proposed site driveways provide the appropriate level of access for the development. The site-generated traffic does not have a significant or disproportionate effect on the existing vehicle traffic operations. The following recommendations should be included in the development of the site:

1. Construct Drive 4 to Goliad Street as a right-in/right-out driveway due to not meeting TxDOT driveway access spacing.

I.INTRODUCTION

A. Purpose

Kimley-Horn was retained to conduct a Traffic Impact Analysis (TIA) of future traffic conditions associated with the development of the Rayburn Electric Cooperative Campus Expansion site located within the block bounded by Goliad Street, Sims Road, and Mims Road in Rockwall, Texas. A site vicinity map is provided as **Exhibit 1**. **Exhibit 2** shows the proposed conceptual site plan. This study is intended to identify traffic generation characteristics, identify potential traffic related impacts on the local street system, and to develop mitigation measures required for identified impacts.

B. Methodology

Traffic operations were analyzed at the study intersections for AM and PM peak hours for the following scenarios due to falling into Analysis Category 1 based on the requirements listed in Table 2.6 in the City of Rockwall's Standards of Design & Construction.

- 2022 existing traffic
- 2024 background traffic
- 2024 background plus site traffic

The capacity analyses were conducted using the *Synchro*™ software package and its associated *Intersection* reports for signalized intersections and *Highway Capacity Manual* reports for unsignalized intersections.

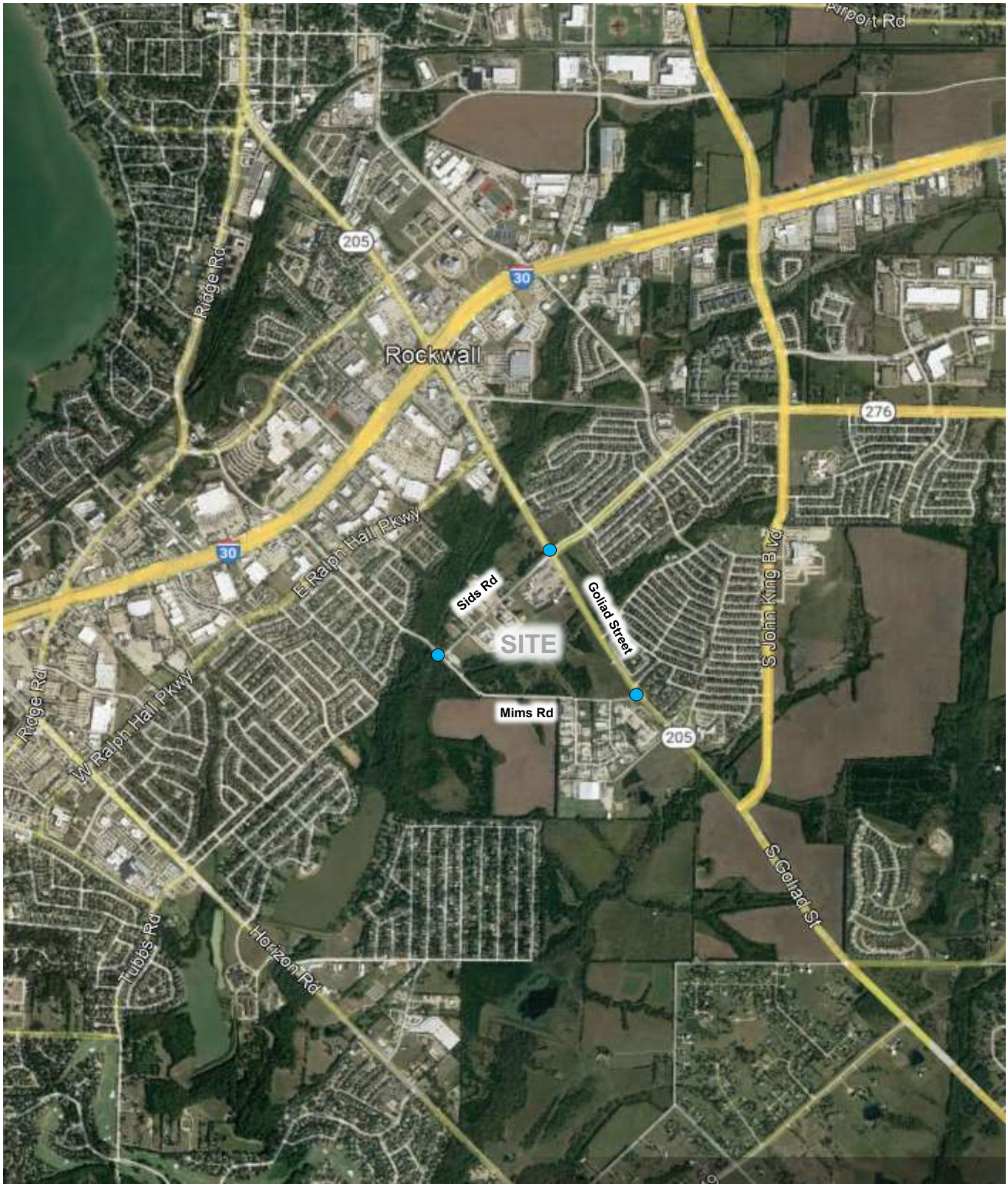

EXHIBIT 1

Vicinity Map

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

= Study Intersection

North

Not To Scale

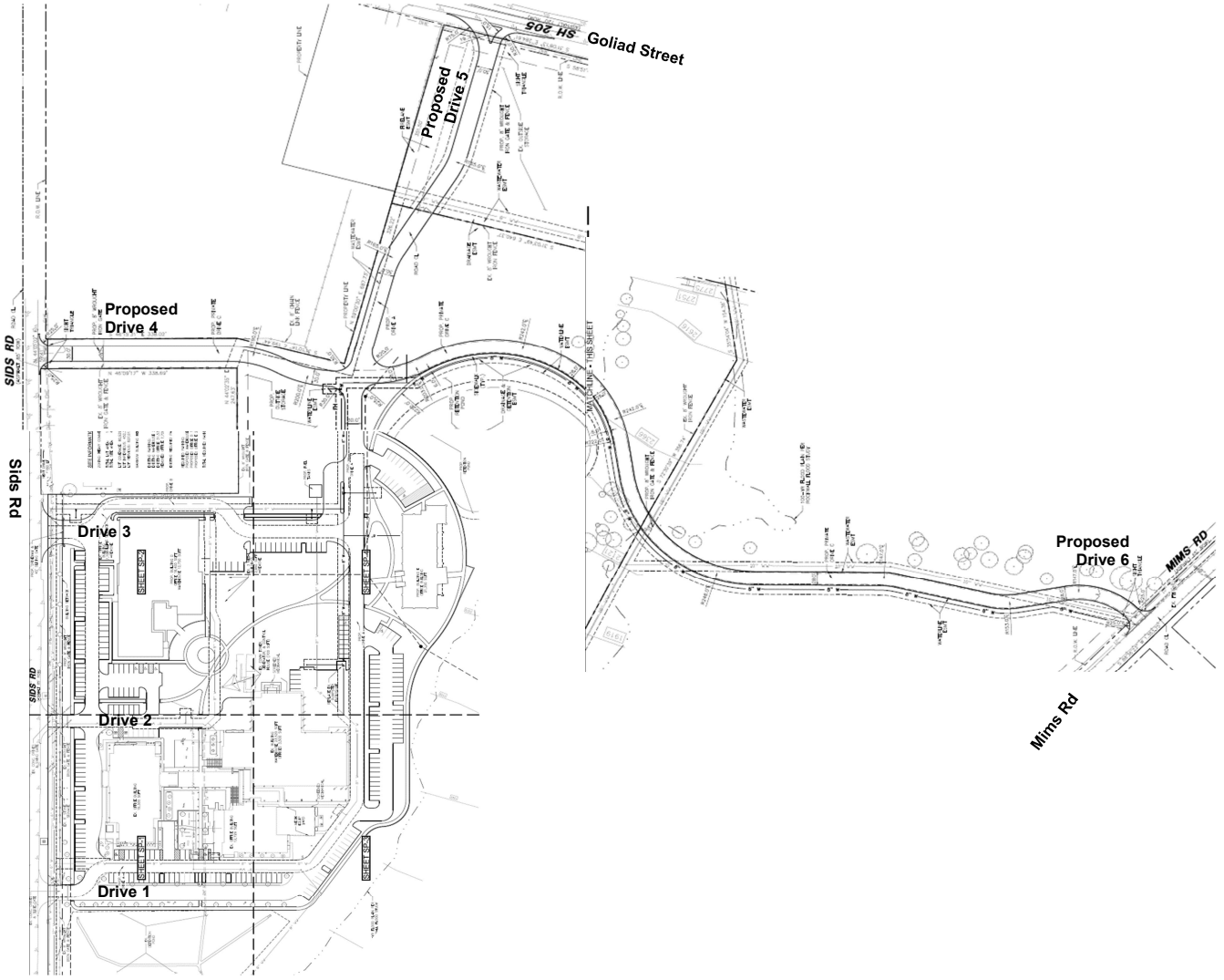

EXHIBIT 2

Conceptual Site Plan

Lineman Building - Rockwall, Texas

Kimley»Horn

North

Not To Scale

II. EXISTING AND FUTURE AREA CONDITIONS

A. Roadway Characteristics

The following signalized intersections were evaluated as part of this study:

- Goliad Street & Sids Road

The following unsignalized intersections were evaluated as part of this study:

- Mims Road & Sids Road
- Goliad Street & Mims Road
- Mims Road & National Drive

The major study area roadways are described below.

Sids Road – is a two-lane undivided roadway between Mims Road to Goliad Street and then transitions into a four-lane divided roadway east of Goliad Street. The speed limit is 30 mph west of Goliad Street adjacent to the proposed site and 50 mph east of Goliad Street. Sids Road is identified as a 4-lane undivided minor arterial, west of Goliad Street, and a 6-lane divided arterial, east of Goliad Street.

Goliad Street (SH 205) – is a two-lane undivided roadway between John King Boulevard to Sids Road and then transitions into a six-lane divided roadway north of Sids Road. The speed limit is 55 mph south of Sids Road adjacent to the proposed site and 45 mph north of Sids Road. Goliad Street is identified as a 6-lane divided arterial on the City of Rockwall Thoroughfare Plan.

Mims Road – is a two-lane undivided roadway that runs from Goliad Street to I-30. On the City of Rockwall Thoroughfare Plan, Industrial Boulevard is designated as a four-lane undivided minor arterial. The speed limit near the site is 30 mph.

Exhibit 3 illustrates the intersection geometry used for the traffic analysis.

B. Existing Study Area

The property is zoned as Heavy Commercial (LHC with “office/warehouse combinations land uses” listed as a primary land use. The use of the property will not be changing.

C. Proposed Site Improvements

The development as proposed includes expansion of the Rayburn Electric.Cooperative Campus. The existing REC campus contains 62,750 square feet; 7700 square feet will be removed while two buildings totaling 52,500 square feet will be added. The net gain is 44,800 square feet.

As shown in **Exhibit 3**, the site has three proposed driveways. The driveways to be modeled in this analysis are as follows:

Drive 1 – is an existing full-access driveway to Sids Road. The drive is approximately 550 feet northeast of the intersection of Mims Road and Sids Road.

Drive 2 – is an existing full-access driveway to Sids Road and is located across from another commercial driveway. The drive is approximately 300 feet northeast of Drive 1.

Drive 3 – would reconstruct and widen the site's northenmost driveway to Sids Road. The drive is approximately 375 feet northeast of Drive 2 and meets the City of Rockwall's minimum driveway spacing of 200 feet.

Proposed Drive 4 – would be a full-access driveway to Sids Road approximately 285 feet north of Drive 3. Drive 4 is proposed to be 100 feet northeast of the existing commercial driveway servicing S & A Systems Inc. The City of Rockwall requires 200 feet driveway spacing on Arterials and 100 feet of spacing on Collectors. Sids Road is expected to be a 4-lane arterial in the future based on the thoroughfare plan, however, functions as a two-lane collector today. Furthermore, the roadway dead ends into Mims Road and traffic volumes will likely remain low for quite sometimes. Further attributing to collector characteristics. The S & A Systems driveway only services a few parking spaces and has very low traffic. For these reasons, the 100-foot driveway spacing is appropriate for this driveway.

Proposed Drive 5 – would be a right-in right-out driveway to Goliad Street (SH 205) approximately 810 feet south of Goliad Street. The driveway will be 155 feet south of the next driveway to the north. Goliad Street is a TxDOT roadway and therefore requires 360 feet of spacing as a 45 MPH road. This spacing requirement is not met. To provide reasonable access under these conditions but also provide the safest operation, the driveway connection should be constructed to only allow right-in/right out turning movements.

Proposed Drive 6 – would be a full access driveway to the existing intersection of Mims Road and National Drive. The access point will create the fourth leg of the existing three-legged intersection

The intersection spacing appears to meet the City of Rockwall standards for driveway spacing away from intersections of minor arterials, and between driveways to minor arterials. Intersection sight distance at the proposed driveways is acceptable with each on relatively straight segments of their respective roadway.

D. Existing Traffic Volumes

Exhibit 4 shows the existing weekday AM and PM peak hour traffic volumes. 24-hour machine counts were collected near the site at the intersection of Goliad Street and Sids Road. The raw count sheets, as well as a comparison between the 24-hour volumes collected and previous 24-hour counts, are provided at the end of this report.

The 24-hour count showed the daily volume on the roadway link as follows:

- Goliad Street, west of Sids Road: 11,423 vehicles per day (vpd)
- Sids Road, south of Goliad Street: 2,339 vpd

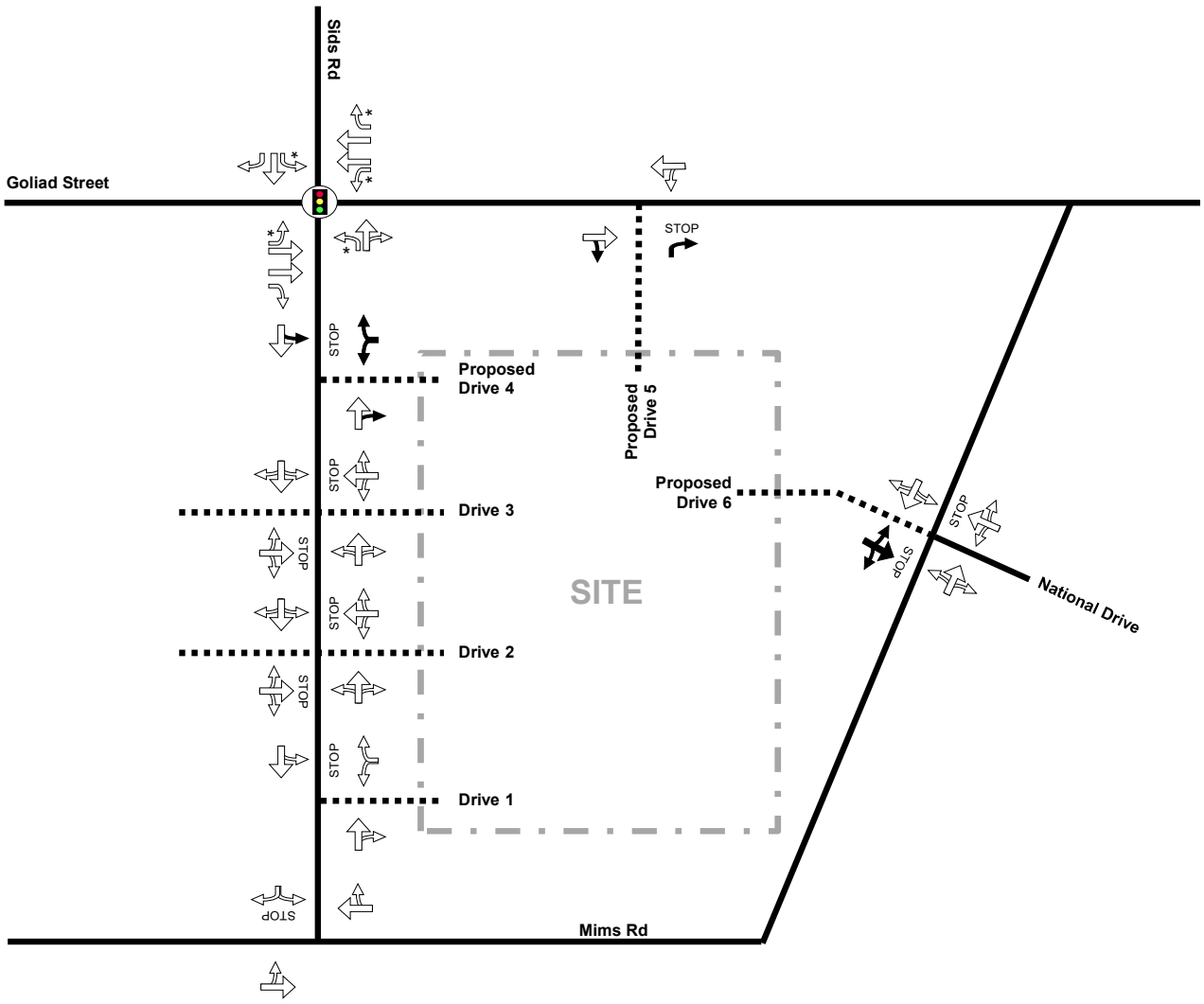

EXHIBIT 3

Lane Assignment and Intersection Control

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

= Signalized Intersection

STOP = Stop-Controlled Approach

= Travel Lane

* = Turn Bay

= Driveway Lanes or Off-Site Improvements

TWLTL = Two-Way Left Turn Lane

North

Not To Scale

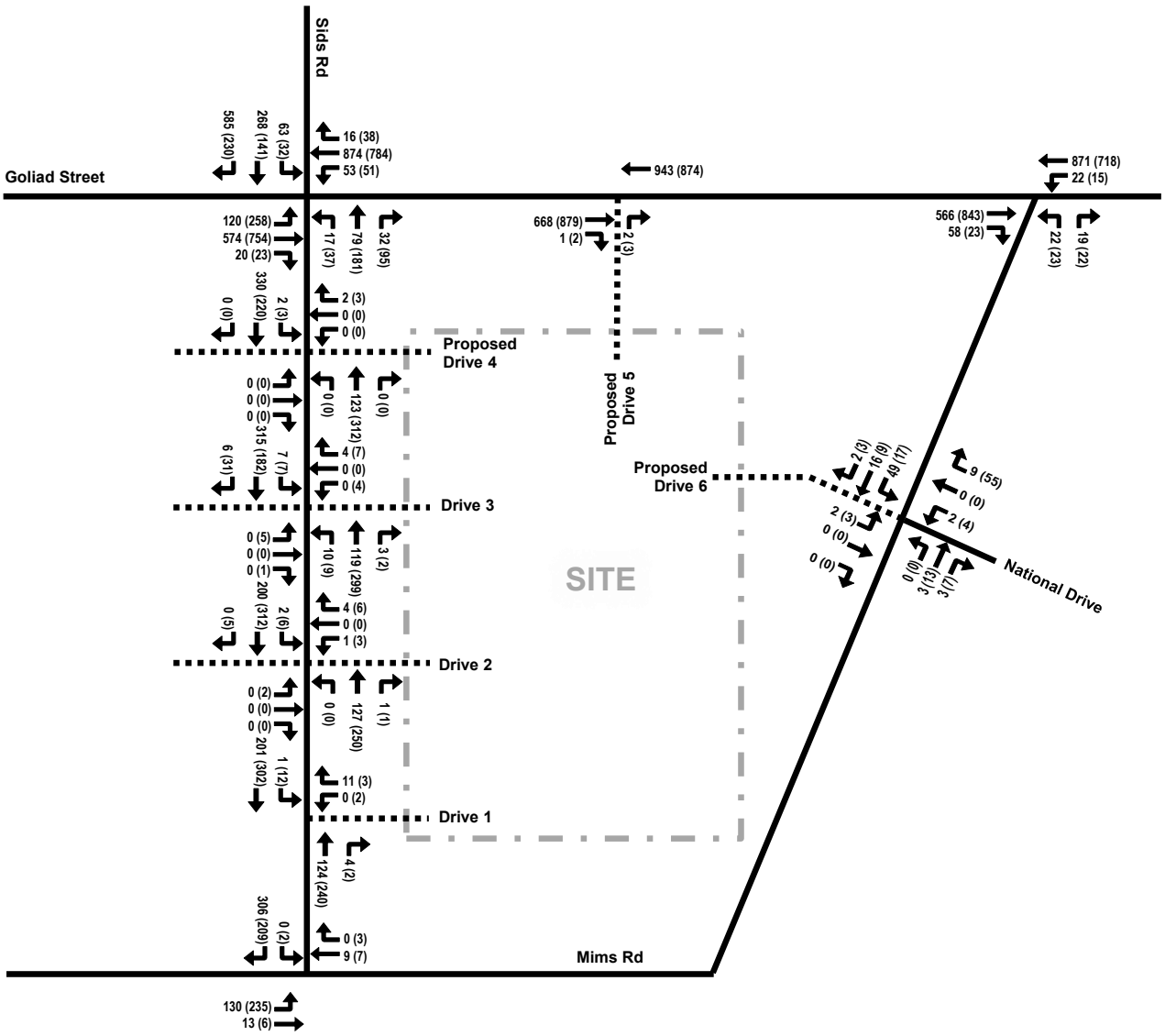

EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

Not To Scale

III. PROJECT TRAFFIC CHARACTERISTICS

A. Site-Generated Traffic

Site-generated traffic estimates are determined through a process known as trip generation. If site specific trip data is unknown, rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific tie interval using the 10th edition of *Trip Generation Manual* published by the Institute of Transportation Engineers (ITE). However, since the specific trip data of the existing site is known that data is a better indication of the expected trip data after the expansion is completed. The existing trip data was grown as a ratio based on the square footage of the existing REC campus and proposed REC campus. An additional 20% trip increase was applied to ensure a conservative analysis.

No reductions were taken for pass-by trips, internal capture, or multimodal use.

Table 1 shows the resulting daily and weekday AM and PM peak hour trip generation for the proposed development, showing new external trips.

Table 1 – Trip Generation

Land Uses	Amount	Units	ITE Code	Daily One-Way Trips	AM Peak Hour One-Way Trips			PM Peak Hour One-Way Trips		
					IN	OUT	TOTAL	IN	OUT	TOTAL
Existing Site (Observed)	*62,750*	*SF*	*170*	*636*[2]	*11*	*13*	*24*	*17*	*18*	*35*
Proposed Expansion (Estimated) [1]	44,800	SF	170	551[2]	8	10	18	13	13	25
Development Totals										
Subtotal Trip Generation Total:				1187[2]	19	23	42	30	31	60
Contingency (20% Increase)				-	4	5	8	6	6	12
Existing Site (Observed)				-636[2]	*-11*	*-13*	*-24*	*-17*	*-18*	*-35*
Total Net New External Vehicle Trips:				***551***[2]	**12**	**15**	**26**	**19**	**19**	**37**

(1) Trip Generation rates based on the existing site's observed inbound and outbound trips.
(2) Trip Generation rates based on ITE Trip Generation, 11th Edition.

B. Trip Distribution and Assignment

The distribution of the site-generated traffic volumes in to and out of the site driveways and onto the street system was based on the area street system characteristics, existing traffic patterns, relative land use density, and the locations of the proposed driveway access to/from the site. The corresponding distributions can be found in **Exhibit 5**. The corresponding inbound and outbound traffic assignment, where the directional distribution is applied using the most probable paths to and from the site can be found in **Exhibit 6**

C. Development of 2024 Background Traffic

In order to obtain 2024 background traffic, the existing traffic counts and historic counts near the site were compared to find expected growth trends within the study area. Based on the recent growth in the area, an annual growth rate of 3.2% was assumed for the background traffic through 2024. To calculate the 2024 background traffic, the existing 2022 traffic counts were grown by their respective growth rates annually for two years. The resulting 2024 background weekday AM and PM peak hour traffic volumes are shown in **Exhibit 7**.

D. Development of 2024 Total Traffic

Site traffic volumes were added to the background volumes to represent the estimated total (background plus site-generated) traffic conditions for the 2024 study year after completion of the proposed development. **Exhibit 8** shows the resulting 2024 weekday AM and PM peak hour total traffic volumes.

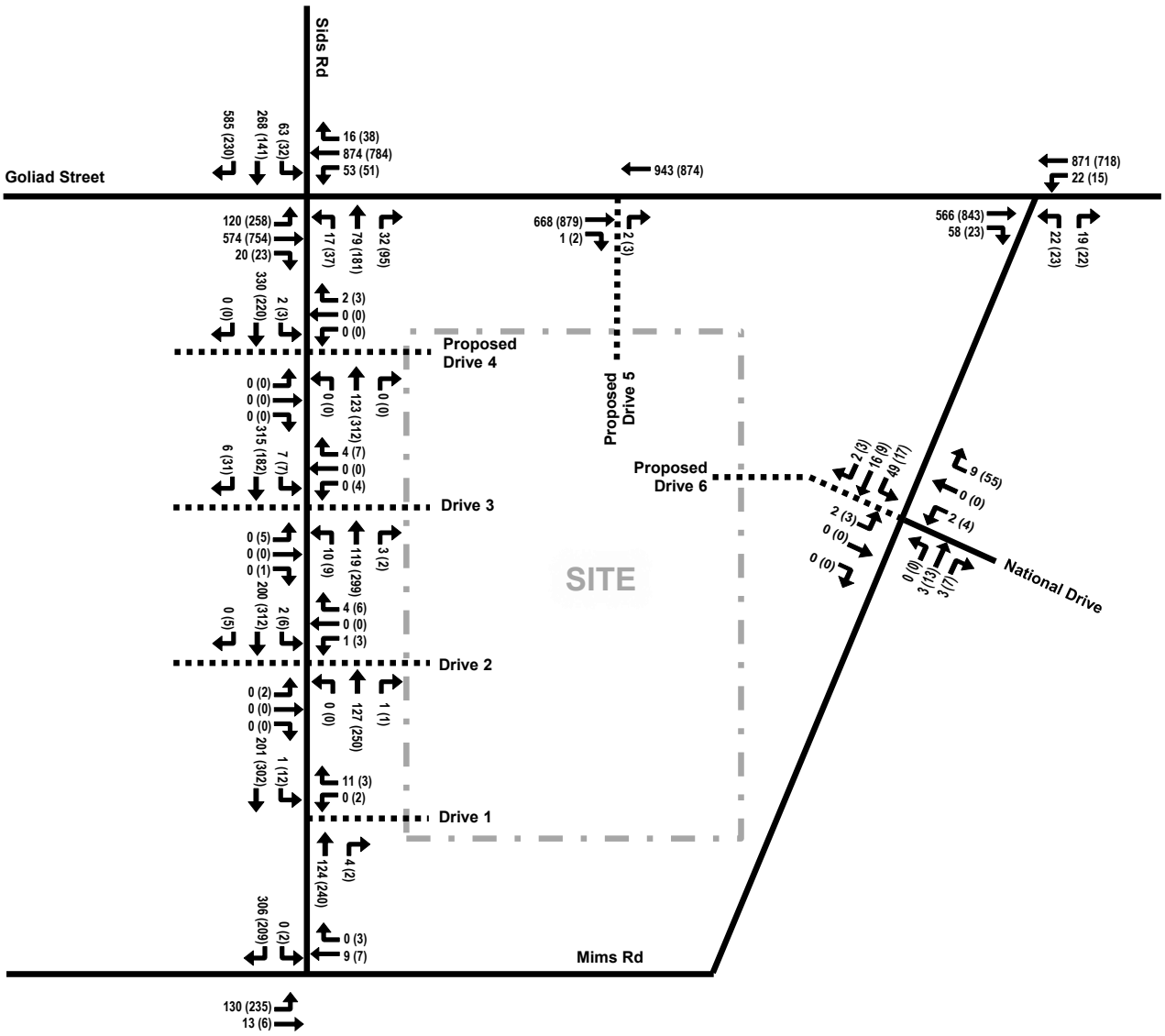

EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

Not To Scale

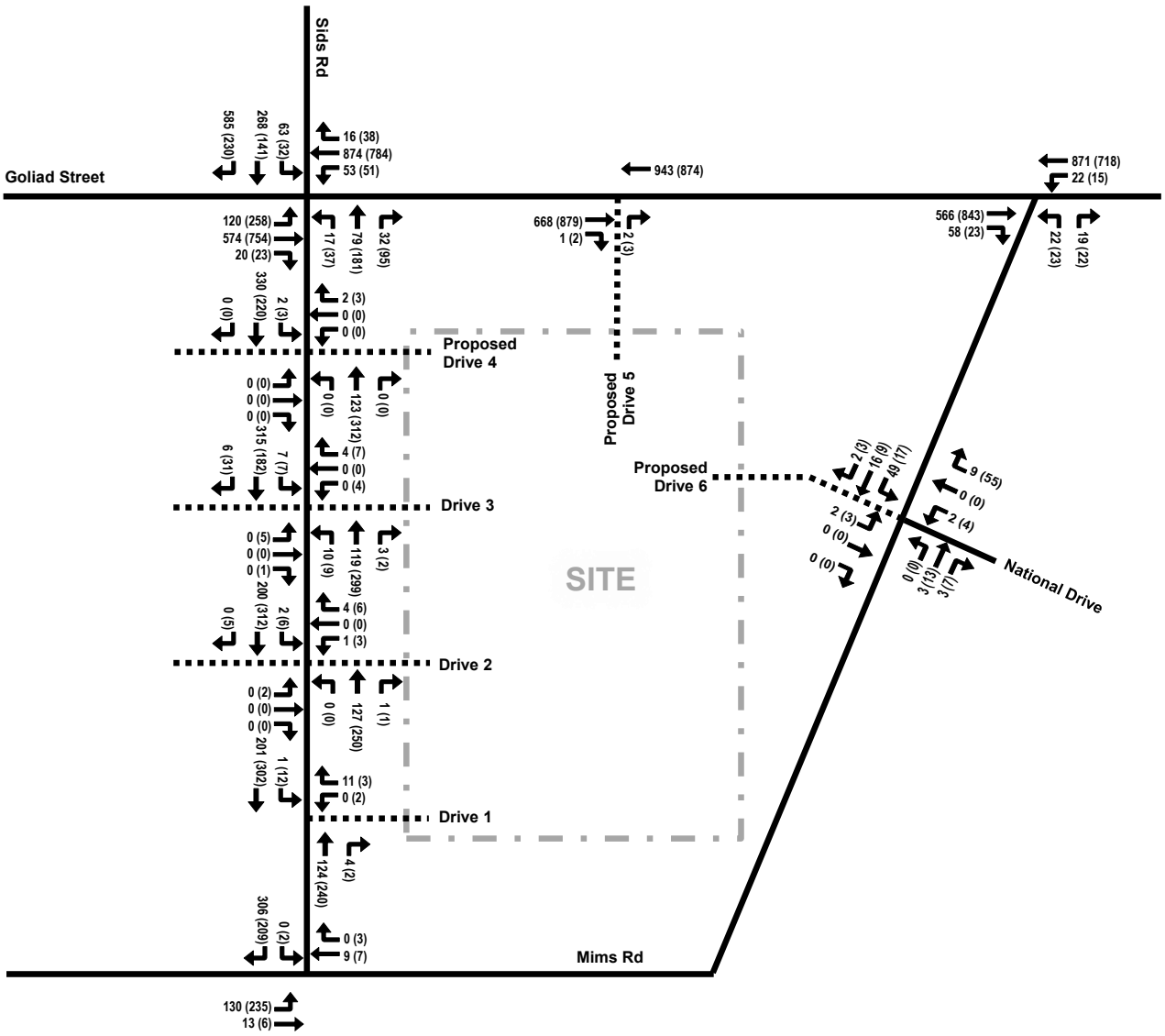

EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

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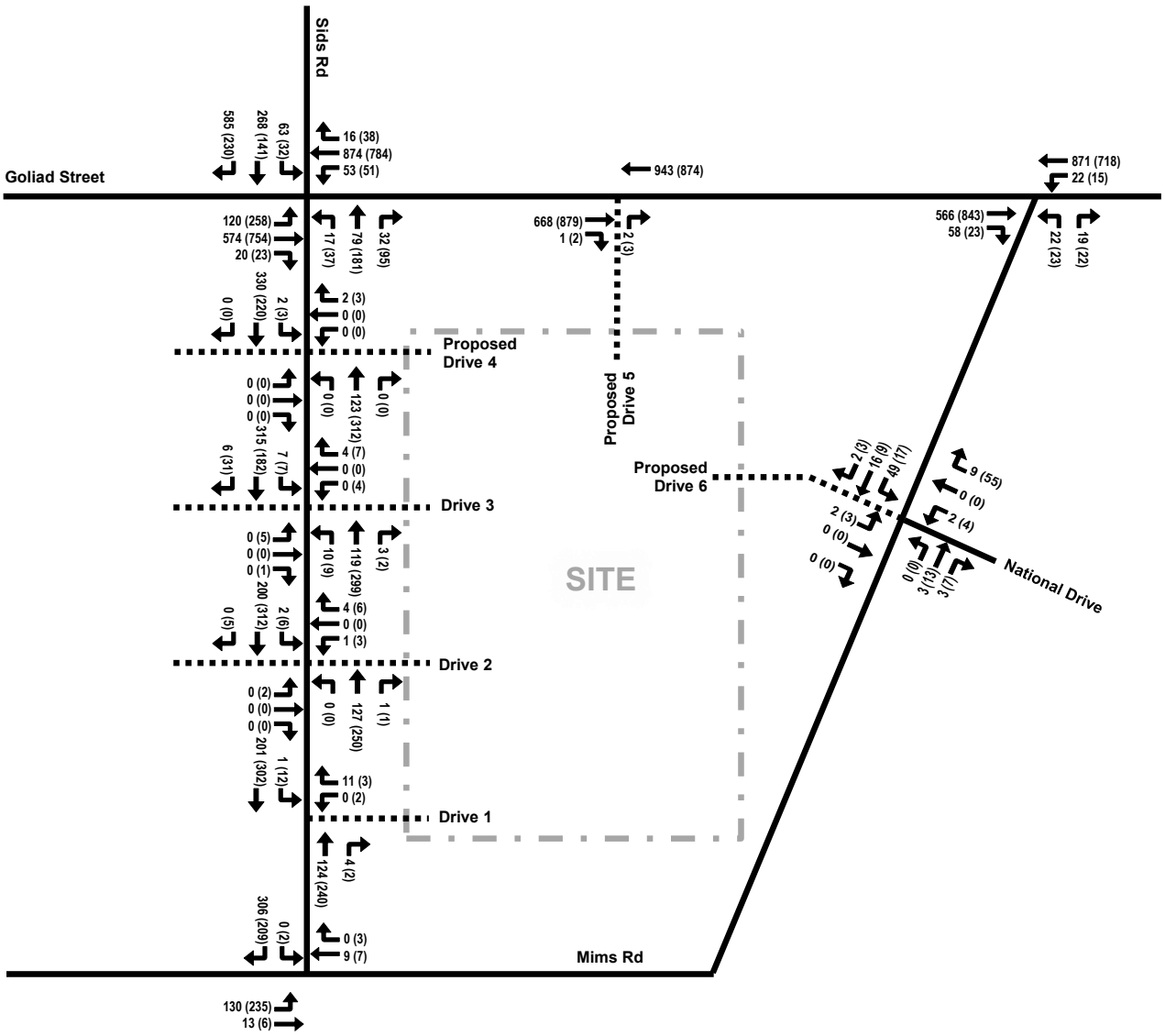

EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

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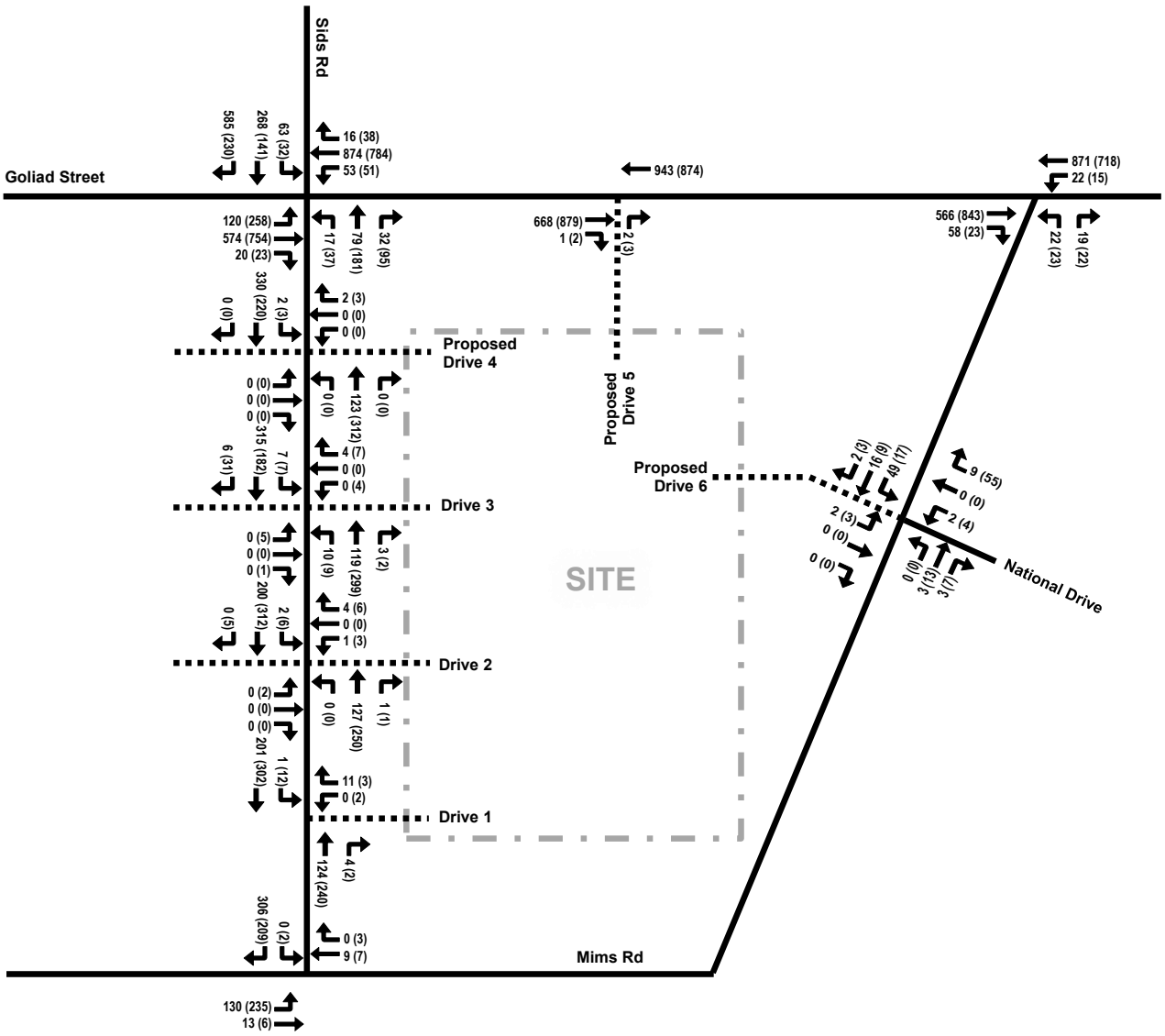


EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

Not To Scale

IV. TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn conducted a traffic operations analysis to determine potential capacity deficiencies in the 2022 & 2024study years at the study intersections. The acknowledged source for determining overall capacity is the current edition of the *Highway Capacity Manual.*

A. Analysis Methodology

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). **Table 2** shows the definition of level of service for signalized and unsignalized intersections.

Table 2 – Level of Service Definitions

Level of Service	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤10	≤10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50

Definitions provided from the Highway Capacity Manual, Special Report 209, Transportation Research Board, 2010.

Study area intersections were analyzed based on average total delay analysis for signalized and unsignalized intersections. For the unsignalized analysis, the level of service (LOS) for a two-way stop-controlled intersection is defined for each movement. Unlike signalized intersections which define LOS for each approach and for the intersection as a whole, LOS for two-way stop-controlled intersections is not defined as a whole.

Signal timings for the signalized intersection were based on the observed signal timing in the field. No timing adjustments were made in future scenarios.

The analyses assumed the lane geometry and intersection control shown in **Exhibit 3**.

The peak hour factors (PHF) for the existing traffic is known from the counts collected at the study intersections and was assumed to remain the same through the analysis. PHF for the site-generated traffic is unknown, so at new driveways it was assumed to be 0.92.

B. Analysis Results

Table 3 show the intersection operational results for the weekday AM and PM peak hours, respectively.

Table 3 – Traffic Operational Results – Weekday AM & PM Peak Hour

INTERSECTION	APPROACH	2021 Existing Traffic		2023 Background Traffic		2023 Background plus Site Traffic		2021 Existing Traffic		2023 Background Traffic		2023 Background plus Site Traffic	
		AM PEAK HOUR		AM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR		PM PEAK HOUR		PM PEAK HOUR	
		DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS
Signalized Intersection													
Sids Road & Goliad Road	EB	24.6	C	24.7	C	24.7	C	34.4	C	34.4	C	36.1	D
	WB	34.0	C	34.2	C	34.1	C	32.2	C	32.2	C	31.8	C
	NB	21.8	C	23.3	C	23.2	C	24.9	C	24.9	C	25.2	C
	SB	17.9	B	20.9	C	23.2	C	12.7	B	12.7	B	13.0	B
	Overall	**25.5**	**C**	**26.7**	**C**	**27.4**	**C**	**29.3**	**C**	**29.3**	**C**	**29.8**	**C**
Unsignalized Intersection													
Mims Road & Sids Road	EBL	7.4	A	7.5	A	7.5	A	7.6	A	7.6	A	7.7	A
	SB	9.8	A	9.9	A	10.0	A	9.3	A	9.3	A	9.3	A
Goliad Road & Mims Road	EB	8.5	A	8.5	A	8.5	A	8.4	A	8.4	A	8.4	A
	NBL	7.3	A	7.3	A	7.3	A	7.3	A	7.3	A	7.3	A
Sids Road & Drive 1	WB	9.0	A	9.0	A	9.0	A	11.3	B	11.3	B	11.0	B
	SBL	-	-	-	-	7.5	A	7.8	A	7.8	A	7.8	A
Sids Road & Drive 2	EB	0.0	A	0.0	A	0.0	A	13.7	B	13.7	B	13.9	B
	WB	9.6	A	9.8	A	9.5	A	11.4	B	11.4	B	11.1	B
	NBL	-	-	-	-	-	-	-	-	-	-	-	-
	SBL	7.5	A	7.5	A	7.5	A	7.8	A	7.8	A	7.8	A
Sids Road & Drive 3	EB	-	-	-	-	-	-	12.8	B	12.8	B	13.1	B
	WB	8.9	A	8.9	A	9.0	A	12.0	B	12.0	B	11.4	B
	NBL	8.0	A	8.0	A	8.0	A	7.7	A	7.7	A	7.7	A
	SBL	7.5	A	7.5	A	7.5	A	7.9	A	7.9	A	7.9	A
Sids Road & Drive 4	WB	-	-	-	-	9.2	A	-	-	-	-	10.3	B
	SBL	-	-	-	-	7.6	A	-	-	-	-	8.0	A
Goliad Road & Drive 5	NBT	-	-	-	-	13.6	B	-	-	-	-	16.6	C
Mims Road & National Drive / Drive 6	EBL	-	-	-	-	-	-	-	-	-	-	-	-
	WBL	-	-	-	-	-	-	7.3	A	7.3	A	7.3	A
	NBT	8.6	A	8.6	A	8.6	A	8.7	A	8.7	A	8.7	A
	SBT	-	-	-	-	9.8	A	-	-	-	-	9.4	A

- No traffic movements in this analysis scenario

C. Traffic Operations

The results in **Table 3** show the intersection operational results for the weekday AM and PM peak hours. After the site-generated traffic is added to the roadway network, each approach operates at the same LOS and negligible increase in delay during both the AM and PM peak hours. The signalized intersection of Goliad Street and Sids Road performs at LOS C in the peak hours representing favorable operations; the analysis demonstrates that the site traffic can be incorporated into the roadway network with very limited disturbances to the existing traffic flow. The existing driveways remain operating with low delays and the proposed driveways are all expected to perform with low delays at LOS B or better. These results indicate favorable operations and that the development is provided the appropriate amount of access.

D. Link Volume Analysis

The volume to capacity ratio (V/C) of Sids Road and Goliad Street was calculated for the 2022 existing traffic and the 2024 background and background plus site traffic scenarios. The daily link capacity for each roadway is taken from the NTCOG model capacity volumes assuming the rural area type, Sids Road, as a secondary arterial, has a capacity of 875 vehicles per hour per lane (vphpl). Goliad Street, as a primary arterial, has a capacity of 925 vehicles per hour per lane (vphpl).

The link analyses displayed in **Table 4** shows that Sids Road currently operates with ample capacity of LOS A/B with current traffic volumes. After the traffic from the background growth and the project site are added to the network, the roadway continues to operate at a LOS A/B through the build-out of the site in 2024. Goliad Street currently operates with acceptable capacity of LOS D in a two-lane configuration with current traffic volumes. After the traffic from the background growth and the project site are added to the network, the roadway continues to operate at a LOS D through the build-out of the site in 2024.

The site as proposed does not have a significant negative impact on the link capacities of the study roadways.

Table 4 – Link Operational Results

Analysis Year	Roadway	Segment	Number of Lanes	Capacity	Background Volume	V/C	LOS	Back+Site Volume	V/C	LOS
2022	Sids Road	Mims Road to Goliad Street	2	17,500	11,423	0.65	D	-	-	-
	Goliad Street	Sids Road to Mims Road	2	17,500	2,339	0.13	A/B	-	-	-
2024	Sids Road	Mims Road to Goliad Street	2	17,500	12,166	0.70	D	12,500	0.71	D
	Goliad Street	Sids Road to Mims Road	2	17,500	2,491	0.14	A/B	2,571	0.15	A/B

E. Right-Turn Lane Analysis

Where justified, the addition of right-turn deceleration lanes can help inbound turning vehicles separate from the through traffic, avoiding conflicts and smoothing traffic flow. The TxDOT *Access Management Manual* sets forth criteria for auxiliary lanes on TxDOT roadways. Per Table 2.3 (Auxiliary Lane Thresholds), a right-turn deceleration lane should be considered on roads with a posted speed less than or equal to 45 MPH if the projected right-turn volume into a driveway is greater than 60 vehicles per hour. **Table 5** shows the driveway locations with right-turn driveway access to the site, and how they compare with the TxDOT threshold. The high inbound volume occurs in the PM peak hour for every driveway in this analysis.

In consideration to these recommendations and TxDOT criterion, a right-turn lane is not recommended at any of the site driveways.

Table 5 – Right-Turn Lane Analysis

Right-Turn Location	Projected Maximum Peak Hour Right-Turn Volume	TxDOT Threshold (Access Management Manual, Table 2-3)	Right-Turn Lane Recommended?
Drive 1 from Sids Road	4 vph	60 vph	No
Drive 2 from Sids Road	1 vph	60 vph	No
Drive 3 from Sids Road	3 vph	60 vph	No
Drive 4 from Sids Road	0 vph	60 vph	No
Drive 5 from Goliad Street	2 vph	50 vph	No
Drive 6 from Mims Road	3 vph	60 vph	No

V.CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this report, the proposed Rayburn Electric Cooperative Campus Expansion development can be successfully incorporated into the surrounding roadway network. The proposed site driveways provide the appropriate level of access for the development. The site-generated traffic does not have a significant or disproportionate effect on the existing vehicle traffic operations.

The following recommendations should be included in the development of the site:

1. Construct Drive 4 to Goliad Street as a right-in/right-out driveway due to not meeting TxDOT driveway access spacing.

Kimley»Horn

TRAFFIC COUNTS AND HISTORICAL DATA

Lineman Building - Rockwall, Texas

Historical Link Volumes and Growth Rates

Goliad Street						
Record	**Year**	**Link Start**	**Link End**	**Source**	**24-Hour Volume**	**Annual Growth Rate**
1	2011	Lochspring Drive	SH 276	TxDOT	20,696	-
2	2013	Lochspring Drive	SH 276	TxDOT	23,328	6.2%
3	2014	Lochspring Drive	SH 276	TxDOT	21,981	-5.8%
4	2015	Lochspring Drive	SH 276	TxDOT	23,046	4.8%
5	2016	Lochspring Drive	SH 276	TxDOT	24,309	5.5%
6	2017	Lochspring Drive	SH 276	TxDOT	26,274	8.1%
7	2018	Lochspring Drive	SH 276	TxDOT	26,568	1.1%
8	2019	Lochspring Drive	SH 276	TxDOT	26,846	1.0%
9	2020	Lochspring Drive	SH 276	TxDOT	26,590	-1.0%
10	2021	Lochspring Drive	SH 276	TxDOT	27,992	5.3%
					Average Growth 2011 - 2021:	**3.0%**

Mims Road						
Record	**Year**	**Link Start**	**Link End**	**Source**	**24-Hour Volume**	**Annual Growth Rate**
1	2009	Goliad Street	Sids Road	TxDOT	1,143	-
2	2014	Goliad Street	Sids Road	TxDOT	1,353	3.4%
					Average Growth 2009 - 2014:	**3.4%**

Average Annual Growth:	**3.2%**

National Data & Surveying Services Intersection Turning Movement Count

Location: Rayburn County Electric Middle Dwy & Sids Rd
City: Rockwall
Control: No Control

Project ID: 22-470030-006
Date: 9/20/2022

Data - Totals

NS/EW Streets:	Rayburn County Electric Middle Dwy				Rayburn County Electric Middle Dwy				Sids Rd				Sids Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	0	0	0	0	0	20	0	0	1	19	0	0	40
6:45 AM	0	0	0	0	0	0	0	0	0	12	0	0	2	17	0	0	31
7:00 AM	0	0	0	0	0	0	0	0	0	14	0	0	1	27	0	0	42
7:15 AM	0	0	1	0	0	0	0	0	0	23	0	0	0	42	0	0	66
7:30 AM	0	0	0	0	0	0	0	0	0	32	0	0	1	47	0	0	80
7:45 AM	1	0	1	0	0	0	0	0	0	38	0	0	1	74	1	0	116
8:00 AM	0	0	1	0	0	0	0	0	0	23	0	0	2	93	2	0	121
8:15 AM	0	0	0	0	0	0	0	0	0	25	0	0	0	77	2	0	104
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	3	0	0	0	0	0	0	187	0	0	8	396	5	0	600
APPROACH %'s :	25.00%	0.00%	75.00%	0.00%					0.00%	100.00%	0.00%	0.00%	1.96%	96.82%	1.22%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	1	0	2	0	0	0	0	0	0	118	0	0	4	291	5	0	421
PEAK HR FACTOR :	0.250	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.776	0.000	0.000	0.500	0.782	0.625	0.000	0.870
	0.375				0.000				0.776				0.773				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	0	0	0	0	0	0	0	0	62	0	0	0	31	0	0	93
4:45 PM	0	0	2	0	1	0	0	0	0	55	0	0	0	51	0	0	109
5:00 PM	1	0	0	0	1	0	0	0	0	59	0	0	0	51	0	0	112
5:15 PM	2	0	0	0	0	0	0	0	0	59	0	0	1	42	0	0	104
5:30 PM	0	0	2	0	0	0	0	0	0	60	0	0	0	43	0	0	105
5:45 PM	0	0	0	0	1	0	0	0	0	46	0	0	0	37	0	0	84
6:00 PM	0	0	0	0	0	0	0	0	0	50	0	0	0	31	0	0	81
6:15 PM	0	0	1	0	0	0	0	0	0	43	0	0	0	37	0	0	81
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	0	5	0	3	0	0	0	0	434	0	0	1	323	0	0	769
APPROACH %'s :	37.50%	0.00%	62.50%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.31%	99.69%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	3	0	4	0	2	0	0	0	0	233	0	0	1	187	0	0	430
PEAK HR FACTOR :	0.375	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.971	0.000	0.000	0.250	0.917	0.000	0.000	0.960
	0.875				0.500				0.971				0.922				

National Data & Surveying Services Intersection Turning Movement Count

Location: Rayburn County Electric West Dwy & Sids Rd
City: Rockwall
Control: No Control

Project ID: 22-470030-005
Date: 9/20/2022

Data - Totals

NS/EW Streets:	Rayburn County Electric West Dwy				Rayburn County Electric West Dwy				Sids Rd				Sids Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	0	0	0	0	0	20	0	0	2	17	0	0	39
6:45 AM	0	0	0	0	0	0	0	0	0	12	0	0	0	17	0	0	29
7:00 AM	0	0	0	0	0	0	0	0	0	15	0	0	1	26	0	0	42
7:15 AM	0	0	0	0	0	0	0	0	0	23	4	0	2	39	0	0	68
7:30 AM	0	0	1	0	0	0	0	0	0	30	0	0	2	46	0	0	79
7:45 AM	0	0	1	0	0	0	0	0	0	37	1	0	2	72	0	0	113
8:00 AM	0	0	0	0	0	0	0	0	0	23	2	0	5	89	0	0	119
8:15 AM	0	0	0	0	0	0	0	0	0	25	0	0	0	76	0	0	101
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	2	0	0	0	0	0	0	185	7	0	14	382	0	0	590
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%					0.00%	96.35%	3.65%	0.00%	3.54%	96.46%	0.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	2	0	0	0	0	0	0	115	3	0	9	283	0	0	412
PEAK HR FACTOR :	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.777	0.375	0.000	0.450	0.795	0.000	0.000	0.866
	0.500								0.776				0.777				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	0	1	0	0	0	0	0	0	58	0	0	0	31	0	0	90
4:45 PM	0	0	0	0	0	0	0	0	0	54	0	0	0	50	0	0	104
5:00 PM	4	0	3	0	0	0	0	0	0	56	0	0	0	52	0	0	115
5:15 PM	0	0	3	0	0	0	0	0	0	56	0	0	0	44	0	0	103
5:30 PM	1	0	3	0	0	0	0	0	0	57	0	0	0	43	0	0	104
5:45 PM	0	0	0	0	0	0	0	0	0	46	0	0	0	37	0	0	83
6:00 PM	0	0	0	0	0	0	0	0	0	50	0	0	0	31	0	0	81
6:15 PM	0	0	0	0	0	0	0	0	0	44	0	0	0	38	0	0	82
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	0	10	0	0	0	0	0	0	421	0	0	0	326	0	0	762
APPROACH %'s :	33.33%	0.00%	66.67%	0.00%					0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	5	0	9	0	0	0	0	0	0	223	0	0	0	189	0	0	426
PEAK HR FACTOR :	0.313	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.978	0.000	0.000	0.000	0.909	0.000	0.000	0.926
	0.500								0.978				0.909				

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 205/S Goliad St & Mims Rd
City: Rockwall
Control: 1-Way Stop(EB)

Project ID: 22-470030-004
Date: 9/20/2022

Data - Totals

NS/EW Streets:	SR 205/S Goliad St				SR 205/S Goliad St				Mims Rd				Mims Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	2	193	0	0	0	90	9	0	8	0	0	0	0	0	0	0	302
6:45 AM	7	202	0	0	0	72	15	0	1	0	0	0	0	0	0	0	297
7:00 AM	5	216	0	0	0	94	10	0	6	0	0	0	0	0	0	0	331
7:15 AM	2	195	0	0	0	119	16	0	4	0	3	0	0	0	0	0	339
7:30 AM	10	201	0	0	0	121	10	0	8	0	3	0	0	0	0	0	353
7:45 AM	1	210	0	1	0	161	15	0	5	0	6	0	0	0	0	0	399
8:00 AM	6	210	0	0	0	128	13	0	4	0	4	0	0	0	0	0	365
8:15 AM	5	171	0	0	0	137	10	0	8	0	5	0	0	0	0	0	336
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	38	1598	0	1	0	922	98	0	44	0	21	0	0	0	0	0	2722
APPROACH %'s :	2.32%	97.62%	0.00%	0.06%	0.00%	90.39%	9.61%	0.00%	67.69%	0.00%	32.31%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	19	816	0	1	0	529	54	0	21	0	16	0	0	0	0	0	1456
PEAK HR FACTOR :	0.475	0.971	0.000	0.250	0.000	0.821	0.844	0.000	0.656	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.912
		0.968				0.828				0.841							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	3	159	0	0	0	194	10	0	7	0	5	0	0	0	0	0	378
4:45 PM	2	154	0	0	0	198	2	0	10	0	7	0	0	0	0	0	373
5:00 PM	2	186	0	0	0	177	5	0	22	0	4	0	0	0	0	0	396
5:15 PM	2	188	0	0	0	165	3	0	7	0	4	0	0	0	0	0	369
5:30 PM	4	155	0	0	0	202	6	0	5	0	10	0	0	0	0	0	382
5:45 PM	2	152	0	0	0	210	9	0	5	0	1	0	0	0	0	0	379
6:00 PM	3	176	0	0	0	211	4	0	5	0	3	0	0	0	0	0	402
6:15 PM	1	144	0	0	0	202	4	0	2	0	0	0	0	0	0	0	353
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	19	1314	0	0	0	1559	43	0	63	0	34	0	0	0	0	0	3032
APPROACH %'s :	1.43%	98.57%	0.00%	0.00%	0.00%	97.32%	2.68%	0.00%	64.95%	0.00%	35.05%	0.00%					
PEAK HR :	05:15 PM - 06:15 PM																TOTAL
PEAK HR VOL :	11	671	0	0	0	788	22	0	22	0	18	0	0	0	0	0	1532
PEAK HR FACTOR :	0.688	0.892	0.000	0.000	0.000	0.934	0.611	0.000	0.786	0.000	0.450	0.000	0.000	0.000	0.000	0.000	0.953
		0.897				0.925				0.667							

National Data & Surveying Services Intersection Turning Movement Count

Location: National Dr & Mims Rd
City: Rockwall
Control: 1-Way Stop(NB)

Project ID: 22-470030-003
Date: 9/27/2022

Data - Totals

NS/EW Streets:	National Dr				National Dr				Mims Rd				Mims Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	5	0	0	0	0	0	0	0	3	0	8	0	0	0	16
6:45 AM	0	0	3	0	0	0	0	0	0	0	0	0	11	0	0	0	14
7:00 AM	1	0	5	0	0	0	0	0	0	0	1	0	5	0	0	0	12
7:15 AM	0	0	4	0	0	0	0	0	0	0	1	0	2	0	0	0	7
7:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4
7:45 AM	1	0	2	0	0	0	0	0	0	0	1	0	5	2	0	0	11
8:00 AM	0	0	2	0	0	0	0	0	0	0	2	0	5	8	0	0	17
8:15 AM	0	0	4	0	0	0	0	0	0	3	0	0	7	5	0	1	20
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	0	25	0	0	0	0	0	0	3	8	0	46	15	0	1	101
APPROACH %'s :	10.71%	0.00%	89.29%	0.00%					0.00%	27.27%	72.73%	0.00%	74.19%	24.19%	0.00%	1.61%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	2	0	8	0	0	0	0	0	0	3	3	0	20	15	0	1	52
PEAK HR FACTOR :	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.375	0.000	0.714	0.469	0.000	0.250	0.650
	0.625								0.500				0.692				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	1	0	10	0	0	0	0	0	0	5	3	0	3	3	0	0	25
4:45 PM	0	0	7	0	0	0	0	0	0	4	2	0	3	2	0	0	18
5:00 PM	1	0	14	0	0	0	0	0	0	1	2	0	5	2	0	0	25
5:15 PM	1	0	8	0	0	0	0	0	0	2	0	0	5	1	0	0	17
5:30 PM	0	0	3	0	0	0	0	0	0	5	2	0	6	2	0	0	18
5:45 PM	0	0	2	0	0	0	0	0	0	3	1	0	7	0	0	0	13
6:00 PM	1	0	7	0	0	0	0	0	0	0	0	0	0	2	0	0	10
6:15 PM	0	0	1	0	0	0	0	0	0	0	1	0	1	1	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	0	52	0	0	0	0	0	0	20	11	0	30	13	0	0	130
APPROACH %'s :	7.14%	0.00%	92.86%	0.00%					0.00%	64.52%	35.48%	0.00%	69.77%	30.23%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	3	0	39	0	0	0	0	0	0	12	7	0	16	8	0	0	85
PEAK HR FACTOR :	0.750	0.000	0.696	0.000	0.000	0.000	0.000	0.000	0.000	0.600	0.583	0.000	0.800	0.667	0.000	0.000	0.850
	0.700								0.594				0.857				

National Data & Surveying Services Intersection Turning Movement Count

Location: Mims Rd & Sids Rd
City: Rockwall
Control: 1-Way Yield(WB)

Project ID: 22-470030-002
Date: 9/20/2022

Data - Totals

NS/EW Streets:	Mims Rd				Mims Rd				Sids Rd				Sids Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	21	1	0	0	0	0	0	0	0	0	19	0	41
6:45 AM	0	0	0	0	13	0	0	0	0	0	0	0	0	0	16	0	29
7:00 AM	0	0	0	0	15	3	0	0	0	0	0	0	0	0	26	0	44
7:15 AM	0	1	1	0	25	1	0	0	0	0	0	0	0	0	39	0	67
7:30 AM	0	2	0	0	30	3	0	0	0	0	0	0	0	0	46	0	81
7:45 AM	0	0	0	0	38	2	0	0	0	0	0	0	0	0	72	0	112
8:00 AM	0	3	0	0	25	3	0	0	0	0	0	0	0	0	89	0	120
8:15 AM	0	2	0	0	27	4	0	0	0	0	0	0	0	0	77	0	110
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	8	1	0	194	17	0	0	0	0	0	0	0	0	384	0	604
APPROACH %'s :	0.00%	88.89%	11.11%	0.00%	91.94%	8.06%	0.00%	0.00%					0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	7	0	0	120	12	0	0	0	0	0	0	0	0	284	0	423
PEAK HR FACTOR :	0.000	0.583	0.000	0.000	0.789	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.798	0.000	0.881
	0.583				0.825								0.798				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	0	0	0	59	3	0	0	0	0	0	0	0	0	31	0	93
4:45 PM	0	1	1	0	51	4	0	0	0	0	0	0	0	0	49	0	106
5:00 PM	0	2	1	0	55	0	0	0	0	0	0	0	2	0	55	0	115
5:15 PM	0	2	1	0	53	1	0	0	0	0	0	0	0	0	43	0	100
5:30 PM	0	3	0	0	58	1	0	0	0	0	0	0	0	0	45	0	107
5:45 PM	0	0	0	0	47	1	0	0	0	0	0	0	0	0	37	1	86
6:00 PM	0	0	1	0	46	1	0	0	0	0	0	0	0	0	31	0	79
6:15 PM	0	3	0	0	46	1	0	0	0	0	0	0	0	0	37	0	87
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	11	4	0	415	12	0	0	0	0	0	0	2	0	328	1	773
APPROACH %'s :	0.00%	73.33%	26.67%	0.00%	97.19%	2.81%	0.00%	0.00%					0.60%	0.00%	99.09%	0.30%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	8	3	0	217	6	0	0	0	0	0	0	2	0	192	0	428
PEAK HR FACTOR :	0.000	0.667	0.750	0.000	0.935	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.873	0.000	0.930
	0.917				0.945								0.851				

National Data & Surveying Services Intersection Turning Movement Count

Location: Rayburn County Electric East Dwy & Sids Rd
City: Rockwall
Control: No Control

Project ID: 22-470030-007
Date: 9/20/2022

Data - Totals

NS/EW Streets:	Rayburn County Electric East Dwy				Rayburn County Electric East Dwy				Sids Rd				Sids Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	0	0	0	0	2	29	0	0	1	15	1	0	48
6:45 AM	0	0	0	0	0	0	0	0	0	16	1	0	1	18	0	0	36
7:00 AM	0	0	0	0	0	0	0	0	0	20	0	0	2	29	1	0	52
7:15 AM	0	0	2	0	0	0	0	0	0	24	0	0	0	41	1	0	68
7:30 AM	0	0	1	0	0	0	0	0	0	32	0	0	1	46	3	0	83
7:45 AM	0	0	0	0	0	0	0	0	0	37	2	0	3	74	2	0	118
8:00 AM	0	0	0	0	0	0	0	0	1	23	0	0	1	96	0	0	121
8:15 AM	0	0	0	0	0	0	0	0	8	18	0	0	0	78	1	0	105
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	3	0	0	0	0	0	11	199	3	0	9	397	9	0	631
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%					5.16%	93.43%	1.41%	0.00%	2.17%	95.66%	2.17%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	1	0	0	0	0	0	9	110	2	0	5	294	6	0	427
PEAK HR FACTOR :	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.281	0.743	0.250	0.000	0.417	0.766	0.500	0.000	0.882
	0.250				0.000				0.776				0.786				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	0	1	0	0	0	0	0	7	60	0	0	0	30	6	0	104
4:45 PM	3	0	0	0	0	0	0	0	3	69	0	0	2	45	14	0	136
5:00 PM	0	0	2	0	0	0	0	0	4	77	0	0	0	42	10	0	135
5:15 PM	0	0	0	0	4	0	0	0	0	70	0	0	1	38	4	0	117
5:30 PM	1	0	1	0	1	1	0	0	1	62	1	0	0	42	1	0	111
5:45 PM	0	0	1	0	0	0	0	0	0	50	0	0	0	37	2	0	90
6:00 PM	1	0	1	0	2	0	0	0	0	52	0	0	0	30	4	0	90
6:15 PM	0	0	0	0	0	0	0	0	0	46	0	0	0	36	1	0	83
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	0	6	0	7	1	0	0	15	486	1	0	3	300	42	0	866
APPROACH %'s :	45.45%	0.00%	54.55%	0.00%	87.50%	12.50%	0.00%	0.00%	2.99%	96.81%	0.20%	0.00%	0.87%	86.96%	12.17%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	4	0	3	0	5	1	0	0	8	278	1	0	3	167	29	0	499
PEAK HR FACTOR :	0.333	0.000	0.375	0.000	0.313	0.250	0.000	0.000	0.500	0.903	0.250	0.000	0.375	0.928	0.518	0.000	0.917
	0.583				0.375				0.886				0.816				

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 205/S Goliad St & SR 276/Sids Rd
City: Rockwall
Control: Signalized

Project ID: 22-470030-001
Date: 9/20/2022

Data - Totals

NS/EW Streets: SR 205/S Goliad St | SR 205/S Goliad St | SR 276/Sids Rd | SR 276/Sids Rd

AM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 AM	0	13	1	0	4	14	1	0	0	1	1	0	0	0	3	0	38
12:15 AM	0	6	1	0	7	17	0	1	0	0	1	0	0	1	1	0	35
12:30 AM	0	4	2	0	3	18	0	0	1	1	0	0	0	1	5	0	35
12:45 AM	0	4	0	0	0	7	0	0	0	0	0	0	0	0	2	0	13
1:00 AM	0	5	0	0	2	6	0	0	0	0	0	0	1	0	1	0	15
1:15 AM	0	8	0	0	4	6	0	0	0	1	0	0	0	0	2	0	21
1:30 AM	0	6	0	0	0	5	1	0	0	0	1	0	0	0	2	0	15
1:45 AM	0	3	0	0	1	8	1	0	0	1	0	0	1	1	3	0	19
2:00 AM	0	7	0	0	1	2	1	0	0	0	1	0	0	0	2	0	14
2:15 AM	0	7	0	0	0	5	0	0	0	0	0	0	0	0	1	0	13
2:30 AM	0	5	0	0	3	6	0	0	0	0	0	0	2	0	0	0	16
2:45 AM	0	9	0	0	1	4	0	0	0	0	0	0	0	0	1	0	15
3:00 AM	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0	0	9
3:15 AM	0	6	0	0	0	2	0	0	0	0	0	0	0	1	2	0	11
3:30 AM	1	7	0	0	2	3	0	0	0	0	0	0	0	0	0	0	13
3:45 AM	0	12	0	0	0	2	0	0	0	1	0	0	0	0	2	0	17
4:00 AM	0	20	0	0	1	9	0	0	0	0	0	0	0	0	4	0	34
4:15 AM	0	24	0	0	0	4	1	0	0	0	0	0	1	1	6	0	37
4:30 AM	0	21	0	0	1	16	1	0	0	0	0	0	0	0	8	0	47
4:45 AM	1	42	0	0	3	12	1	0	0	1	1	0	0	4	13	0	78
5:00 AM	3	54	1	0	3	11	4	0	1	1	1	0	1	2	7	0	89
5:15 AM	2	68	0	0	2	26	2	0	1	2	0	0	2	5	21	0	131
5:30 AM	3	94	1	0	5	28	2	0	1	3	2	0	1	3	15	0	158
5:45 AM	2	111	0	0	3	36	14	0	1	1	1	0	3	13	24	0	209
6:00 AM	3	145	1	0	5	29	5	0	4	5	5	0	4	9	41	0	256
6:15 AM	3	161	2	0	6	45	5	0	3	6	11	0	7	10	39	0	298
6:30 AM	6	210	4	0	9	84	4	0	1	13	14	0	10	9	60	0	424
6:45 AM	6	216	3	0	13	68	3	0	2	7	9	0	14	16	79	0	436
7:00 AM	13	241	3	0	15	115	3	0	3	12	3	0	7	16	95	0	526
7:15 AM	12	212	8	0	20	111	2	0	1	13	13	0	13	34	105	0	544
7:30 AM	9	213	5	0	27	134	5	0	2	23	7	0	13	39	121	0	598
7:45 AM	9	208	2	0	30	130	2	0	4	24	12	0	18	68	129	0	636
8:00 AM	19	211	4	0	32	132	4	1	2	16	4	0	17	82	148	0	672
8:15 AM	11	188	4	0	24	142	6	1	3	8	7	0	11	61	151	0	617
8:30 AM	19	148	7	0	25	109	4	0	5	15	9	0	19	49	132	0	541
8:45 AM	17	173	1	0	32	142	6	0	18	14	8	0	9	42	122	0	584
9:00 AM	9	207	9	0	27	113	3	0	7	14	11	0	7	32	99	0	538
9:15 AM	10	172	2	0	35	117	6	0	7	10	8	0	6	26	89	0	488
9:30 AM	3	162	7	0	52	133	6	0	7	15	8	0	3	28	68	0	492
9:45 AM	5	170	3	0	28	103	5	0	1	16	7	0	1	29	60	0	428
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	166	3577	71	0	426	1959	98	3	75	224	145	0	171	582	1663	0	9160
APPROACH %'s :	4.35%	93.79%	1.86%	0.00%	17.14%	78.80%	3.94%	0.12%	16.89%	50.45%	32.66%	0.00%	7.08%	24.09%	68.83%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	48	820	15	0	113	538	17	2	11	71	30	0	59	250	549	0	2523
PEAK HR FACTOR :	0.632	0.962	0.750	0.000	0.883	0.947	0.708	0.500	0.688	0.740	0.625	0.000	0.819	0.762	0.909	0.000	0.939
	0.943				0.968				0.700				0.868				

NOON

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
10:00 AM	8	192	4	0	23	101	1	0	4	8	10	0	4	14	59	0	428
10:15 AM	8	164	0	0	25	102	6	0	4	10	8	0	4	19	56	0	406
10:30 AM	10	147	4	0	28	124	5	0	2	23	17	0	3	17	60	0	440
10:45 AM	3	163	1	0	25	138	0	0	5	20	10	0	6	17	60	0	448
11:00 AM	7	152	3	0	28	111	4	0	3	14	12	0	7	20	60	0	421
11:15 AM	3	173	3	0	45	147	9	0	3	20	2	0	2	14	52	0	473
11:30 AM	14	171	6	0	35	144	4	0	6	18	16	0	4	17	48	0	483
11:45 AM	4	160	7	0	37	138	3	0	11	17	9	0	5	25	68	0	484
12:00 PM	4	153	5	0	36	188	10	0	8	14	12	0	4	12	72	0	518
12:15 PM	10	193	2	0	38	141	7	0	5	20	18	0	4	26	70	0	534
12:30 PM	11	139	3	0	38	156	5	0	4	25	15	0	8	26	72	1	503
12:45 PM	10	140	6	0	40	140	10	0	8	30	17	0	2	23	53	0	479
1:00 PM	12	146	2	0	43	148	8	0	4	20	9	0	5	15	73	0	485
1:15 PM	10	128	2	0	47	179	10	0	8	23	16	0	3	15	55	0	496
1:30 PM	4	166	5	0	47	147	12	0	4	24	21	0	11	27	56	1	525
1:45 PM	6	144	4	0	39	171	15	0	0	16	16	0	7	24	54	0	496
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	124	2531	57	0	574	2275	109	0	79	302	208	0	79	311	968	2	7619
APPROACH %'s :	4.57%	93.33%	2.10%	0.00%	19.41%	76.91%	3.68%	0.00%	13.41%	51.27%	35.31%	0.00%	5.81%	22.87%	71.18%	0.15%	
PEAK HR :	11:45 AM - 12:45 PM																TOTAL
PEAK HR VOL :	29	645	17	0	149	623	25	0	28	76	54	0	21	89	282	1	2039
PEAK HR FACTOR :	0.659	0.835	0.607	0.000	0.980	0.828	0.625	0.000	0.636	0.760	0.750	0.000	0.656	0.856	0.979	0.250	0.955
	0.843				0.851				0.898				0.918				

PM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:00 PM	10	130	11	0	46	171	7	1	6	27	12	0	3	31	48	0	503
2:15 PM	5	147	8	0	39	159	3	0	7	35	27	0	3	17	52	0	502
2:30 PM	10	127	5	0	49	164	1	0	4	34	18	0	4	18	60	0	494
2:45 PM	13	165	5	0	56	179	2	0	5	24	16	0	7	17	62	0	551
3:00 PM	11	188	5	0	52	166	3	0	2	19	9	0	6	31	47	0	539
3:15 PM	11	136	4	0	65	161	2	0	2	28	17	0	7	22	46	0	501
3:30 PM	6	150	5	0	33	186	4	0	3	21	17	0	6	23	46	0	500
3:45 PM	9	163	9	0	52	156	9	0	4	23	18	0	12	29	53	0	537
4:00 PM	10	142	7	0	58	193	3	0	5	38	21	0	12	25	37	0	551
4:15 PM	13	145	14	0	55	185	3	0	3	21	24	0	8	20	51	0	542
4:30 PM	10	152	12	0	52	191	4	0	2	40	23	0	18	26	49	0	579
4:45 PM	22	178	6	0	53	176	3	0	7	31	29	0	6	40	48	0	599
5:00 PM	13	199	15	0	63	182	6	0	9	43	23	0	6	34	47	0	640
5:15 PM	7	183	8	0	61	141	3	1	9	55	16	0	9	27	52	0	572
5:30 PM	3	176	7	0	65	207	6	0	4	37	21	0	9	28	69	0	632
5:45 PM	9	148	9	0	60	181	2	0	5	29	19	0	26	27	58	0	573
6:00 PM	7	176	10	0	59	206	2	0	5	29	26	0	10	26	50	1	607
6:15 PM	6	156	4	0	48	201	3	0	1	24	22	0	13	23	52	0	553
6:30 PM	9	166	10	0	52	204	1	0	4	31	21	0	9	20	51	0	578
6:45 PM	3	151	13	0	54	221	1	0	3	23	14	0	11	22	35	0	551
7:00 PM	7	136	9	0	48	218	2	0	4	16	17	0	10	15	27	0	509
7:15 PM	9	128	4	0	37	178	1	0	0	15	22	0	11	12	33	0	450
7:30 PM	5	112	6	0	39	209	0	0	1	18	25	0	11	7	32	0	465
7:45 PM	4	103	4	0	35	175	2	0	0	12	11	0	7	9	34	1	397
8:00 PM	5	102	8	0	48	165	2	0	0	12	13	0	5	8	30	0	398
8:15 PM	1	111	5	0	36	162	0	0	0	18	15	0	5	7	23	0	383
8:30 PM	5	108	5	0	37	176	0	0	2	16	12	0	5	6	21	0	393
8:45 PM	2	85	4	0	44	144	0	0	2	12	18	0	5	4	8	0	328
9:00 PM	0	67	3	0	36	114	0	0	1	4	5	0	2	3	11	0	246
9:15 PM	0	41	2	0	30	91	0	0	2	5	10	0	2	6	14	1	204
9:30 PM	2	67	4	0	21	90	1	0	0	5	3	0	2	0	13	0	208
9:45 PM	0	37	0	0	15	70	1	0	0	5	1	0	1	8	7	0	145
10:00 PM	2	39	0	0	10	65	0	0	0	4	3	0	3	1	9	0	136
10:15 PM	2	31	1	0	16	66	1	1	1	3	1	0	2	2	8	0	135
10:30 PM	2	34	7	0	12	41	1	0	2	5	1	0	4	2	7	0	118
10:45 PM	0	21	1	0	14	26	0	0	0	1	5	0	1	1	6	0	76
11:00 PM	0	15	2	0	8	25	0	0	0	1	1	0	3	1	7	0	63
11:15 PM	0	10	0	0	7	25	0	1	0	2	1	0	0	1	2	0	49
11:30 PM	0	8	1	0	7	19	0	0	0	0	0	0	0	0	2	0	37
11:45 PM	0	6	0	0	6	8	0	0	0	0	0	0	0	0	2	0	22
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	233	4439	233	0	1578	5697	79	4	105	766	557	0	264	599	1309	3	15866
APPROACH %'s :	4.75%	90.50%	4.75%	0.00%	21.45%	77.43%	1.07%	0.05%	7.35%	53.64%	39.01%	0.00%	12.14%	27.54%	60.18%	0.14%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	45	736	36	0	242	706	18	1	29	166	89	0	30	129	216	0	2443
PEAK HR FACTOR :	0.511	0.925	0.600	0.000	0.931	0.853	0.750	0.250	0.806	0.755	0.767	0.000	0.833	0.806	0.783	0.000	0.954
	0.900				0.870				0.888				0.884				

Kimley»Horn

Synchro™ Output - 2022 Existing Traffic

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	2	113	538	17	48	820	15	11	71	30	59	250
Future Volume (vph)	2	113	538	17	48	820	15	11	71	30	59	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.956			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1781	0	1770	1863
Flt Permitted		0.127			0.328			0.510			0.687	
Satd. Flow (perm)	0	237	3539	1583	611	3539	1583	950	1781	0	1280	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		18			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			908			822
Travel Time (s)			7.7			15.3			20.6			18.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	2	120	572	18	51	872	16	12	76	32	63	266
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	572	18	51	872	16	12	108	0	63	266
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

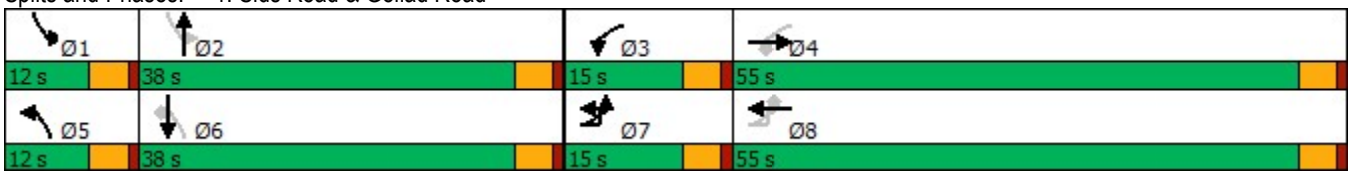
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	549
Future Volume (vph)	549
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	326
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.94
Adj. Flow (vph)	584
Shared Lane Traffic (%)	
Lane Group Flow (vph)	584
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	CI+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		39.3	34.9	34.9	40.5	30.3	30.3	42.3	34.2		39.7	41.1
Actuated g/C Ratio		0.41	0.36	0.36	0.42	0.31	0.31	0.44	0.36		0.41	0.43
v/c Ratio		0.51	0.45	0.03	0.15	0.78	0.03	0.03	0.17		0.11	0.33
Control Delay		23.3	25.7	0.1	15.8	35.7	0.1	17.9	22.2		18.2	22.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		23.3	25.7	0.1	15.8	35.7	0.1	17.9	22.2		18.2	22.8
LOS		C	C	A	B	D	A	B	C		B	C
Approach Delay			24.6			34.0			21.8			17.9
Approach LOS			C			C			C			B
Queue Length 50th (ft)		44	150	0	18	264	0	4	39		22	103
Queue Length 95th (ft)		77	203	0	38	338	0	17	91		55	231
Internal Link Dist (ft)			425			933			828			742
Turn Bay Length (ft)		285			185		265	285			330	
Base Capacity (vph)		272	1897	892	400	1897	892	484	644		569	796
Starvation Cap Reductn		0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio		0.45	0.30	0.02	0.13	0.46	0.02	0.02	0.17		0.11	0.33

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 96.2			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 25.5		Intersection LOS: C	
Intersection Capacity Utilization 82.2%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	41.1
Actuated g/C Ratio	0.43
v/c Ratio	0.68
Control Delay	15.7
Queue Delay	0.0
Total Delay	15.7
LOS	B
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	114
Queue Length 95th (ft)	#379
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	863
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.68

Intersection Summary

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	120	12	8	0	0	284
Future Vol, veh/h	120	12	8	0	0	284
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	136	14	9	0	0	323

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	9	0	-	0	295	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	286	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1611	-	-	-	696	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	763	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1611	-	-	-	637	1073
Mov Cap-2 Maneuver	-	-	-	-	637	-
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	763	-

Approach	EB	WB	SB
HCM Control Delay, s	6.8	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1611	-	-	-	1073
HCM Lane V/C Ratio	0.085	-	-	-	0.301
HCM Control Delay (s)	7.4	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	1.3

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	9	115	3	0	189
Future Vol, veh/h	0	9	115	3	0	189
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	131	3	0	215

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	348	133	0	0	134	0
Stage 1	133	-	-	-	-	-
Stage 2	215	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	649	916	-	-	1451	-
Stage 1	893	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	649	916	-	-	1451	-
Mov Cap-2 Maneuver	649	-	-	-	-	-
Stage 1	893	-	-	-	-	-
Stage 2	821	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	916	1451	-
HCM Lane V/C Ratio	-	-	0.011	-	-
HCM Control Delay (s)	-	-	9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	1	0	2	0	118	0	1	187	0
Future Vol, veh/h	0	0	0	1	0	2	0	118	0	1	187	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	1	0	2	0	136	0	1	215	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	354	353	215	353	353	136	215	0	0	136	0	0
Stage 1	217	217	-	136	136	-	-	-	-	-	-	-
Stage 2	137	136	-	217	217	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	601	572	825	602	572	913	1355	-	-	1448	-	-
Stage 1	785	723	-	867	784	-	-	-	-	-	-	-
Stage 2	866	784	-	785	723	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	599	571	825	601	571	913	1355	-	-	1448	-	-
Mov Cap-2 Maneuver	599	571	-	601	571	-	-	-	-	-	-	-
Stage 1	785	722	-	867	784	-	-	-	-	-	-	-
Stage 2	864	784	-	784	722	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.6	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1355	-	-	-	778	1448	-	-
HCM Lane V/C Ratio	-	-	-	-	0.004	0.001	-	-
HCM Control Delay (s)	0	-	-	0	9.6	7.5	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	1	9	110	2	5	294	6
Future Vol, veh/h	0	0	0	0	0	1	9	110	2	5	294	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	1	10	125	2	6	334	7

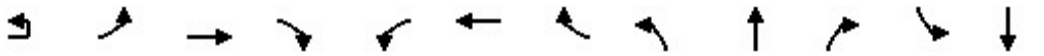
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	497	497	338	496	499	126	341	0	0	127	0	0
Stage 1	350	350	-	146	146	-	-	-	-	-	-	-
Stage 2	147	147	-	350	353	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	483	475	704	484	473	924	1218	-	-	1459	-	-
Stage 1	666	633	-	857	776	-	-	-	-	-	-	-
Stage 2	856	775	-	666	631	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	477	468	704	479	466	924	1218	-	-	1459	-	-
Mov Cap-2 Maneuver	477	468	-	479	466	-	-	-	-	-	-	-
Stage 1	660	630	-	849	769	-	-	-	-	-	-	-
Stage 2	847	768	-	663	628	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.9	0.6	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1218	-	-	-	924	1459	-	-
HCM Lane V/C Ratio	0.008	-	-	-	0.001	0.004	-	-
HCM Control Delay (s)	8	0	-	0	8.9	7.5	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Future Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.948			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1766	0	1770	1863
Flt Permitted		0.155			0.223			0.646			0.458	
Satd. Flow (perm)	0	289	3539	1583	415	3539	1583	1203	1766	0	853	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		22			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			908			822
Travel Time (s)			7.7			15.3			20.6			18.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1	272	792	20	51	825	40	33	186	100	34	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	273	792	20	51	825	40	33	286	0	34	144
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	230
Future Volume (vph)	230
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	242
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Adj. Flow (vph)	242
Shared Lane Traffic (%)	
Lane Group Flow (vph)	242
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

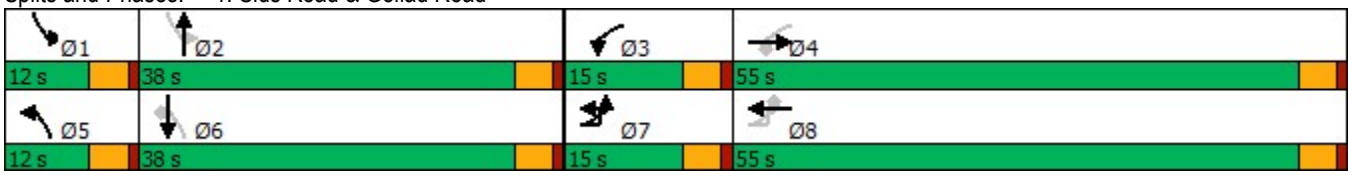


Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		39.1	37.0	37.0	41.3	28.4	28.4	38.0	34.1		38.0	34.1
Actuated g/C Ratio		0.42	0.40	0.40	0.44	0.30	0.30	0.41	0.37		0.41	0.37
v/c Ratio		0.94	0.56	0.03	0.18	0.77	0.07	0.06	0.43		0.08	0.21
Control Delay		62.5	25.7	0.1	15.9	34.8	0.3	17.4	25.8		17.6	24.7
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		62.5	25.7	0.1	15.9	34.8	0.3	17.4	25.8		17.6	24.7
LOS		E	C	A	B	C	A	B	C		B	C
Approach Delay			34.4			32.2			24.9			12.7
Approach LOS			C			C			C			B
Queue Length 50th (ft)		112	220	0	17	245	0	11	126		11	63
Queue Length 95th (ft)		#287	294	0	38	317	0	32	234		33	127
Internal Link Dist (ft)			425			933			828			742
Turn Bay Length (ft)		285			185		265	285			330	
Base Capacity (vph)		291	1951	915	345	1951	915	539	659		424	681
Starvation Cap Reductn		0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio		0.94	0.41	0.02	0.15	0.42	0.04	0.06	0.43		0.08	0.21

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 93.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 29.3		Intersection LOS: C	
Intersection Capacity Utilization 70.3%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	34.1
Actuated g/C Ratio	0.37
v/c Ratio	0.33
Control Delay	4.9
Queue Delay	0.0
Total Delay	4.9
LOS	A
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	56
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	732
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.33

Intersection Summary

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	231	6	7	3	2	205
Future Vol, veh/h	231	6	7	3	2	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	248	6	8	3	2	220

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	11	0	-	0	512	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	502	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1608	-	-	-	522	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	608	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1608	-	-	-	441	1071
Mov Cap-2 Maneuver	-	-	-	-	441	-
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	608	-

Approach	EB	WB	SB
HCM Control Delay, s	7.5	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1608	-	-	-	1056
HCM Lane V/C Ratio	0.154	-	-	-	0.211
HCM Control Delay (s)	7.6	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.5	-	-	-	0.8

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	238	0	10	302
Future Vol, veh/h	2	2	238	0	10	302
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	259	0	11	328

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	609	259	0	0	259	0
Stage 1	259	-	-	-	-	-
Stage 2	350	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	458	780	-	-	1306	-
Stage 1	784	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	453	780	-	-	1306	-
Mov Cap-2 Maneuver	453	-	-	-	-	-
Stage 1	784	-	-	-	-	-
Stage 2	706	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	573	1306	-
HCM Lane V/C Ratio	-	-	0.008	0.008	-
HCM Control Delay (s)	-	-	11.3	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	0	3	0	4	0	248	0	4	310	5
Future Vol, veh/h	2	0	0	3	0	4	0	248	0	4	310	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	3	0	4	0	258	0	4	323	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	594	592	326	592	594	258	328	0	0	258	0	0
Stage 1	334	334	-	258	258	-	-	-	-	-	-	-
Stage 2	260	258	-	334	336	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	417	419	715	418	418	781	1232	-	-	1307	-	-
Stage 1	680	643	-	747	694	-	-	-	-	-	-	-
Stage 2	745	694	-	680	642	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	414	417	715	417	416	781	1232	-	-	1307	-	-
Mov Cap-2 Maneuver	414	417	-	417	416	-	-	-	-	-	-	-
Stage 1	680	640	-	747	694	-	-	-	-	-	-	-
Stage 2	741	694	-	677	639	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	11.4	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1232	-	-	414	568	1307	-	-
HCM Lane V/C Ratio	-	-	-	0.005	0.013	0.003	-	-
HCM Control Delay (s)	0	-	-	13.7	11.4	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	1	4	0	3	9	296	1	3	178	31
Future Vol, veh/h	5	0	1	4	0	3	9	296	1	3	178	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	1	4	0	3	10	322	1	3	193	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	560	559	210	560	576	323	227	0	0	323	0	0
Stage 1	216	216	-	343	343	-	-	-	-	-	-	-
Stage 2	344	343	-	217	233	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	439	438	830	439	428	718	1341	-	-	1237	-	-
Stage 1	786	724	-	672	637	-	-	-	-	-	-	-
Stage 2	671	637	-	785	712	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	433	433	830	435	423	718	1341	-	-	1237	-	-
Mov Cap-2 Maneuver	433	433	-	435	423	-	-	-	-	-	-	-
Stage 1	779	722	-	666	631	-	-	-	-	-	-	-
Stage 2	662	631	-	782	710	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	12	0.2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1341	-	-	471	523	1237	-	-
HCM Lane V/C Ratio	0.007	-	-	0.014	0.015	0.003	-	-
HCM Control Delay (s)	7.7	0	-	12.8	12	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Synchro™ Output - 2024 Background Traffic

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	2	120	573	18	51	874	16	12	76	32	63	266
Future Volume (vph)	2	120	573	18	51	874	16	12	76	32	63	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.956			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1781	0	1770	1863
Flt Permitted		0.119			0.310			0.485			0.682	
Satd. Flow (perm)	0	222	3539	1583	577	3539	1583	903	1781	0	1270	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		17			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			908			822
Travel Time (s)			7.7			15.3			20.6			18.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	2	128	610	19	54	930	17	13	81	34	67	283
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	130	610	19	54	930	17	13	115	0	67	283
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

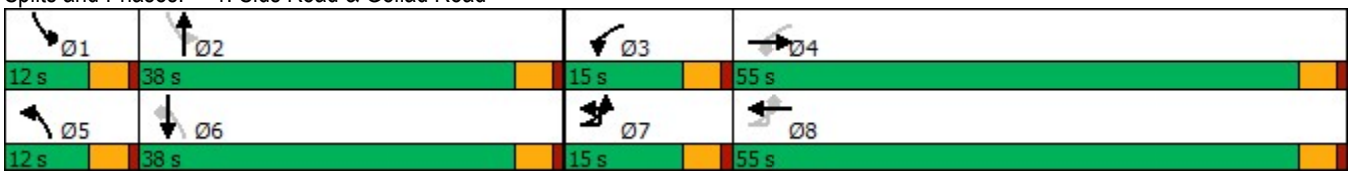
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	585
Future Volume (vph)	585
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	316
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.94
Adj. Flow (vph)	622
Shared Lane Traffic (%)	
Lane Group Flow (vph)	622
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		41.8	37.2	37.2	43.0	32.6	32.6	42.4	34.2		39.7	41.2
Actuated g/C Ratio		0.42	0.38	0.38	0.44	0.33	0.33	0.43	0.35		0.40	0.42
v/c Ratio		0.55	0.46	0.03	0.16	0.80	0.03	0.03	0.18		0.12	0.36
Control Delay		25.0	25.4	0.1	15.6	35.9	0.1	19.2	23.7		19.4	24.5
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		25.0	25.4	0.1	15.6	35.9	0.1	19.2	23.7		19.4	24.5
LOS		C	C	A	B	D	A	B	C		B	C
Approach Delay			24.7			34.2			23.3			20.9
Approach LOS			C			C			C			C
Queue Length 50th (ft)		47	162	0	19	290	0	5	45		25	119
Queue Length 95th (ft)		85	217	0	40	366	0	18	100		60	255
Internal Link Dist (ft)			425			933			828			742
Turn Bay Length (ft)		285			185		265	285			330	
Base Capacity (vph)		265	1850	872	393	1850	872	455	628		552	776
Starvation Cap Reductn		0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio		0.49	0.33	0.02	0.14	0.50	0.02	0.03	0.18		0.12	0.36

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 98.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 26.7		Intersection LOS: C	
Intersection Capacity Utilization 86.3%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	41.2
Actuated g/C Ratio	0.42
v/c Ratio	0.74
Control Delay	19.5
Queue Delay	0.0
Total Delay	19.5
LOS	B
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	158
Queue Length 95th (ft)	#465
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	844
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.74

Intersection Summary

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	128	13	9	0	0	303
Future Vol, veh/h	128	13	9	0	0	303
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	145	15	10	0	0	344

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	10	0	-	0	315	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	305	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1610	-	-	-	678	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	748	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1610	-	-	-	616	1071
Mov Cap-2 Maneuver	-	-	-	-	616	-
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	748	-

Approach	EB	WB	SB
HCM Control Delay, s	6.8	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1610	-	-	-	1071
HCM Lane V/C Ratio	0.09	-	-	-	0.321
HCM Control Delay (s)	7.5	0	-	-	9.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	1.4

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	123	3	0	201
Future Vol, veh/h	0	10	123	3	0	201
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	140	3	0	228

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	370	142	0	0	143	0
Stage 1	142	-	-	-	-	-
Stage 2	228	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	630	906	-	-	1440	-
Stage 1	885	-	-	-	-	-
Stage 2	810	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	630	906	-	-	1440	-
Mov Cap-2 Maneuver	630	-	-	-	-	-
Stage 1	885	-	-	-	-	-
Stage 2	810	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	906	1440	-
HCM Lane V/C Ratio	-	-	0.013	-	-
HCM Control Delay (s)	-	-	9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	1	0	2	0	126	0	1	199	0
Future Vol, veh/h	0	0	0	1	0	2	0	126	0	1	199	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	1	0	2	0	145	0	1	229	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	377	376	229	376	376	145	229	0	0	145	0	0
Stage 1	231	231	-	145	145	-	-	-	-	-	-	-
Stage 2	146	145	-	231	231	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	580	555	810	581	555	902	1339	-	-	1437	-	-
Stage 1	772	713	-	858	777	-	-	-	-	-	-	-
Stage 2	857	777	-	772	713	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	578	554	810	580	554	902	1339	-	-	1437	-	-
Mov Cap-2 Maneuver	578	554	-	580	554	-	-	-	-	-	-	-
Stage 1	772	712	-	858	777	-	-	-	-	-	-	-
Stage 2	855	777	-	771	712	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.8	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1339	-	-	-	761	1437	-	-
HCM Lane V/C Ratio	-	-	-	-	0.005	0.001	-	-
HCM Control Delay (s)	0	-	-	0	9.8	7.5	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	0	0	0	1	10	117	2	5	313	6
Future Vol, veh/h	0	0	0	0	0	1	10	117	2	5	313	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	1	11	133	2	6	356	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	529	529	360	528	531	134	363	0	0	135	0	0
Stage 1	372	372	-	156	156	-	-	-	-	-	-	-
Stage 2	157	157	-	372	375	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	460	455	684	461	454	915	1196	-	-	1449	-	-
Stage 1	648	619	-	846	769	-	-	-	-	-	-	-
Stage 2	845	768	-	648	617	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	454	448	684	456	447	915	1196	-	-	1449	-	-
Mov Cap-2 Maneuver	454	448	-	456	447	-	-	-	-	-	-	-
Stage 1	642	616	-	838	761	-	-	-	-	-	-	-
Stage 2	836	760	-	645	614	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.9	0.6	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1196	-	-	-	915	1449	-	-
HCM Lane V/C Ratio	0.01	-	-	-	0.001	0.004	-	-
HCM Control Delay (s)	8	0	-	0	8.9	7.5	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Future Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.948			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1766	0	1770	1863
Flt Permitted		0.155			0.223			0.646			0.458	
Satd. Flow (perm)	0	289	3539	1583	415	3539	1583	1203	1766	0	853	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		22			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			908			822
Travel Time (s)			7.7			15.3			20.6			18.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1	272	792	20	51	825	40	33	186	100	34	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	273	792	20	51	825	40	33	286	0	34	144
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

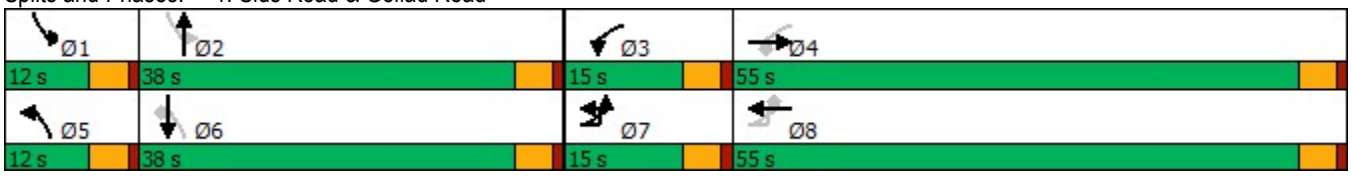
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	230
Future Volume (vph)	230
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	242
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Adj. Flow (vph)	242
Shared Lane Traffic (%)	
Lane Group Flow (vph)	242
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		39.1	37.0	37.0	41.3	28.4	28.4	38.0	34.1		38.0	34.1
Actuated g/C Ratio		0.42	0.40	0.40	0.44	0.30	0.30	0.41	0.37		0.41	0.37
v/c Ratio		0.94	0.56	0.03	0.18	0.77	0.07	0.06	0.43		0.08	0.21
Control Delay		62.5	25.7	0.1	15.9	34.8	0.3	17.4	25.8		17.6	24.7
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		62.5	25.7	0.1	15.9	34.8	0.3	17.4	25.8		17.6	24.7
LOS		E	C	A	B	C	A	B	C		B	C
Approach Delay			34.4			32.2			24.9			12.7
Approach LOS			C			C			C			B
Queue Length 50th (ft)		112	220	0	17	245	0	11	126		11	63
Queue Length 95th (ft)		#287	294	0	38	317	0	32	234		33	127
Internal Link Dist (ft)			425			933			828			742
Turn Bay Length (ft)		285			185		265	285			330	
Base Capacity (vph)		291	1951	915	345	1951	915	539	659		424	681
Starvation Cap Reductn		0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio		0.94	0.41	0.02	0.15	0.42	0.04	0.06	0.43		0.08	0.21

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 93.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 29.3		Intersection LOS: C	
Intersection Capacity Utilization 70.3%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	34.1
Actuated g/C Ratio	0.37
v/c Ratio	0.33
Control Delay	4.9
Queue Delay	0.0
Total Delay	4.9
LOS	A
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	56
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	732
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.33

Intersection Summary

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	231	6	7	3	2	205
Future Vol, veh/h	231	6	7	3	2	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	248	6	8	3	2	220

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	11	0	-	0	512	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	502	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1608	-	-	-	522	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	608	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1608	-	-	-	441	1071
Mov Cap-2 Maneuver	-	-	-	-	441	-
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	608	-

Approach	EB	WB	SB
HCM Control Delay, s	7.5	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1608	-	-	-	1056
HCM Lane V/C Ratio	0.154	-	-	-	0.211
HCM Control Delay (s)	7.6	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.5	-	-	-	0.8

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	238	0	10	302
Future Vol, veh/h	2	2	238	0	10	302
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	259	0	11	328

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	609	259	0	0	259	0
Stage 1	259	-	-	-	-	-
Stage 2	350	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	458	780	-	-	1306	-
Stage 1	784	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	453	780	-	-	1306	-
Mov Cap-2 Maneuver	453	-	-	-	-	-
Stage 1	784	-	-	-	-	-
Stage 2	706	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	573	1306	-
HCM Lane V/C Ratio	-	-	0.008	0.008	-
HCM Control Delay (s)	-	-	11.3	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	0	3	0	4	0	248	0	4	310	5
Future Vol, veh/h	2	0	0	3	0	4	0	248	0	4	310	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	3	0	4	0	258	0	4	323	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	594	592	326	592	594	258	328	0	0	258	0	0
Stage 1	334	334	-	258	258	-	-	-	-	-	-	-
Stage 2	260	258	-	334	336	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	417	419	715	418	418	781	1232	-	-	1307	-	-
Stage 1	680	643	-	747	694	-	-	-	-	-	-	-
Stage 2	745	694	-	680	642	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	414	417	715	417	416	781	1232	-	-	1307	-	-
Mov Cap-2 Maneuver	414	417	-	417	416	-	-	-	-	-	-	-
Stage 1	680	640	-	747	694	-	-	-	-	-	-	-
Stage 2	741	694	-	677	639	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	11.4	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1232	-	-	414	568	1307	-	-
HCM Lane V/C Ratio	-	-	-	0.005	0.013	0.003	-	-
HCM Control Delay (s)	0	-	-	13.7	11.4	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	1	4	0	3	9	296	1	3	178	31
Future Vol, veh/h	5	0	1	4	0	3	9	296	1	3	178	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	1	4	0	3	10	322	1	3	193	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	560	559	210	560	576	323	227	0	0	323	0	0
Stage 1	216	216	-	343	343	-	-	-	-	-	-	-
Stage 2	344	343	-	217	233	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	439	438	830	439	428	718	1341	-	-	1237	-	-
Stage 1	786	724	-	672	637	-	-	-	-	-	-	-
Stage 2	671	637	-	785	712	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	433	433	830	435	423	718	1341	-	-	1237	-	-
Mov Cap-2 Maneuver	433	433	-	435	423	-	-	-	-	-	-	-
Stage 1	779	722	-	666	631	-	-	-	-	-	-	-
Stage 2	662	631	-	782	710	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	12	0.2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1341	-	-	471	523	1237	-	-
HCM Lane V/C Ratio	0.007	-	-	0.014	0.015	0.003	-	-
HCM Control Delay (s)	7.7	0	-	12.8	12	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Synchro™ Output - 2024 Background Plus Site Traffic

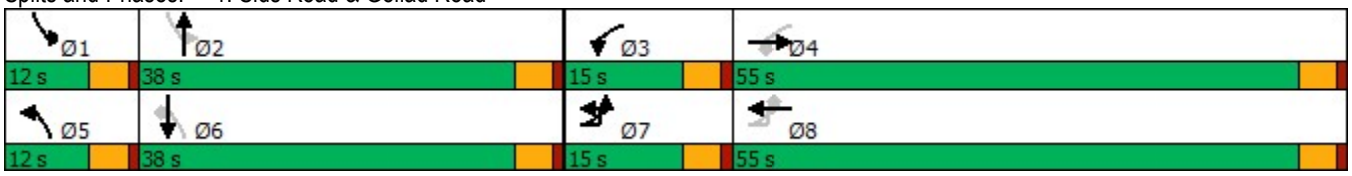
Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	2	120	574	21	53	874	16	17	79	32	63	269
Future Volume (vph)	2	120	574	21	53	874	16	17	79	32	63	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.957			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1783	0	1770	1863
Flt Permitted		0.118			0.311			0.472			0.678	
Satd. Flow (perm)	0	220	3539	1583	579	3539	1583	879	1783	0	1263	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		17			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			919			822
Travel Time (s)			7.7			15.3			20.9			18.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	2	128	611	22	56	930	17	18	84	34	67	286
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	130	611	22	56	930	17	18	118	0	67	286
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	585
Future Volume (vph)	585
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	313
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.94
Adj. Flow (vph)	622
Shared Lane Traffic (%)	
Lane Group Flow (vph)	622
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	CI+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		41.8	37.2	37.2	43.0	32.6	32.6	41.5	34.2		39.7	39.1
Actuated g/C Ratio		0.42	0.38	0.38	0.44	0.33	0.33	0.42	0.35		0.40	0.40
v/c Ratio		0.55	0.46	0.03	0.17	0.80	0.03	0.04	0.19		0.12	0.39
Control Delay		25.2	25.5	0.1	15.6	35.9	0.1	19.1	23.8		19.4	26.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		25.2	25.5	0.1	15.6	35.9	0.1	19.1	23.8		19.4	26.8
LOS		C	C	A	B	D	A	B	C		B	C
Approach Delay			24.7			34.1			23.2			23.2
Approach LOS			C			C			C			C

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 98.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 27.4		Intersection LOS: C	
Intersection Capacity Utilization 86.3%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	39.1
Actuated g/C Ratio	0.40
v/c Ratio	0.76
Control Delay	21.9
Queue Delay	0.0
Total Delay	21.9
LOS	C
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	130	611	22	56	930	17	18	118	67	286	622
v/c Ratio	0.55	0.46	0.03	0.17	0.80	0.03	0.04	0.19	0.12	0.39	0.76
Control Delay	25.2	25.5	0.1	15.6	35.9	0.1	19.1	23.8	19.4	26.8	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.2	25.5	0.1	15.6	35.9	0.1	19.1	23.8	19.4	26.8	21.9
Queue Length 50th (ft)	47	162	0	19	290	0	7	47	25	120	160
Queue Length 95th (ft)	86	217	0	41	366	0	23	103	60	260	#471
Internal Link Dist (ft)		425			933			839		742	
Turn Bay Length (ft)	285			185		265	285		330		
Base Capacity (vph)	265	1850	872	394	1850	872	440	629	549	737	815
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.33	0.03	0.14	0.50	0.02	0.04	0.19	0.12	0.39	0.76

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	8.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	131	13	9	0	0	306
Future Vol, veh/h	131	13	9	0	0	306
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	15	10	0	0	348

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	10	0	-	0	323	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	313	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1610	-	-	-	671	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	741	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1610	-	-	-	609	1071
Mov Cap-2 Maneuver	-	-	-	-	609	-
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	741	-

Approach	EB	WB	SB
HCM Control Delay, s	6.8	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1610	-	-	-	1071
HCM Lane V/C Ratio	0.092	-	-	-	0.325
HCM Control Delay (s)	7.5	0	-	-	10
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1.4

Intersection	
Int Delay, s/veh	8.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	58	22	0	0	0
Future Vol, veh/h	0	58	22	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	400	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	64	24	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	49	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	48	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	960	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	974	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	946	1084	1622	-	-	-
Mov Cap-2 Maneuver	946	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	974	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	7.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.015	-	0.059	-	-
HCM Control Delay (s)	7.3	-	8.5	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	124	4	1	201
Future Vol, veh/h	0	11	124	4	1	201
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	13	141	5	1	228

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	374	144	0	0	146	0
Stage 1	144	-	-	-	-	-
Stage 2	230	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	627	903	-	-	1436	-
Stage 1	883	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	626	903	-	-	1436	-
Mov Cap-2 Maneuver	626	-	-	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	807	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	903	1436	-
HCM Lane V/C Ratio	-	-	0.014	0.001	-
HCM Control Delay (s)	-	-	9	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	1	0	4	0	128	1	2	200	0
Future Vol, veh/h	0	0	0	1	0	4	0	128	1	2	200	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	1	0	5	0	147	1	2	230	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	384	382	230	382	382	148	230	0	0	148	0	0
Stage 1	234	234	-	148	148	-	-	-	-	-	-	-
Stage 2	150	148	-	234	234	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	574	551	809	576	551	899	1338	-	-	1434	-	-
Stage 1	769	711	-	855	775	-	-	-	-	-	-	-
Stage 2	853	775	-	769	711	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	570	550	809	575	550	899	1338	-	-	1434	-	-
Mov Cap-2 Maneuver	570	550	-	575	550	-	-	-	-	-	-	-
Stage 1	769	710	-	855	775	-	-	-	-	-	-	-
Stage 2	849	775	-	767	710	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.5	0	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1338	-	-	-	808	1434	-	-
HCM Lane V/C Ratio	-	-	-	-	0.007	0.002	-	-
HCM Control Delay (s)	0	-	-	0	9.5	7.5	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	0	0	0	4	10	120	3	8	316	6
Future Vol, veh/h	0	0	0	0	0	4	10	120	3	8	316	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	5	11	136	3	9	359	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	543	542	363	541	544	138	366	0	0	139	0	0
Stage 1	381	381	-	160	160	-	-	-	-	-	-	-
Stage 2	162	161	-	381	384	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	451	447	682	452	446	910	1193	-	-	1445	-	-
Stage 1	641	613	-	842	766	-	-	-	-	-	-	-
Stage 2	840	765	-	641	611	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	442	439	682	446	438	910	1193	-	-	1445	-	-
Mov Cap-2 Maneuver	442	439	-	446	438	-	-	-	-	-	-	-
Stage 1	635	608	-	834	758	-	-	-	-	-	-	-
Stage 2	827	757	-	636	606	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9	0.6	0.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1193	-	-	-	910	1445	-	-
HCM Lane V/C Ratio	0.01	-	-	-	0.005	0.006	-	-
HCM Control Delay (s)	8	0	-	0	9	7.5	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	668	1	0	943	0	3
Future Vol, veh/h	668	1	0	943	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	726	1	0	1025	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	727
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	424
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	424
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	424	-	-	-
HCM Lane V/C Ratio	0.008	-	-	-
HCM Control Delay (s)	13.6	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕				↕			↕			↕	
Traffic Vol, veh/h	0	3	3	1	49	16	2	2	0	9	3	0	0
Future Vol, veh/h	0	3	3	1	49	16	2	2	0	9	3	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	65	65	65	65	65	65	65	65	65	65	65	65	65
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	5	2	75	25	3	3	0	14	5	0	0

Major/Minor	Major1			Major2				Minor1			Minor2		
Conflicting Flow All	28	0	0	-	10	0	0	185	190	8	192	191	27
Stage 1	-	-	-	-	-	-	-	8	8	-	177	181	-
Stage 2	-	-	-	-	-	-	-	177	182	-	15	10	-
Critical Hdwy	4.12	-	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1585	-	-	-	1610	-	-	776	705	1074	768	704	1048
Stage 1	-	-	-	-	-	-	-	1013	889	-	825	750	-
Stage 2	-	-	-	-	-	-	-	825	749	-	1005	887	-
Platoon blocked, %		-	-			-	-						
Mov Cap-1 Maneuver	1585	-	-	~ -52	~ -52	-	-	776	705	1074	758	704	1048
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	776	705	-	758	704	-
Stage 1	-	-	-	-	-	-	-	1013	889	-	825	750	-
Stage 2	-	-	-	-	-	-	-	825	749	-	992	887	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0		8.6	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1004	1585	-	-	+	-	-	758
HCM Lane V/C Ratio	0.017	-	-	-	-	-	-	0.006
HCM Control Delay (s)	8.6	0	-	-	-	-	-	9.8
HCM Lane LOS	A	A	-	-	-	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	-	-	-	0

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	124	0	2	331
Future Vol, veh/h	0	3	124	0	2	331
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	182	0	3	487

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	675	182	0	0	182	0
Stage 1	182	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	419	861	-	-	1393	-
Stage 1	849	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	418	861	-	-	1393	-
Mov Cap-2 Maneuver	418	-	-	-	-	-
Stage 1	849	-	-	-	-	-
Stage 2	612	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	861	1393	-
HCM Lane V/C Ratio	-	-	0.005	0.002	-
HCM Control Delay (s)	-	-	9.2	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

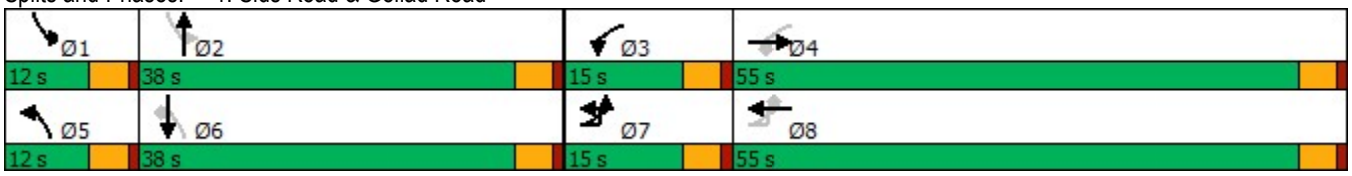
Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	258	754	23	51	784	38	38	182	95	32	141
Future Volume (vph)	1	258	754	23	51	784	38	38	182	95	32	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.949			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1768	0	1770	1863
Flt Permitted		0.152			0.209			0.641			0.451	
Satd. Flow (perm)	0	283	3539	1583	389	3539	1583	1194	1768	0	840	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		22			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			919			822
Travel Time (s)			7.7			15.3			20.9			18.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1	272	794	24	54	825	40	40	192	100	34	148
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	273	794	24	54	825	40	40	292	0	34	148
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	230
Future Volume (vph)	230
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	242
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Adj. Flow (vph)	242
Shared Lane Traffic (%)	
Lane Group Flow (vph)	242
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		39.7	35.1	35.1	40.8	29.0	29.0	38.0	34.1		38.0	34.1
Actuated g/C Ratio		0.42	0.37	0.37	0.43	0.31	0.31	0.40	0.36		0.40	0.36
v/c Ratio		0.95	0.60	0.04	0.20	0.75	0.07	0.08	0.45		0.08	0.22
Control Delay		64.4	27.5	0.1	16.2	34.3	0.3	17.6	26.2		17.7	25.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		64.4	27.5	0.1	16.2	34.3	0.3	17.6	26.2		17.7	25.1
LOS		E	C	A	B	C	A	B	C		B	C
Approach Delay			36.1			31.8			25.2			13.0
Approach LOS			D			C			C			B

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 93.9			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 29.8		Intersection LOS: C	
Intersection Capacity Utilization 70.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	34.1
Actuated g/C Ratio	0.36
v/c Ratio	0.33
Control Delay	5.0
Queue Delay	0.0
Total Delay	5.0
LOS	A
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	273	794	24	54	825	40	40	292	34	148	242
v/c Ratio	0.95	0.60	0.04	0.20	0.75	0.07	0.08	0.45	0.08	0.22	0.33
Control Delay	64.4	27.5	0.1	16.2	34.3	0.3	17.6	26.2	17.7	25.1	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.4	27.5	0.1	16.2	34.3	0.3	17.6	26.2	17.7	25.1	5.0
Queue Length 50th (ft)	114	222	0	18	246	0	13	130	11	65	0
Queue Length 95th (ft)	#290	295	0	40	317	0	37	240	33	130	56
Internal Link Dist (ft)		425			933			839		742	
Turn Bay Length (ft)	285			185		265	285		330		
Base Capacity (vph)	288	1934	908	335	1934	908	532	656	417	675	728
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.41	0.03	0.16	0.43	0.04	0.08	0.45	0.08	0.22	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	235	6	7	3	2	210
Future Vol, veh/h	235	6	7	3	2	210
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	253	6	8	3	2	226

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	11	0	-	0	522	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	512	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1608	-	-	-	515	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	602	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1608	-	-	-	434	1071
Mov Cap-2 Maneuver	-	-	-	-	434	-
Stage 1	-	-	-	-	853	-
Stage 2	-	-	-	-	602	-

Approach	EB	WB	SB
HCM Control Delay, s	7.5	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1608	-	-	-	1056
HCM Lane V/C Ratio	0.157	-	-	-	0.216
HCM Control Delay (s)	7.7	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.6	-	-	-	0.8

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	23	23	0	0	0
Future Vol, veh/h	0	23	23	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	400	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	24	24	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	49	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	48	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	960	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	974	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	946	1084	1622	-	-	-
Mov Cap-2 Maneuver	946	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	974	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	7.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.015	-	0.022	-	-
HCM Control Delay (s)	7.3	-	8.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	3	240	2	12	302
Future Vol, veh/h	2	3	240	2	12	302
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	261	2	13	328

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	616	262	0	0	263	0
Stage 1	262	-	-	-	-	-
Stage 2	354	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	454	777	-	-	1301	-
Stage 1	782	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	449	777	-	-	1301	-
Mov Cap-2 Maneuver	449	-	-	-	-	-
Stage 1	782	-	-	-	-	-
Stage 2	701	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	601	1301	-
HCM Lane V/C Ratio	-	-	0.009	0.01	-
HCM Control Delay (s)	-	-	11	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	0	3	0	6	0	250	1	6	312	5
Future Vol, veh/h	2	0	0	3	0	6	0	250	1	6	312	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	3	0	6	0	260	1	6	325	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	604	601	328	601	603	261	330	0	0	261	0	0
Stage 1	340	340	-	261	261	-	-	-	-	-	-	-
Stage 2	264	261	-	340	342	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	410	414	713	412	413	778	1229	-	-	1303	-	-
Stage 1	675	639	-	744	692	-	-	-	-	-	-	-
Stage 2	741	692	-	675	638	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	405	412	713	410	411	778	1229	-	-	1303	-	-
Mov Cap-2 Maneuver	405	412	-	410	411	-	-	-	-	-	-	-
Stage 1	675	635	-	744	692	-	-	-	-	-	-	-
Stage 2	735	692	-	671	634	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.9	11.1	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1229	-	-	405	599	1303	-	-
HCM Lane V/C Ratio	-	-	-	0.005	0.016	0.005	-	-
HCM Control Delay (s)	0	-	-	13.9	11.1	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	1	4	0	8	9	299	2	7	182	31
Future Vol, veh/h	5	0	1	4	0	8	9	299	2	7	182	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	1	4	0	9	10	325	2	8	198	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	582	578	215	578	594	326	232	0	0	327	0	0
Stage 1	231	231	-	346	346	-	-	-	-	-	-	-
Stage 2	351	347	-	232	248	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	424	427	825	427	418	715	1336	-	-	1233	-	-
Stage 1	772	713	-	670	635	-	-	-	-	-	-	-
Stage 2	666	635	-	771	701	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	414	420	825	421	411	715	1336	-	-	1233	-	-
Mov Cap-2 Maneuver	414	420	-	421	411	-	-	-	-	-	-	-
Stage 1	765	708	-	664	629	-	-	-	-	-	-	-
Stage 2	652	629	-	765	696	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.1	11.4	0.2	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1336	-	-	451	580	1233	-	-
HCM Lane V/C Ratio	0.007	-	-	0.014	0.022	0.006	-	-
HCM Control Delay (s)	7.7	0	-	13.1	11.4	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	879	2	0	874	0	3
Future Vol, veh/h	879	2	0	874	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	955	2	0	950	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	956
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	313
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	313
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	16.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	313	-	-	-
HCM Lane V/C Ratio	0.01	-	-	-
HCM Control Delay (s)	16.6	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	13	7	17	9	3	4	0	55	3	0	0
Future Vol, veh/h	0	13	7	17	9	3	4	0	55	3	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	15	8	20	11	4	5	0	65	4	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	15	0	0	23	0	0	72	74	19	105	76	13
Stage 1	-	-	-	-	-	-	19	19	-	53	53	-
Stage 2	-	-	-	-	-	-	53	55	-	52	23	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1603	-	-	1592	-	-	919	816	1059	875	814	1067
Stage 1	-	-	-	-	-	-	1000	880	-	960	851	-
Stage 2	-	-	-	-	-	-	960	849	-	961	876	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1603	-	-	1592	-	-	910	805	1059	814	803	1067
Mov Cap-2 Maneuver	-	-	-	-	-	-	910	805	-	814	803	-
Stage 1	-	-	-	-	-	-	1000	880	-	960	840	-
Stage 2	-	-	-	-	-	-	948	838	-	902	876	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	4.3	8.7	9.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1047	1603	-	-	1592	-	-	814
HCM Lane V/C Ratio	0.066	-	-	-	0.013	-	-	0.004
HCM Control Delay (s)	8.7	0	-	-	7.3	0	-	9.4
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	313	0	3	220
Future Vol, veh/h	0	3	313	0	3	220
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	368	0	4	259

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	635	368	0	0	368	0
Stage 1	368	-	-	-	-	-
Stage 2	267	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	443	677	-	-	1191	-
Stage 1	700	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	441	677	-	-	1191	-
Mov Cap-2 Maneuver	441	-	-	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	775	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	677	1191	-
HCM Lane V/C Ratio	-	-	0.005	0.003	-
HCM Control Delay (s)	-	-	10.3	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

CITY OF ROCKWALL

PLANNING AND ZONING COMMISSION CASE MEMO

PLANNING AND ZONING DEPARTMENT
385 S. GOLIAD STREET • ROCKWALL, TX 75087
PHONE: (972) 771-7745 • EMAIL: PLANNING@ROCKWALL.COM

TO:	Planning and Zoning Commission
DATE:	November 15, 2022
APPLICANT:	Frank Polma; *R-Delta Engineers, Inc.*
CASE NUMBER:	SP2022-058; *Site Plan for Rayburn Electric Corporation*

SUMMARY

Discuss and consider a request by Frank A. Polma, PE of R-Delta Engineers, Inc. on behalf of Stephen Geiger of Rayburn Country Electric Cooperative for the approval of a *Site Plan* for an Industrial Campus on a 99.849-acre tract of land identified as Lots 6, 7, 8 & 9, Block A, Rayburn Country Addition and Tract 3 of the W. H. Barnes Survey, Abstract No. 26, City of Rockwall, Rockwall County, Texas, zoned Heavy Commercial (HC) District, situated within the SH-205 Overlay (SH-205 OV) District, addressed as 950 & 980 Sids Road, and take any action necessary.

BACKGROUND

The subject property was annexed on May 19, 1986 by *Ordinance No. 86-37* [*Case No. A1986-005*]. According to the December 7, 1993 zoning map the subject property was zoned Agricultural (AG) District and Heavy Commercial (HC) District. On March 17, 2014, the City Council approved a zoning change [*Case No. Z2014-001*] for a portion of the subject property changing the designation from an Agricultural (AG) District to a Heavy Commercial (HC) District. This zoning change put the entire subject property under the Heavy Commercial (HC) District designation. Following this approval, on August 11, 2014, the City Council approved a final plat of the subject property designating it as Lots 1-3, Block A, Rayburn Country Addition. On May 15, 2018, the City Council approved a replat of the subject property establishing Lots 4-7, Block A, Rayburn Country Addition. On January 30, 2019 the City Council approved a subsequent replat of the subject property establishing Lots 8 & 9, Block A, Rayburn Country Addition. On September 19, 2022, the City Council approved a preliminary plat [*Case No. P2022-041*] for the subject property.

PURPOSE

On October 14, 2022, the applicant -- *Frank Polma of R-Delta Engineers, Inc.* -- submitted an application requesting the approval of a *Site Plan* for the purpose of constructing three (3) buildings on the subject property.

ADJACENT LAND USES AND ACCESS

The subject property is addressed as 950 & 980 Sids Road. The land uses adjacent to the subject property are as follows:

North: Directly north of the subject property is a two (2) acre parcel of land developed with an office/manufacturing building, zoned Planned Development District 43 (PD-43) for Commercial (C) District land uses. Beyond this is Sids Road, which is identified as a M4U (*i.e. major collector, four [4] lane, undivided roadway*) on the Master Thoroughfare Plan contained in the OURHometown Vision 2040 Comprehensive Plan. Following this are seven (7) tracts of land, one (1) zoned Commercial (C) District (*i.e. 960 Sids Road*), four (4) zoned Heavy Commercial (HC) District (*i.e. 955, 965, 967 & 981 Sids Road*), and two (2) zoned Agricultural (AG) District (*i.e. 995 & 1005 Sids Road*). Beyond this are two (2) large vacant tracts of land zoned Commercial (C) District.

South: Directly south of the subject property is a vacant 58.72-acre tract of land, owned by the applicant, and zoned Heavy Commercial (HC) District and Commercial (C) District. Beyond this is Mims Road, which is identified as a M4U (*i.e. major collector, four [4] land, undivided roadway*) on the Master Thoroughfare Plan contained in the OURHometown Vision 2040 Comprehensive Plan. Following this is the Rockwall Business Park, which is zoned

Heavy Commercial (HC) District. This is followed by two (2) large vacant tracts of land, zoned Agricultural (AG) District.

East: Directly east of the subject property is a vacant 4.1334-acre parcel of land zoned Commercial (C) District. Beyond this is S. Goliad Street [*SH-205*], which is identified as a P6D (*i.e. principal arterial, six [6] lane, divided roadway*) on the Master Thoroughfare Plan contained in the OURHometown Vision 2040 Comprehensive Plan. Beyond this is the Hickory Ridge Subdivision, which is zoned Planned Development District 10 (PD-10) for Single-Family land uses.

West: Directly west of the subject property is a 1.50-acre tract of land zoned Planned Development District 38 (PD-38) for Heavy Commercial (HC) District land uses. Beyond this is the intersection of Sids Road and Mims Road, which are both identified as M4U (*i.e. major collector, four [4] land, undivided roadway*) on the Master Thoroughfare Plan contained in the OURHometown Vision 2040 Comprehensive Plan. Following this is the Highland Meadows Subdivision, which is zoned Single Family 7 (SF-7) District.

DENSITY AND DIMENSIONAL REQUIREMENTS

According to Section 01, *Land Use Schedule*, of Article 04, *Permissible Uses*, of the Unified Development Code (UDC), an *Office* and *Warehouse* is a permitted *by-right* land use in a Heavy Commercial (HC) District. The submitted site plan, landscape plan, photometric plan, and building elevations generally conform to the technical requirements contained within the Unified Development Code (UDC) for a property located within a Heavy Commercial (HC) District with the exception of the items noted in the *Variances and Exceptions Requested by the Applicant* section of this case memo. A summary of the density and dimensional requirements for the subject property are as follows:

Ordinance Provisions	*Zoning District Standards*	*Conformance to the Standards*
Minimum Lot Area	*12,500 SF*	*X=99.849-acres; In Conformance*
Minimum Lot Frontage	*100-Feet*	*X= 1,166.39-feet; In Conformance*
Minimum Lot Depth	*125-Feet*	*X=338.73-feet; In Conformance*
Minimum Front Yard Setback	*25-Feet*	*X>25-feet; In Conformance*
Minimum Rear Yard Setback	*20-Feet*	*X>20-feet; In Conformance*
Minimum Side Yard Setback	*15-Feet*	*X>15-feet; In Conformance*
Maximum Building Height	*60-Feet*	*X=46.25-feet; In Conformance*
Max Building/Lot Coverage	*60%*	*X=07.80%; In Conformance*
Minimum Number of Parking Spaces	*1 Parking Space/1000 SF (47 Required)* *1 Parking Space/ 300 SF (222 Required)* *Total = 269 Parking Spaces*	*X=271; In Conformance*
Minimum Landscaping Percentage	*15%*	*X>15.00%; In Conformance*
Maximum Impervious Coverage	*90-95%*	*X<90%; In Conformance*

TREESCAPE PLAN

The *Treescape Plan* provided by the applicant indicates that 377.5 caliper inches of trees will be removed from the property as a result of the development. As part of the proposed development the applicant's landscape plan shows that 78, four (4) inch caliper canopy trees and 17, five (5) inch caliper canopy trees will be planted, totaling 397.00 caliper inches of trees being planted with the proposed development. Based on this the proposed landscape plan satisfies the mitigation balance.

CONFORMANCE WITH THE CITY'S CODES

The applicant is requesting to construct three (3) new buildings on the subject property that will contain a mix of *Office* and *Warehousing* land uses. According to Subsection 02.02(D)(2), *Office Building*, of Article 13, *Definitions*, of the Unified Development Code (UDC), an *Office* is defined as "facility that provides executive, management, administrative, or professional services…but not involving the sale of merchandise except as incidental to a permitted use." According to Subsection 02.02(D)(2), *Warehouse/Distribution Center,* of Article 13, *Definitions*, of the Unified Development Code (UDC) a *Warehouse/Distribution Center* is defined as "(a) building used primarily for the storage and distribution of goods, merchandise, supplies, and equipment." In this case, the applicant's request for *Office* and *Warehousing* land uses are

permitted by right according to Section 01, *Land Use Schedule*, of Article 04, *Permissible Uses*, of the Unified Development Code (UDC).

According to Subsection 01.05, *Screening Standards*, of Article 05, *District Development Standards*, of the Unified Development Code (UDC), "(o)ff-street loading docks must be screened from all public streets, any residential zoning district or residentially used property, and any parks and open space that abuts or is directly across a public street or alley from the subject property." This section also states that either a six (6) foot masonry wall with canopy trees or three (3) tiered screening shall be utilized to screen off-street loading docks. In this case, the applicant's off-street loading dock faces onto a public street (*i.e. Sids Road*) and requires screening. In lieu of the screening methods listed previously, the applicant is suggesting to plant a 36-inch tall shrub row along Sids Road for screening. The applicant has proposed this screening method as they have detailed that existing water and sewer easements restrict their ability to use of canopy or accent trees. This screening method will require an exception from the Planning and Zoning Commission, which is listed in the *Variances and Exceptions Requested by the Applicant* section of this case memo.

The proposed site plan also generally conforms to the requirements of the *General Commercial District Standards* as stipulated by Article 05, *District Development Standards*, of the Unified Development Code (UDC), with the exception of the exceptions being requested as outlined in the *Variances and Exceptions Requested by the Applicant* section of this case memo.

VARIANCES AND EXCEPTIONS BY THE APPLICANT

As stated above, the applicant's request conforms to the majority of the City's codes; however, staff has identified the following exceptions:

(1) *Screening Standards*.

(a) *Above Ground Storage Tanks.* According to Subsection 01.05, *Screening Standards*, of Article 05, *District Development Standards*, of the Unified Development Code (UDC), "(a)bove ground storage tanks shall be screened utilizing walls matching the main structure." In this case, the applicant is requesting not to screen an above ground storage tank, stating that it will be internal to the site and have limited visibility from any public rights-of-way or adjoining properties. This will require an *exception* from the Planning and Zoning Commission.

(b) *Outside Storage.* According to Subsection 01.05, *Screening Standards*, of Article 05, *District Development Standards*, of the Unified Development Code (UDC), "(o)utside storage of materials or vehicles shall be screened from all public streets, any residential zoning district or residentially used property, and parks and open space that abuts or is directly across a public street or alley from the subject property." In this case, the applicant has a laydown yard for outside storage and is requesting not to fully screen it on the basis that it will be internal to the site and have limited visibility from any public rights-of-way or adjoining properties. This will require an *exception* from the Planning and Zoning Commission.

(c) *Loading Docks.* According to Subsection 01.05, *Screening Standards*, of Article 05, *District Development Standards*, of the Unified Development Code (UDC), "(o)ff-street loading docks must be screened from all public streets, any residential zoning district or residentially used property, and any parks and open space that abuts or is directly across a public street or alley from the subject property." In this case the applicant is requesting to screen the roll up doors with 36-inch tall shrubs in lieu of three (3) tiered landscaping or a masonry wall with canopy trees. As stated above the applicant has indicated there is existing water and wastewater lines/easements that restrict their ability to plant canopy or accent trees in these areas. This will require an *exception* from the Planning and Zoning Commission.

(2) Building Articulation.

(a) *Primary and Secondary Building Facades*. According to Subsection 04.01 (C), *General Commercial District Standards*, of Article 05, *District Development Standards*, of the Unified Development Code (UDC), for primary and secondary building facades a "…wall length shall not exceed three (3) times the wall height." In this case, each of

the new buildings the applicant is proposing do not meet the wall length requirement. This will require an *exception* from the Planning and Zoning Commission.

(3) *Landscaping Standards*.

(a) *Non-Residential Landscape Buffers*. According to Subsection 05.01, *Landscape Buffers*, of Article 08, *Landscape and Fence Standards*, of the Unified Development Code (UDC), a landscape buffer abutting a public right-of-way shall be "(a) minimum of a ten (10) foot wide landscape buffer [*and*] shall be required along the entire length of any non-residential lot that abuts a public right-of-way…", and "…shall incorporate ground cover, a built-up berm and shrubbery along the entire length of frontage." In this case, the applicant is requesting to only provide the buffer in front of the buildings they are proposing to develop along Sids Road, and not along the existing detention pond. Currently, there is a ten (10) landscape buffer; however, this portion of the landscape buffer does not incorporate the required canopy and accent trees. The applicant is also requesting not to incorporate the berm along the entire existing and proposed ten (10) foot landscape buffer. The applicant has stated that they are trying to provide continuity along their frontage and that the existing landscape buffer does not incorporate a berm. This will require an *exception* from the Planning and Zoning Commission.

(4) *Engineering Standards.*

(a) *Driveway Spacing.* According to Figure 2.3, *Minimum Driveway Spacing & Corner Clearance*, of Section 2, *Streets*, of the Engineering Standards of Design and Construction the proposed driveway along S. Goliad Street [*SH-205*] does not meet the minimum driveway spacing requirements. In this case, the applicant has been working with TXDOT on right-in and right-out configuration for this driveway. While this is considered to be off-site, this element of the proposed project will require a *variance* from the Planning and Zoning Commission.

(b) *Gravel Surface.* According to Subsection 2.20, *Off-Street Parking*, of Section 2, *Streets*, of the Engineering Standards of Design and Construction states that "(a)ll parking areas and spaces shall be designed and constructed of steel reinforced concrete." In addition, Subsection 03.02, *Paving Materials*, of Article 06, *Parking and Loading*, of the Unified Development Code (UDC) states that "(a)ll required parking *and loading areas*, public and private drives, and fire lanes shall be constructed of concrete …". In this case, the applicant is requesting a gravel lay down yard for equipment and vehicles, and has stated that this is to accommodate tracked vehicles. This will require a *variance/exception* from the Planning and Zoning Commission.

According to Subsection 09, *Exceptions and Variances*, of Article 11, *Development Applications and Review Procedures*, of the Unified Development Code (UDC), an applicant may request the Planning and Zoning Commission grant variances and exceptions to the provisions contained in the Unified Development Code (UDC), where unique or extraordinary conditions exist or where strict adherence to the technical requirements of the Unified Development Code would create an undue hardship. In addition, the code requires that the applicant provide compensatory measures that directly offset the requested variances and exceptions. As compensatory measures for this case, the applicant is proposing [1] increased architectural elements on *Buildings D* & *E*, [2] *Building E* will have at least 90% stone on each façade, [3] all buildings will have greater masonry material percentages than adjacent properties, and [4] providing seventeen (17), five (5) inch caliper canopy trees in lieu of the required four (4) inch caliper trees. Compensatory measure three (3) is not truly a compensatory measure; however, staff should note that the proposed buildings do incorporate a greater percentage of stone than the adjacent properties along Sids Road and that the proposed buildings maintain continuity with the design scheme of other buildings situated on the site. This better creates a campus type development on the subject property; however, requests for exceptions and variances to the *General Standards* and *Engineering Standards of Design and Construction* are discretionary decisions for the Planning and Zoning Commission. Staff should note that a supermajority vote (*e.g. six [6] out of the seven [7] commissioners*) -- *with a minimum of four (4) votes in the affirmative* -- is required for the approval of a variance or exception.

CONFORMANCE WITH OURHOMETOWN VISION 2040 COMPREHENSIVE PLAN

The Future Land Use Plan adopted with the OURHometown Vision 2040 Comprehensive Plan identifies the subject property as being situated in the *Southwest Residential District*. The *Southwest Residential District* "…contains a mixture of land uses that include existing medium and low density residential, heavy commercial/retail land uses (*i.e. National Drive, Sids Road, and Mims Road*) and commercial land uses." *Strategy #2* in the *Southwest Residential District* indicates that the properties

surrounding Sids Road and Mims Road contain some of the only land in the City for *Commercial/Industrial* land uses and that "…these areas should be protected from the encroachment of incompatible land uses." In this case, the applicant is proposing *Office* and *Warehousing*, which maintains the existing land uses on subject property and in the surrounding area. Based on this the applicant's proposal appears to conform with the goals and policies of the Comprehensive Plan.

ARCHITECTURAL REVIEW BOARD (ARB) RECOMMENDATION

On October 25, 2022 the Architecture Review Board approved a motion to recommend approval of the building elevations and variances/exceptions by a vote of 6-0, with Board Member Johnson absent.

CONDITIONS OF APPROVAL

If the Planning and Zoning Commission chooses to approve the applicant's *Site Plan* for the construction of three (3) buildings on the *subject property*, then staff would propose the following conditions of approval:

(1) All staff comments provided by the Planning, Engineering and Fire Department must be addressed prior to the submittal of engineering plans.

(2) Any construction resulting from the approval of this *Site Plan* shall conform to the requirements set forth by the Unified Development Code (UDC), the International Building Code (IBC), the Rockwall Municipal Code of Ordinances, city adopted engineering and fire codes and with all other applicable regulatory requirements administered and/or enforced by the state and federal government.

DEVELOPMENT APPLICATION

City of Rockwall
Planning and Zoning Department
385 S. Goliad Street
Rockwall, Texas 75087

STAFF USE ONLY

PLANNING & ZONING CASE NO.

NOTE: *THE APPLICATION IS NOT CONSIDERED ACCEPTED BY THE CITY UNTIL THE PLANNING DIRECTOR AND CITY ENGINEER HAVE SIGNED BELOW.*

DIRECTOR OF PLANNING:

CITY ENGINEER:

PLEASE CHECK THE APPROPRIATE BOX BELOW TO INDICATE THE TYPE OF DEVELOPMENT REQUEST [SELECT ONLY ONE BOX]:

PLATTING APPLICATION FEES:
- ☐ MASTER PLAT ($100.00 + $15.00 ACRE) [1]
- ☐ PRELIMINARY PLAT ($200.00 + $15.00 ACRE) [1]
- ☐ FINAL PLAT ($300.00 + $20.00 ACRE) [1]
- ☐ REPLAT ($300.00 + $20.00 ACRE) [1]
- ☐ AMENDING OR MINOR PLAT ($150.00)
- ☐ PLAT REINSTATEMENT REQUEST ($100.00)

SITE PLAN APPLICATION FEES:
- ☑ SITE PLAN ($250.00 + $20.00 ACRE) [1]
- ☐ AMENDED SITE PLAN/ELEVATIONS/LANDSCAPING PLAN ($100.00)

ZONING APPLICATION FEES:
- ☐ ZONING CHANGE ($200.00 + $15.00 ACRE) [1]
- ☐ SPECIFIC USE PERMIT ($200.00 + $15.00 ACRE) [1 & 2]
- ☐ PD DEVELOPMENT PLANS ($200.00 + $15.00 ACRE) [1]

OTHER APPLICATION FEES:
- ☐ TREE REMOVAL ($75.00)
- ☐ VARIANCE REQUEST/SPECIAL EXCEPTIONS ($100.00) [2]

NOTES:
[1]: IN DETERMINING THE FEE, PLEASE USE THE EXACT ACREAGE WHEN MULTIPLYING BY THE PER ACRE AMOUNT. FOR REQUESTS ON LESS THAN ONE ACRE, ROUND UP TO ONE (1) ACRE.
[2]: A ***$1,000.00*** FEE WILL BE ADDED TO THE APPLICATION FEE FOR ANY REQUEST THAT INVOLVES CONSTRUCTION WITHOUT OR NOT IN COMPLIANCE TO AN APPROVED BUILDING PERMIT.

PROPERTY INFORMATION [PLEASE PRINT]

ADDRESS	950 Sids Road, Rockwall, Texas				
SUBDIVISION	Rayburn Country Addition	LOT		BLOCK	
GENERAL LOCATION					

ZONING, SITE PLAN AND PLATTING INFORMATION [PLEASE PRINT]

CURRENT ZONING	AG, C and HC	CURRENT USE	Rayburn Electric's Headquarters		
PROPOSED ZONING	AG, C and HC	PROPOSED USE	Rayburn Electric's Headquarters		
ACREAGE	99.849	LOTS [CURRENT]	Four (4)	LOTS [PROPOSED]	Four (4)

☑ ***SITE PLANS AND PLATS:*** *BY CHECKING THIS BOX YOU ACKNOWLEDGE THAT DUE TO THE PASSAGE OF HB3167 THE CITY NO LONGER HAS FLEXIBILITY WITH REGARD TO ITS APPROVAL PROCESS, AND FAILURE TO ADDRESS ANY OF STAFF'S COMMENTS BY THE DATE PROVIDED ON THE DEVELOPMENT CALENDAR WILL RESULT IN THE DENIAL OF YOUR CASE.*

OWNER/APPLICANT/AGENT INFORMATION [PLEASE PRINT/CHECK THE PRIMARY CONTACT/ORIGINAL SIGNATURES ARE REQUIRED]

☐ OWNER	Rayburn Country Electric Coop.	☐ APPLICANT	R-Delta Engineers, Inc.
CONTACT PERSON	Stephen Geiger	CONTACT PERSON	Frank A. Polma, P.E.
ADDRESS	950 Sids Road	ADDRESS	618 Main Street
CITY, STATE & ZIP	Rockwall, Texas, 75087	CITY, STATE & ZIP	Garland, Texas, 75040
PHONE	(469) 402-2112	PHONE	(972) 494-5031
E-MAIL	sgeiger@rayburnelectric.com	E-MAIL	fapolma@rdelta.com

NOTARY VERIFICATION [REQUIRED]

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED Stephen Geiger [*OWNER*] THE UNDERSIGNED, WHO STATED THE INFORMATION ON THIS APPLICATION TO BE TRUE AND CERTIFIED THE FOLLOWING:

"I HEREBY CERTIFY THAT I AM THE OWNER FOR THE PURPOSE OF THIS APPLICATION; ALL INFORMATION SUBMITTED HEREIN IS TRUE AND CORRECT; AND THE APPLICATION FEE OF $ 2,246.98 *, TO COVER THE COST OF THIS APPLICATION, HAS BEEN PAID TO THE CITY OF ROCKWALL ON THIS THE* 14th *DAY OF* October *, 2022. BY SIGNING THIS APPLICATION, I AGREE THAT THE CITY OF ROCKWALL (I.E. "CITY") IS AUTHORIZED AND PERMITTED TO PROVIDE INFORMATION CONTAINED WITHIN THIS APPLICATION TO THE PUBLIC. THE CITY IS ALSO AUTHORIZED AND PERMITTED TO REPRODUCE ANY COPYRIGHTED INFORMATION SUBMITTED IN CONJUNCTION WITH THIS APPLICATION, IF SUCH REPRODUCTION IS ASSOCIATED OR IN RESPONSE TO A REQUEST FOR PUBLIC INFORMATION."*

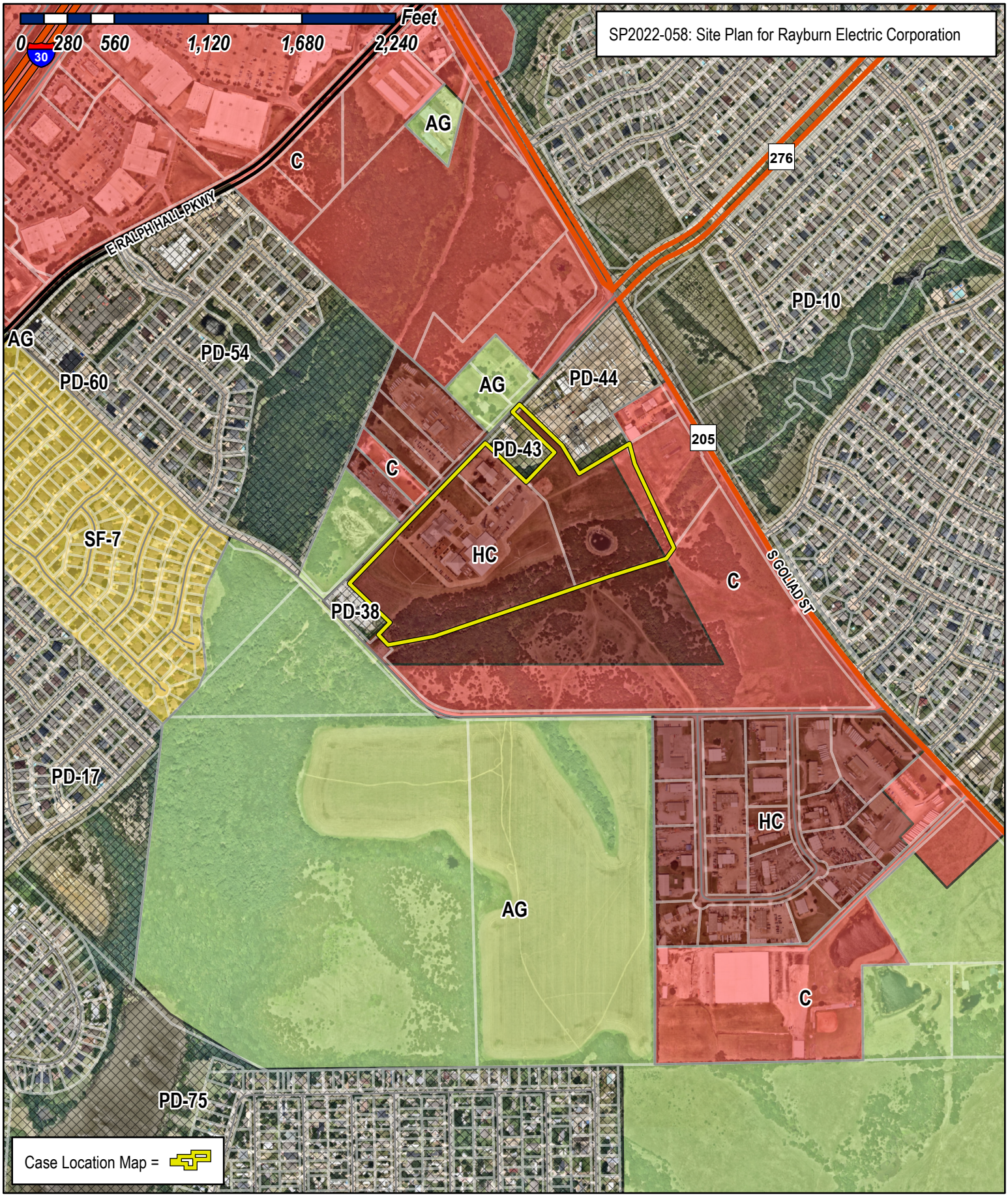
GIVEN UNDER MY HAND AND SEAL OF OFFICE ON THIS THE 12 *DAY OF* October *, 2022*

OWNER'S SIGNATURE Stephanie Hunt

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS Stephanie Hunt

STEPHANIE HUNT
Notary Public, State of Texas
Comm. Expires 09-01-2024
Notary ID 11508120

MY COMMISSION EXPIRES



City of Rockwall

Planning & Zoning Department
385 S. Goliad Street
Rockwall, Texas 75032
(P): (972) 771-7745
(W): www.rockwall.com

The City of Rockwall GIS maps are continually under development and therefore subject to change without notice. While we endeavor to provide timely and accurate information, we make no guarantees. The City of Rockwall makes no warranty, express or implied, including warranties of merchantability and fitness for a particular purpose. Use of the information is the sole responsibility of the user.

r.delta ENGINEERS

November 3, 2022

City of Rockwall, Texas
385 S. Goliad Street
Rockwall, Texas 75087

ATTENTION: **Mr. Henry Lee, AICP**
Planner

SUBJECT: **REC Campus Expansion – Case #SP2022-058**
Variance Requests (Revision 2)

Dear Mr. Lee,

Pursuant to submittal of the project Site Plan and supporting documents and on behalf of Rayburn Country Electric Cooperative (REC); we request variances to the following City Unified Development Code (UDC) requirements for this project:

1) Building Primary and Secondary Façade Articulation: The proposed cladding of Buildings "D" and "E" is based on the functionality of the building interior activities as well as the existing REC Headquarters Building on site. The facilities within Buildings "D" and "E" (new warehouse, mobile substation storage, lineman training facility, and office administration areas) are critical spaces requiring 24/7 redundancy for mechanical and electrical systems to maintain operations regardless of any adverse environmental conditions. The proposed length of Building "D" reflects the layout necessary to meet the required program and the specific adjacencies necessary to support these functions. The office components of Building "D" emulate the example of the existing headquarters building to ensure a similar architectural style from the site and along Sids road. The materials of Building "D" are primarily leuders stone, tilt-up concrete panels with matching integral color, standing-seam metal roofs, and wood accents to break up the massing. As part of the overall campus expansion, the design considers the massing of existing buildings, locating the new buildings on the site to allow open green space to be viewed from the public right of way. Compensatory measures included in the building designs per Article 11, Section 9.01 of the UDC are as follows:
    - (G) Masonry building materials in percentages greater then surrounding properties (Buildings "D", "E" & "F")
    - (H) Inclusion of 20-percent natural or cultured stone (Building "E")
    - (I) Increased architectural elements (Buildings "D" and "E"):
        - Canopies
        - Awnings

        - Peaked roof forms
        - Outdoor patio space
        - Outdoor plaza space
        - Display windows
        - Varied roof heights
    - (K) Compliance with General Overlay District Standards
        - Exterior façade with 90-percent Primary Materials and/or a maximum of 10-percent Secondary Materials excluding doors and windows (Building "E")
        - Rooftop Mechanical Equipment Screening and other rooftop appurtenances accomplished by architectural features integral to the building's design ensuring the mechanical equipment is not visible from any direction (Building "D")
2) Above Ground Fuel Tank Screening: Subsection 01.05 of the UDC requires screening with walls matching the main structure. The proposed fuel storage tank is internal to the site and not visible from any public right-of-way. We request that this requirement be waived since walls would serve no purpose screening the fuel storage tank from public view. No compensatory mitigation measures are proposed for this request.
3) Driveway Spacing Variance: A variance to the minimum spacing requirement is requested for the proposed Access Drive connection to State Highway 205. Preliminary discussions with the Texas Department of Transportation indicate they will permit the reduced driveway spacing if the driveway connection is constructed in the "right in" "right out" configuration shown on the Site Plan. The proposed access drive connection to State Highway 205 will be gated and is intended mainly for egress of the REC Mobile Substation. Compensatory mitigation is the "right in" "right out" configuration of the proposed drive approach at State Highway 205.
4) Outdoor Storage Area Screening Variance: A partial variance for screening of the proposed Outdoor Storage Area is requested due to its distance from State Highway 205 and the existing Heavy Commercial use of the adjacent properties. In lieu of perimeter screen walls or the full landscape screening we request that only canopy trees along a portion of the proposed access drive be required to screen the outdoor storage area as shown in the Landscape Plans. As compensatory mitigation proposed Building "F" will include 10-foot high masonry walls on three sides in order to screen the equipment contained within from view of adjacent properties. The purpose of Building "F" is to shelter equipment from the elements and exterior walls are not necessary for this function.
5) Outdoor Storage Area Surfacing: A variance is requested to allow the use of gravel surfacing in lieu of concrete paving in the Outdoor Storage Area. This area will be utilized for storage of high voltage electrical equipment, raw materials, and construction equipment used in the course of business for REC operations. The construction equipment includes a Caterpillar D6 and other metal tracked heavy construction equipment that would degrade concrete paving over time. Compensatory mitigation measures for the gravel surfacing are the extensive enhanced pedestrian improvements and Amenity Pond proposed with the campus expansion.

6) Three Tiered Screening along Sids Road: Subsection 05.02, Article 8 of the UDC requires screening of the Building "D" roll-up doors from Sids Road. City comments indicate three-tiered screening is the preferred screening method. Taller shrubs (36-inch height initial) are proposed in lieu of a shrub/berm combination due to the existing 15-foot Water and Drainage Easement, existing fence, and existing trees along the Sids Road frontage.

In addition to the variances requested above, we request that this project be permitted to utilize the version of the Tree Preservation Ordinance (UDC Article 09) in place at the time of Preliminary Plat approval (i.e. the "previous" version). The Treescape Plan included in the Site Plan resubmittal is based on the previous version of the Tree Preservation Ordinance.

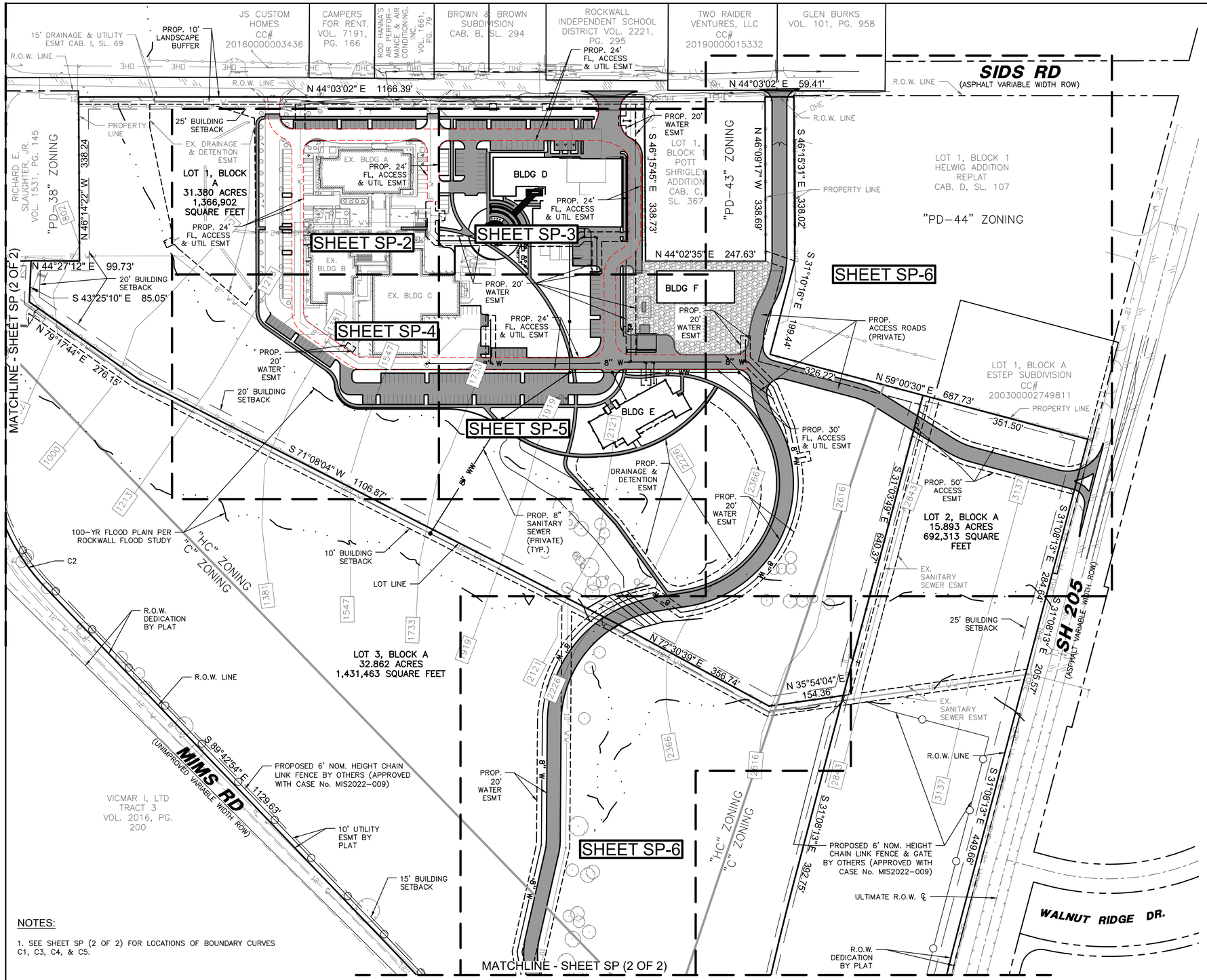
We greatly appreciate your consideration of these variance requests.

Best Regards,

R-DELTA ENGINEERS, INC.
TBPE Firm No. F-001515

Frank A. Polma, P.E.
President

Cc: Mr. Stephen Geiger, P.E. – Rayburn Electric Cooperative



LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
TPED	EX. TELEPHONE PEDESTAL
WV	EX. WATER VALVE
EB	EX. ELECTRIC BOX
FH	EX. FIRE HYDRANT
CMP	EX. CORRUGATED METAL PIPE
X" W	EX. WATER MAIN PIPE
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	EXISTING CHAIN LINK FENCE
PP	EXISTING POWER POLE
OHE	EXISTING OVERHEAD ELECTRIC
	EXISTING GUY WIRE
	EXISTING FLOOD LIGHT
	EDGE OF ASPHALT
	PROPOSED WROUGHT IRON FENCE
	PROPOSED 6' CHAIN LINK FENCE BY OTHERS
	100-YR FLOOD PLAIN-ROCKWALL
	BFR - CONSTRUCT BARRIER FREE RAMP WITH TRUNCATED DOMED PANELS PER CITY DETAILS. NO EXTRA PAY ITEM FOR MONOLITHIC CURBS.
	ACCESSIBLE AISLE STRIPING
1000	CROSS-SECTION LOCATION-CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT
	PROPOSED GRAVEL SURFACING

100 50 0 100
GRAPHIC SCALE IN FEET
SCALE: 1" = 100'

EXISTING SITE PARKING DATA

PUBLIC SPACES	ACCESSIBLE SPACES	TOTAL
125	5	130

PROPOSED SITE PARKING DATA

PUBLIC SPACES	ACCESSIBLE SPACES	TOTAL
262	9	271

SITE INFORMATION:

EXISTING ZONING: HEAVY COMMERCIAL (HC), COMMERCIAL (C), & AGRICULTURAL (AG)

PROPOSED ZONING: NO CHANGE

PROPOSED USE: EXPANSION OF EXISTING SITE TO INCLUDE 2 NEW OFFICE BUILDINGS, TRUCK WAREHOUSE, AND LAYDOWN STORAGE WAREHOUSE

TOTAL AREA LOT 1: 1,366,902 SQ FT 31.38 AC
TOTAL AREA LOTS 1-4: 4,146,392 SQ FT 95.19 AC

LOT 1 "HC" ZONING

MAXIMUM BUILDING HEIGHT: 60 FT
MAXIMUM LOT COVERAGE: 60%
MAXIMUM FLOOR AREA RATIO: 4:1
MAXIMUM IMPERVIOUS PARKING: 90-95%

PROPOSED MAX. BUILDING D HEIGHT: 40'
PROPOSED MAX. BUILDING E HEIGHT: 46'-4"
PROPOSED MAX. BUILDING F HEIGHT: 26'-8"
PROPOSED LOT COVERAGE: 106,281/1,366,902 = 7.8%
PROPOSED FLOOR AREA RATIO: 113,260/1,366,902 = 0.08:1
PROPOSED IMPERVIOUS PARKING: 69,510/1,366,902 = 5.1%

EXISTING PARKING:
EXISTING WAREHOUSE 23,520 SQ FT (1:1000) = 24 SPACES
EXISTING OFFICE 31,530 SQ FT (1:300) = 106 SPACES
REMOVED OFFICE 7,700 SQ FT (1:300) = -26 SPACES

EXISTING REQUIRED PARKING = 104 SPACES

REQUIRED PARKING:
PROPOSED WAREHOUSE D 12,750 SQ FT (1:1000) = 13 SPACES
PROPOSED OFFICE D 19,600 SQ FT (1:300) = 66 SPACES
PROPOSED OFFICE E 23,000 SQ FT (1:300) = 77 SPACES
PROPOSED WAREHOUSE F 10,560 SQ FT (1:1000) = 11 SPACES

TOTAL REQUIRED PARKING = 271 SPACES
TOTAL PROVIDED PARKING = 271 SPACES

NOTES:

1. SEE SHEET SP (2 OF 2) FOR LOCATIONS OF BOUNDARY CURVES C1, C3, C4, & C5.

BOUNDARY CURVE DATA					
CURVE	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	11°11'01"	5,779.71'	1,128.15'	S 36°43'43" E	1,126.36'
C2	46°17'44"	417.50'	337.34'	N 66°34'02" W	328.24'
C3	36°44'03"	482.50'	309.35'	S 61°47'11" E	304.08'
C4	129°16'42"	40.00'	90.25'	S 23°55'53" W	72.29'
C5	7°41'42"	6,142.03'	824.89'	N 34°59'04" W	824.27'

APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ___ day of _____, ____.

WITNESS OUR HANDS, this ___ day of _____, ____.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

PAVEMENT INFORMATION:

ALL PAVEMENTS BELOW HAVE #3 BARS 24" O.C.E.W.

PAVEMENT TYPE	THICKNESS (INCHES)	28-DAY (PSI)	MIN. CEMENT (SACKS/CY) MACHINE	HAND
FIRE LANE	6"	3,600	6.0	6.5
DRIVEWAYS	6"	3,600	6.0	6.5
BARRIER FREE RAMPS	6"	3,600	6.0	6.5
DUMPSTER PADS	7"	3,600	6.0	6.5
SIDEWALKS	4"	3,000	N/A	5.5
PARKING LOT/ DRIVE AISLES	5"	3,000	5.0	5.5

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1-4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

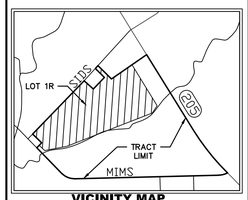
MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
TBPE No. F-1515

Rayburn Electric COOPERATIVE

PRELIMINARY
SUBMITTED FOR REVIEW
BY: BRIAN PAUL PATRICK
P.E. 80844
R-Delta Engineers, Inc.
Date: November 3, 2022
NOT FOR CONSTRUCTION, BIDDING OR PERMITTING PURPOSES



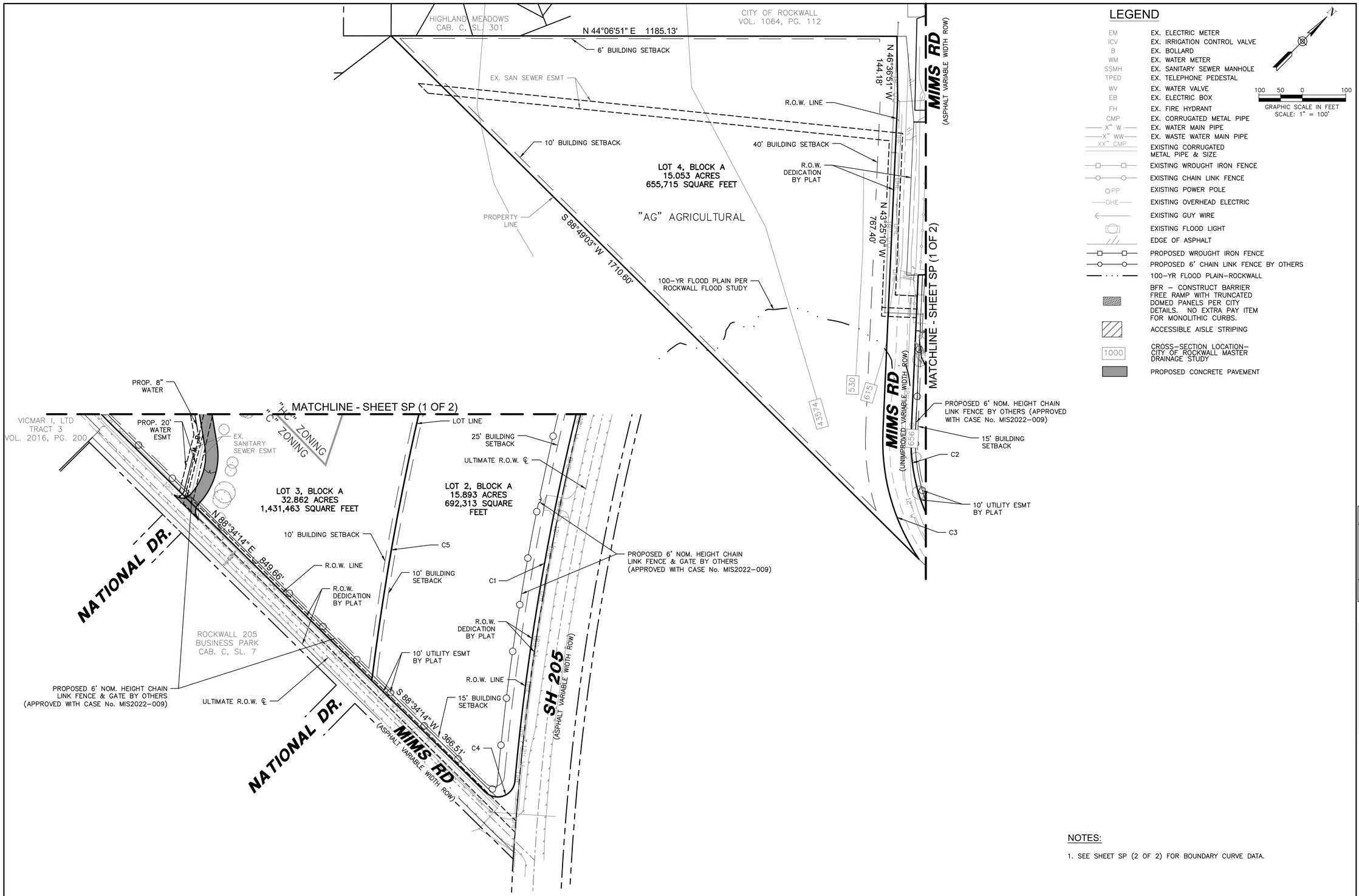
VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21
DATE
11/03/2022
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SITE PLAN
CASE# SP2022-058

SHEET NO.
SP (1 OF 2)



LEGEND

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	PROPOSED CONCRETE PAVEMENT

100 50 0 100
GRAPHIC SCALE IN FEET
SCALE: 1" = 100'

APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ____ day of _____, _____.

WITNESS OUR HANDS, this ____ day of _____, _____.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

SITE INFORMATION:

SEE SP (1 OF 2)

PAVEMENT INFORMATION:

SEE SP (1 OF 2)

NOTES:

1. SEE SHEET SP (2 OF 2) FOR BOUNDARY CURVE DATA.

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REC CAMPUS ADDITION
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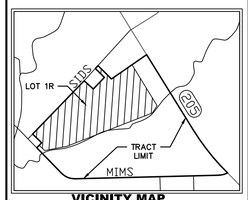

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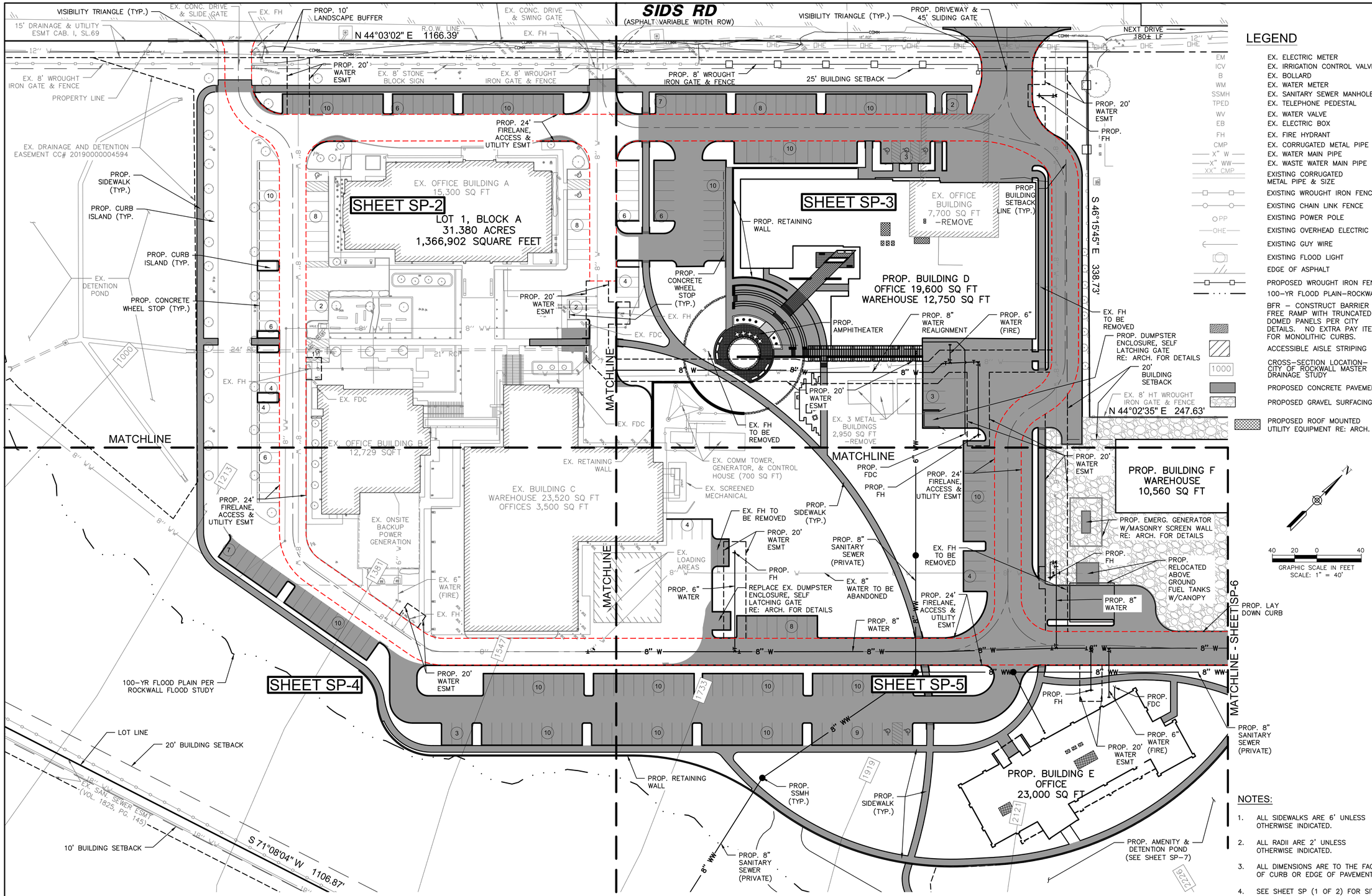
SP (2 OF 2)



LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
TPED	EX. TELEPHONE PEDESTAL
WV	EX. WATER VALVE
EB	EX. ELECTRIC BOX
FH	EX. FIRE HYDRANT
CMP	EX. CORRUGATED METAL PIPE
X" W	EX. WATER MAIN PIPE
X" WW	EX. WASTE WATER MAIN PIPE
XX" CMP	EXISTING CORRUGATED METAL PIPE & SIZE
	EXISTING WROUGHT IRON FENCE
	EXISTING CHAIN LINK FENCE
PP	EXISTING POWER POLE
OHE	EXISTING OVERHEAD ELECTRIC
	EXISTING GUY WIRE
	EXISTING FLOOD LIGHT
	EDGE OF ASPHALT
	PROPOSED WROUGHT IRON FENCE
	100-YR FLOOD PLAIN–ROCKWALL
	BFR – CONSTRUCT BARRIER FREE RAMP WITH TRUNCATED DOMED PANELS PER CITY DETAILS. NO EXTRA PAY ITEM FOR MONOLITHIC CURBS.
	ACCESSIBLE AISLE STRIPING
1000	CROSS-SECTION LOCATION–CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT
	PROPOSED GRAVEL SURFACING
	PROPOSED ROOF MOUNTED UTILITY EQUIPMENT RE: ARCH.

NOTES:

1. ALL SIDEWALKS ARE 6' UNLESS OTHERWISE INDICATED.
2. ALL RADII ARE 2' UNLESS OTHERWISE INDICATED.
3. ALL DIMENSIONS ARE TO THE FACE OF CURB OR EDGE OF PAVEMENT.
4. SEE SHEET SP (1 OF 2) FOR SITE INFORMATION AND PARKING INFORMATION.

APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ___ day of _____, ____.

WITNESS OUR HANDS, this ___ day of _____, ____.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

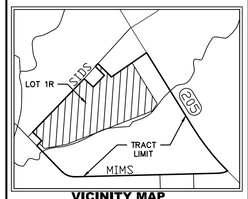
MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
TBPE No. F-1515

Rayburn Electric COOPERATIVE

PRELIMINARY
SUBMITTED FOR REVIEW
BY: BRIAN PAUL PATRICK
P.E. 80844
R-Delta Engineers, Inc.
Date: November 3, 2022
NOT FOR CONSTRUCTION, BIDDING OR PERMITTING PURPOSES



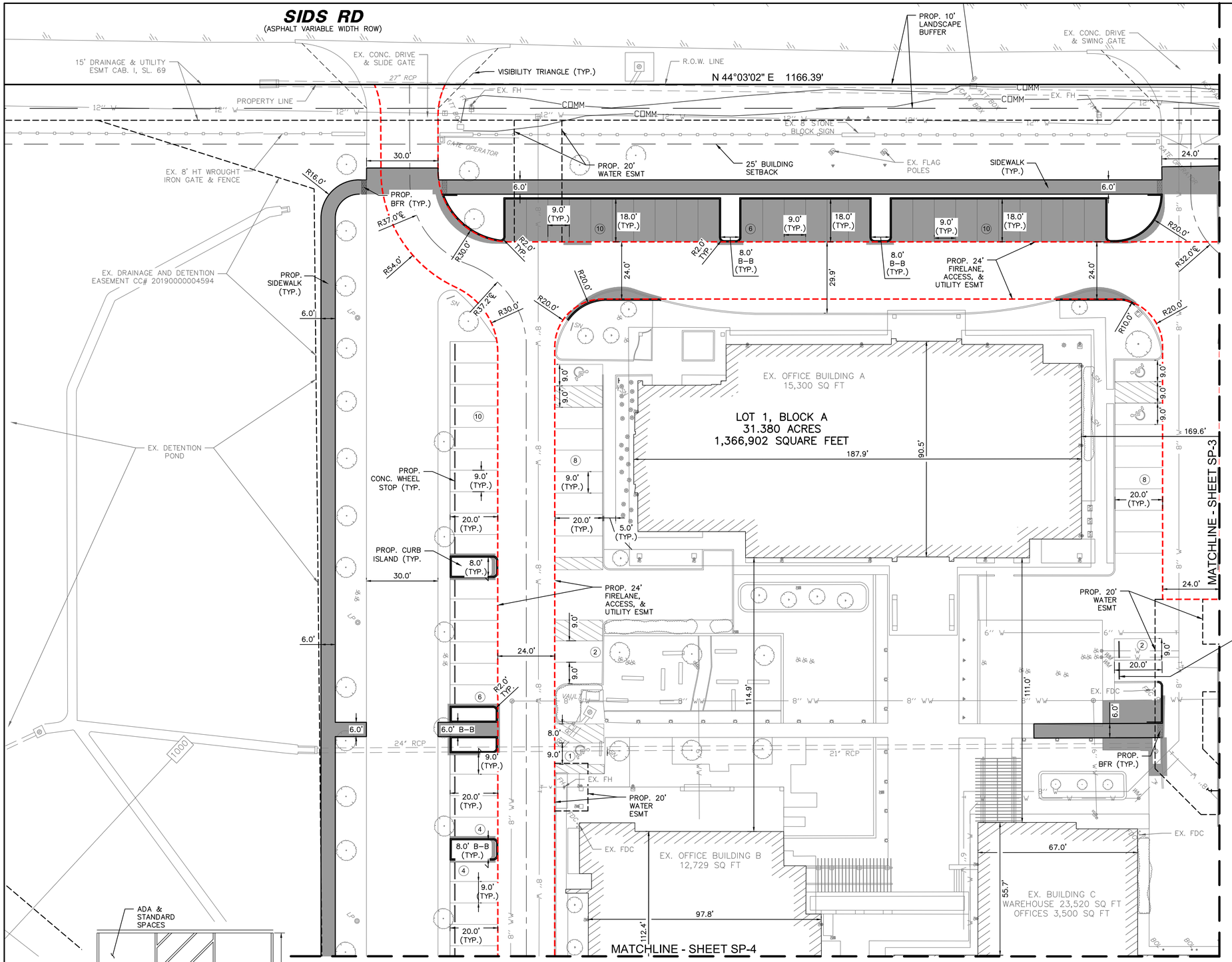
VICINITY MAP
NTS

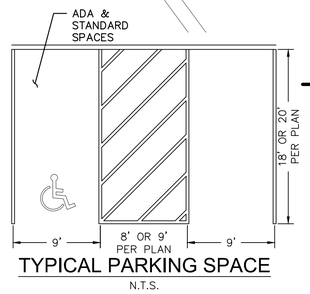
REVISION

NO.	DESCRIPTION	DATE

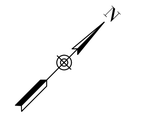
PROJECT NUMBER
3036.21
DATE
11/03/2022
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SITE PLAN
CASE# SP2022-058

SHEET NO.
SP-1





TYPICAL PARKING SPACE
N.T.S.



20 10 0 20
GRAPHIC SCALE IN FEET
SCALE: 1" = 20'

LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
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	ACCESSIBLE AISLE STRIPING
1000	CROSS-SECTION LOCATION- CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT

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WITNESS OUR HANDS, this ____ day of _____, _____.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

HKS

ARCHITECT
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MCKINNEY, TX 75069

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HKS, INC.
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DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
TBPE No. F-1515

Rayburn Electric COOPERATIVE

PRELIMINARY
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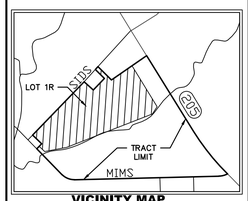


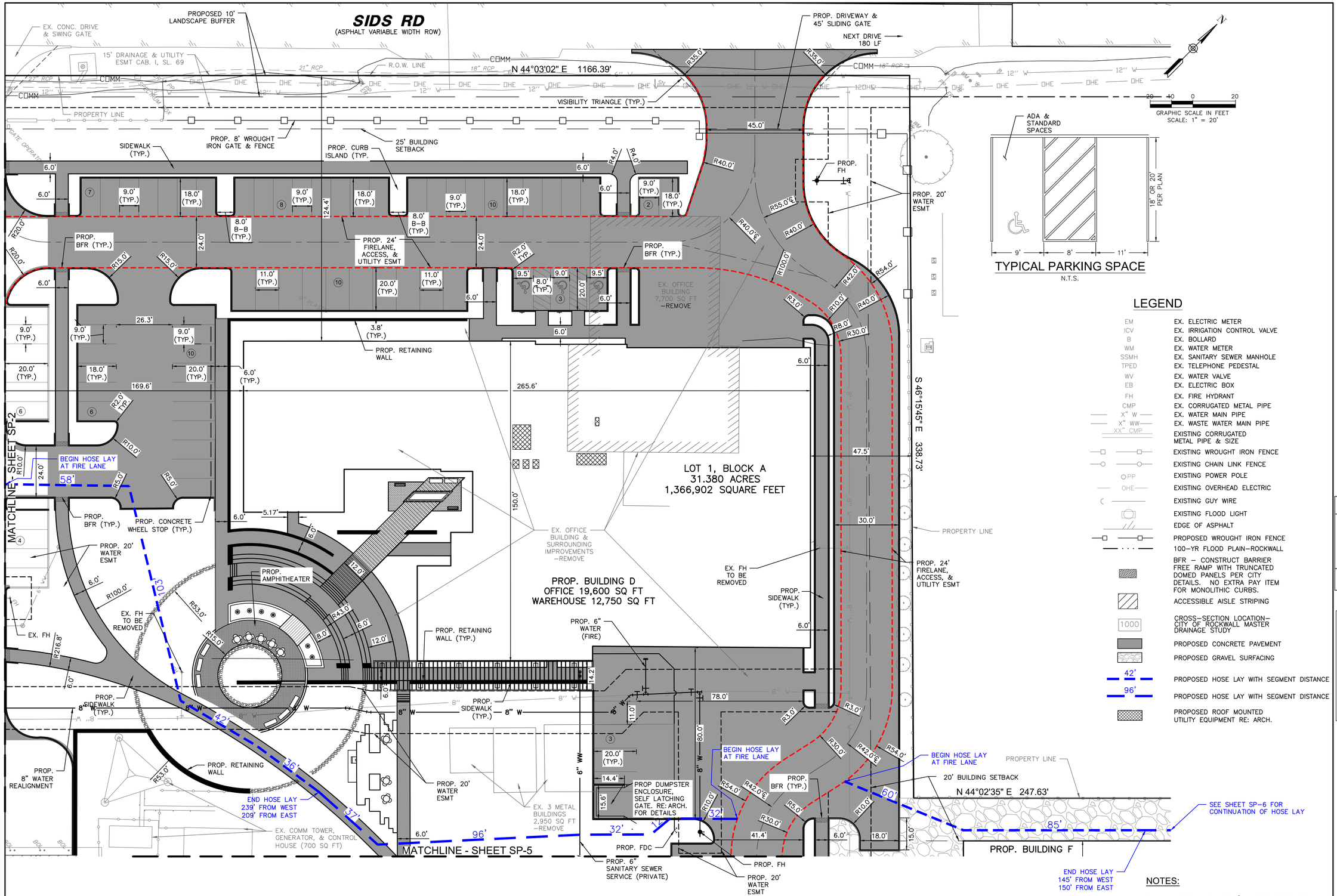
VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21
DATE
11/03/2022
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SITE PLAN
CASE# SP2022-058

SHEET NO.
SP-2



LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
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WV	EX. WATER VALVE
EB	EX. ELECTRIC BOX
FH	EX. FIRE HYDRANT
CMP	EX. CORRUGATED METAL PIPE
X" W	EX. WATER MAIN PIPE
X" WW	EX. WASTE WATER MAIN PIPE
XX" CMP	EXISTING CORRUGATED METAL PIPE & SIZE
	EXISTING WROUGHT IRON FENCE
	EXISTING CHAIN LINK FENCE
PP	EXISTING POWER POLE
OHE	EXISTING OVERHEAD ELECTRIC
	EXISTING GUY WIRE
	EXISTING FLOOD LIGHT
	EDGE OF ASPHALT
	PROPOSED WROUGHT IRON FENCE
	100–YR FLOOD PLAIN–ROCKWALL
	BFR – CONSTRUCT BARRIER FREE RAMP WITH TRUNCATED DOMED PANELS PER CITY DETAILS. NO EXTRA PAY ITEM FOR MONOLITHIC CURBS.
	ACCESSIBLE AISLE STRIPING
1000	CROSS–SECTION LOCATION– CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT
	PROPOSED GRAVEL SURFACING
42'	PROPOSED HOSE LAY WITH SEGMENT DISTANCE
96'	PROPOSED HOSE LAY WITH SEGMENT DISTANCE
	PROPOSED ROOF MOUNTED UTILITY EQUIPMENT RE: ARCH.

APPROVED:
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WITNESS OUR HANDS, this ___ day of _____, ____.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

NOTES:

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HKS

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DALLAS, TX 75201

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MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
TBPE No. F-1515

PRELIMINARY
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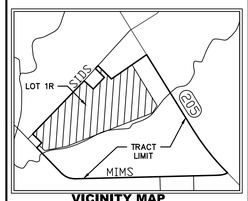
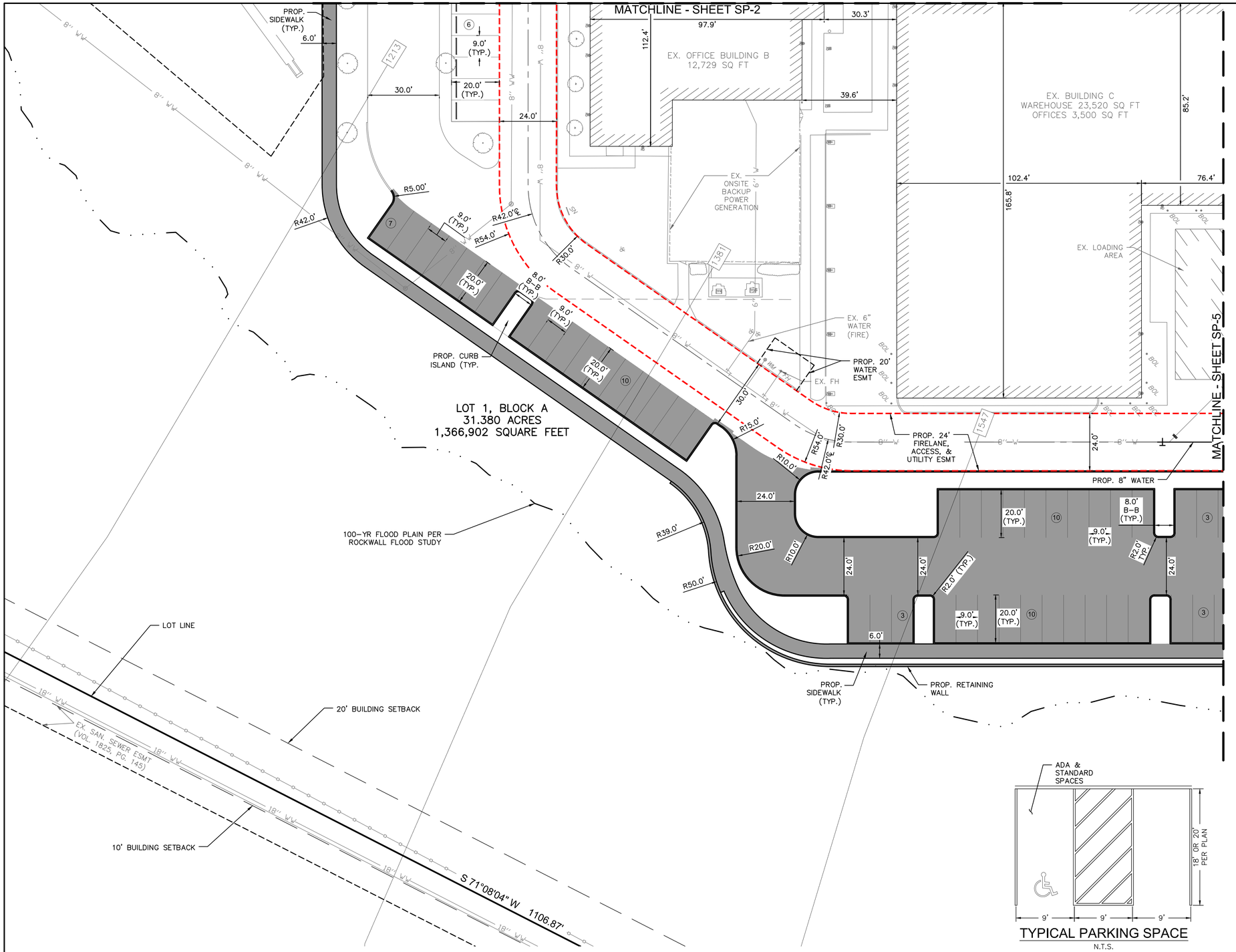


VICINITY MAP
NTS

REVISION
NO. DESCRIPTION DATE

PROJECT NUMBER
3036.21
DATE
11/03/2022
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SITE PLAN
CASE# SP2022-058

SHEET NO.
SP-3



20 10 0 20
GRAPHIC SCALE IN FEET
SCALE: 1" = 20'

LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
TPED	EX. TELEPHONE PEDESTAL
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FH	EX. FIRE HYDRANT
CMP	EX. CORRUGATED METAL PIPE
X" W	EX. WATER MAIN PIPE
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	EXISTING WROUGHT IRON FENCE
	EXISTING CHAIN LINK FENCE
PP	EXISTING POWER POLE
OHE	EXISTING OVERHEAD ELECTRIC
	EXISTING GUY WIRE
	EXISTING FLOOD LIGHT
	EDGE OF ASPHALT
	PROPOSED WROUGHT IRON FENCE
	100-YR FLOOD PLAIN-ROCKWALL
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	ACCESSIBLE AISLE STRIPING
1000	CROSS-SECTION LOCATION-CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT

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TYPICAL PARKING SPACE
N.T.S.

APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ____ day of _____, _____.

WITNESS OUR HANDS, this ____ day of _____, _____.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

HKS

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STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
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DALLAS, TX 75206

OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER
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618 MAIN STREET
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PRELIMINARY
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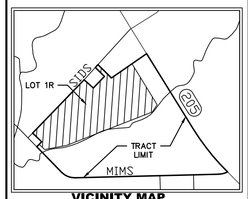

VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21
DATE
11/03/2022
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SITE PLAN
CASE# SP2022-058

SHEET NO.
SP-4

MATCHLINE - SHEET SP-3

MATCHLINE - SHEET SP-4

MATCHLINE - SHEET SP-6

EX. BUILDING C
WAREHOUSE 23,520 SQ FT
OFFICES 3,500 SQ FT

PROP. BUILDING F
WAREHOUSE
10,560 SQ FT

PROP. BUILDING E
OFFICE
23,000 SQ FT

LOT 1, BLOCK A
31.380 ACRES
1,366,902 SQUARE FEET

PROP. SIDEWALK (TYP.)
PROP. 24' FIRELANE, ACCESS, & UTILITY ESMT
PROP. 6" SANITARY SEWER SERVICE (PRIVATE)
PROP. CURB ISLAND (TYP.
PROP. OUTSIDE STORAGE
PROP. EMERG. GENERATOR W/MASONRY SCREEN WALL, SELF LATCHING GATE RE: ARCH. FOR DETAILS
PROP. 20' WATER ESMT
PROP. RELOCATED ABOVE GROUND FUEL TANKS W/CANOPY
EX. FH TO BE REMOVED
PROP. FH
EX. LOADING AREA
PROP. ACCESS DRIVE A
REPLACE EX. DUMPSTER ENCLOSURE, SELF LATCHING GATE RE: ARCH. FOR DETAILS
EX. 8" WATER TO BE ABANDONED
PROP. 8" SANITARY SEWER (PRIVATE)
BEGIN HOSE LAY AT FIRE LANE
PROP. BFR (TYP.)
PROP. 6" SANITARY SEWER SERVICE (PRIVATE)
PROP. FDC
PROP. 8" SANITARY SEWER (PRIVATE)
PROP. 20' WATER ESMT
PROP. 6" WATER (FIRE)
PROP. SSMH (TYP.)
PROP. RETAINING WALL
100-YR FLOOD PLAIN PER ROCKWALL FLOOD STUDY
END HOSE LAY 250' FROM WEST 247' FROM NORTH
PROP. AMENITY & DETENTION POND (SEE SHEET SP-7)
PROP. DRAINAGE & DETENTION ESMT (SEE SHEET SP-7)

GRAPHIC SCALE IN FEET
SCALE: 1" = 20'

LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
TPED	EX. TELEPHONE PEDESTAL
WV	EX. WATER VALVE
EB	EX. ELECTRIC BOX
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CMP	EX. CORRUGATED METAL PIPE
X" W	EX. WATER MAIN PIPE
X" WW	EX. WASTE WATER MAIN PIPE
XX" CMP	EX. CORRUGATED METAL PIPE & SIZE
	EX. WROUGHT IRON FENCE
	EX. CHAIN LINK FENCE
PP	EX. POWER POLE
OHE	EX. OVERHEAD ELECTRIC
	EX. GUY WIRE
	EX. FLOOD LIGHT
	EDGE OF ASPHALT
	PROP. WROUGHT IRON FENCE
	100-YR FLOOD PLAIN-ROCKWALL
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	ACCESSIBLE AISLE STRIPING
1000	CROSS-SECTION LOCATION-CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT
	PROPOSED GRAVEL SURFACING
74'	PROPOSED HOSE LAY WITH SEGMENT DISTANCE
85'	PROPOSED HOSE LAY WITH SEGMENT DISTANCE
	PROPOSED ROOF MOUNTED UTILITY EQUIPMENT RE: ARCH.

NOTES:

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ADA & STANDARD SPACES

TYPICAL PARKING SPACE
N.T.S.

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Planning & Zoning Commission, Chairman

Director of Planning and Zoning

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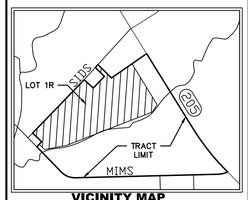

VICINITY MAP
NTS

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PROJECT NUMBER
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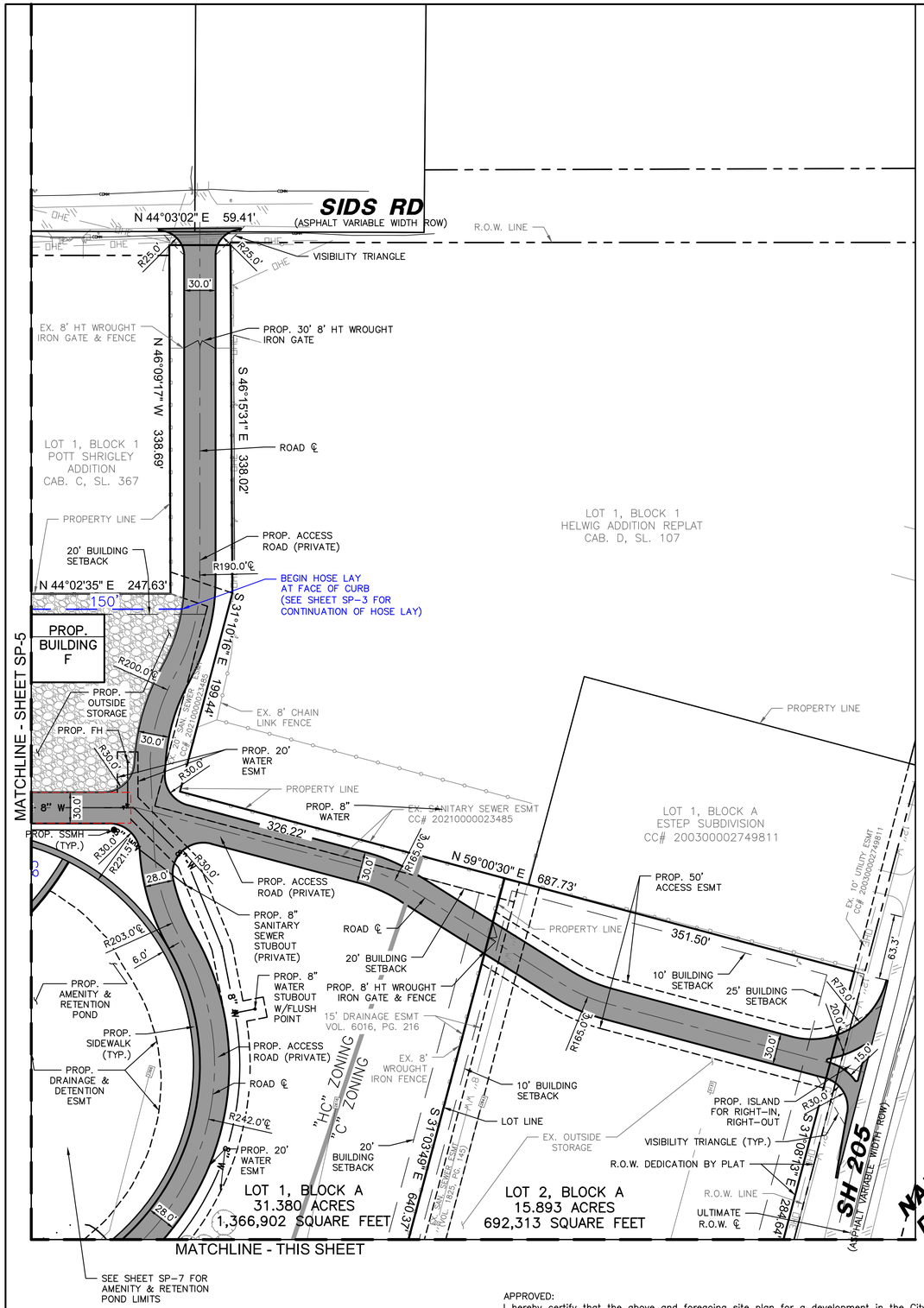
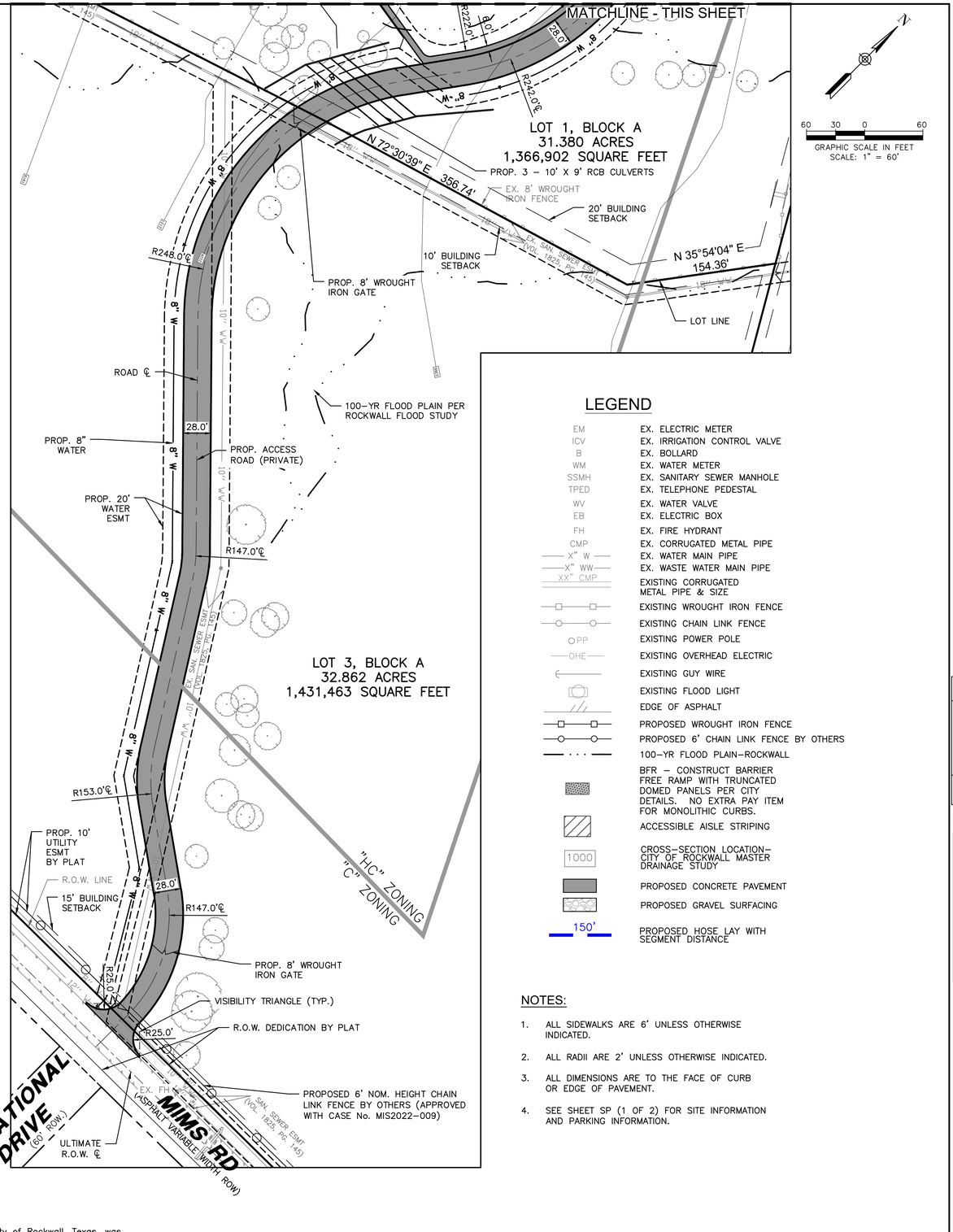
DATE
11/03/2022
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SITE PLAN
CASE# SP2022-058

SHEET NO.
SP-5





LEGEND

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WM	EX. WATER METER
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OHE	EXISTING OVERHEAD ELECTRIC
	EXISTING GUY WIRE
	EXISTING FLOOD LIGHT
	EDGE OF ASPHALT
	PROPOSED WROUGHT IRON FENCE
	PROPOSED 6' CHAIN LINK FENCE BY OTHERS
	100-YR FLOOD PLAIN-ROCKWALL
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	PROPOSED CONCRETE PAVEMENT
	PROPOSED GRAVEL SURFACING
150'	PROPOSED HOSE LAY WITH SEGMENT DISTANCE

NOTES:

1. ALL SIDEWALKS ARE 6' UNLESS OTHERWISE INDICATED.
2. ALL RADII ARE 2' UNLESS OTHERWISE INDICATED.
3. ALL DIMENSIONS ARE TO THE FACE OF CURB OR EDGE OF PAVEMENT.
4. SEE SHEET SP (1 OF 2) FOR SITE INFORMATION AND PARKING INFORMATION.

APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ___ day of _____, ____.

WITNESS OUR HANDS, this ___ day of _____, ____.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

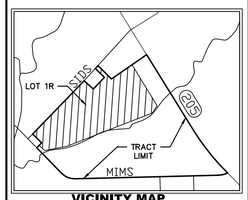
MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER/ APPLICANT
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040
TBPE No. F-1515

RayburnElectric COOPERATIVE

PRELIMINARY
SUBMITTED FOR REVIEW
BY: BRIAN PAUL PATRICK
P.E. 80844
R-Delta Engineers, Inc.
Date: November 3, 2022
NOT FOR CONSTRUCTION, BIDDING OR PERMITTING PURPOSES



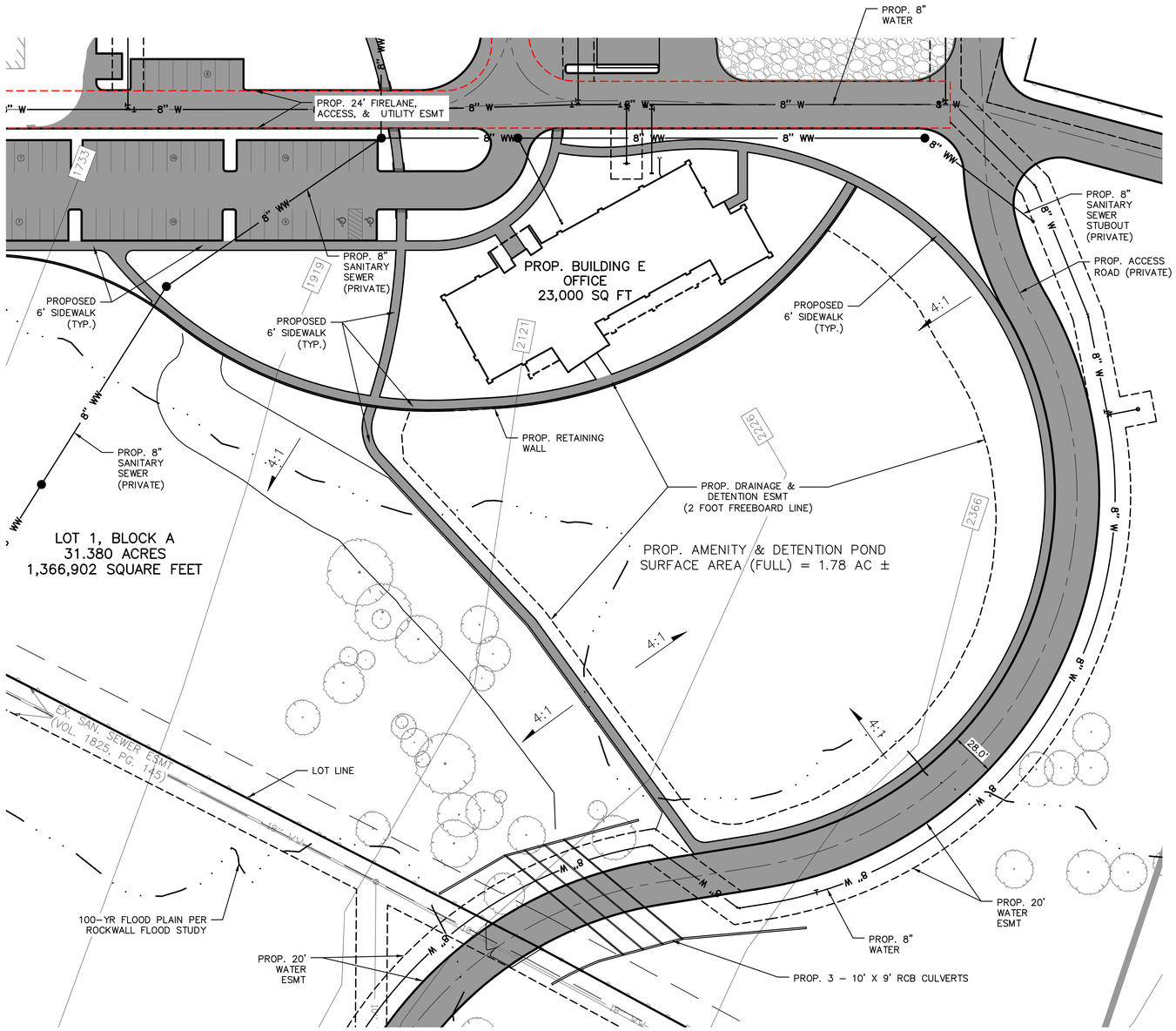
VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21
DATE
11/03/2022
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SITE PLAN
CASE# SP2022-058

SHEET NO.
SP-6



40 20 0 40

GRAPHIC SCALE IN FEET
SCALE: 1" = 40'

LEGEND

EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
TPED	EX. TELEPHONE PEDESTAL
WV	EX. WATER VALVE
EB	EX. ELECTRIC BOX
FH	EX. FIRE HYDRANT
CMP	EX. CORRUGATED METAL PIPE
X" W	EX. WATER MAIN PIPE
X" WW	EX. WASTE WATER MAIN PIPE
XX" CMP	EX. CORRUGATED METAL PIPE & SIZE
	EX. WROUGHT IRON FENCE
	EX. CHAIN LINK FENCE
PP	EX. POWER POLE
OHE	EX. OVERHEAD ELECTRIC
	EX. GUY WIRE
	EX. FLOOD LIGHT
	EDGE OF ASPHALT
	PROP. WROUGHT IRON FENCE
	100-YR FLOOD PLAIN-ROCKWALL
	BFR - CONSTRUCT BARRIER FREE RAMP WITH TRUNCATED DOMED PANELS PER CITY DETAILS. NO EXTRA PAY ITEM FOR MONOLITHIC CURBS.
	ACCESSIBLE AISLE STRIPING
1000	CROSS-SECTION LOCATION-CITY OF ROCKWALL MASTER DRAINAGE STUDY
	PROPOSED CONCRETE PAVEMENT

NOTES:

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_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

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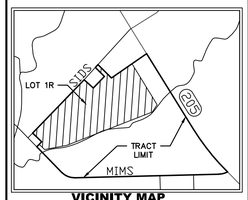


VICINITY MAP
NTS

REVISION

NO.	DESCRIPTION	DATE

PROJECT NUMBER
3036.21
DATE
11/03/2022
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SITE PLAN
CASE# SP2022-058

SHEET NO.
SP-7

EXTERIOR MATERIALS LEGEND

ST01:
a. STONE TYPE: LIMESTONE
b. STONE NAME: LEUDERS CHOPPED BUFF
c. GROUT/SEALANT COLOR: MATCH EXISTING
d. LOCATION: EXTERIOR STONE MASONRY VENEER

AMF01:
a. MATERIAL TYPE: ALUMINIUM
b. FINISH TYPE: ANODIZED
c. ANODIZED COLOR: DARK BRONZE
d. COATING COLOR: MATCH EXISTING
e. LOCATION: MULLIONS

AMF02:
a. MATERIAL TYPE: STEEL
b. FINISH TYPE: HIGH-PERFORMANCE ORGANIC FLUOROPOLYMER
c. COATING COLOR: MATCH PT02
d. LOCATION: EXPOSED TRELLIS COLUMNS

AMF03:
a. MATERIAL TYPE: STEEL
b. COATING COLOR: MATCH EXISTING ROOF, BERRIDGE PREWEATHERED GALVALUME
c. MATTE FINISH
d. LOCATION: STANDING SEAM METAL ROOF

WD01:
a. SPECIES AND CUT: WESTERN RED CEDAR
b. FINISH: CLEAR MATTE FINISH
c. LOCATION: WOOD BEAM CLADDING. EXTERIOR SOFFITS, INTERIOR CEILINGS AND TRIM.

CSM01:
a. MATERIAL TYPE: CAST STONE
b. COLOR: NATURAL
c. AGGREGATE:
d. EXPOSED TEXTURE FINISH: [SMOOTH] [HONED] [SAND TEXTURE]
e. LOCATION: WAINSCOT SILL @ STONE, PARAPET CAP

PCP01:
a. MATERIAL TYPE: PORTLAND CEMENT PLASTER
b. COLOR: MATCH SW 9111 ANTLER VELVET

PC01:
a. MATERIAL TYPE: TILT UP CONCRETE PANELS
b. COLOR: MATCH SW 9111 ANTLER VELVET

PT01:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: GUTTERS AND DOWNSPOUTS

PT02:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: EXPOSED STRUCTURAL STEEL & ENTRY CANOPIES

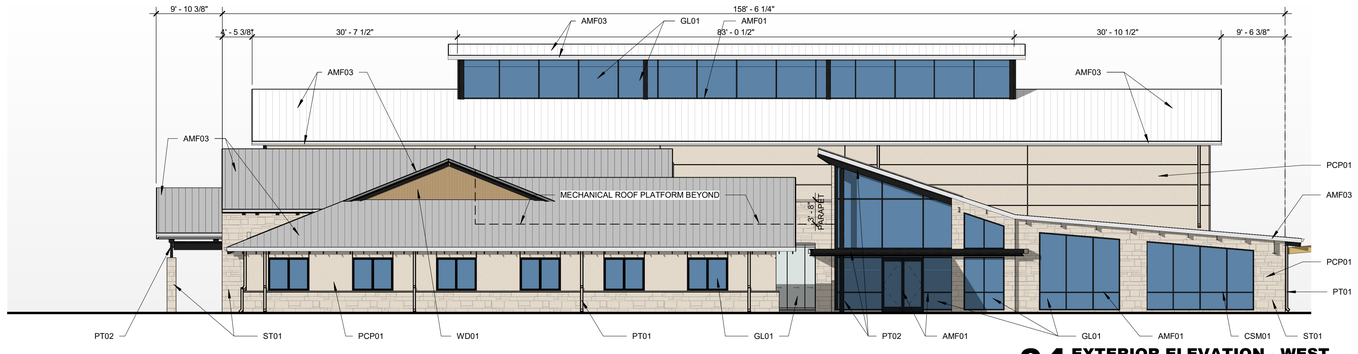
GL01: INSULATING COATED GLASS - VISION
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: CLEAR HS; 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE.
3) AIR SPACE: 1/2"; ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS

GL02: INSULATING COATED GLASS - SPANDREL
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: SPANDREL 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE.
3) AIR SPACE: 1/2"; ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS COLOR: V908 GRAY

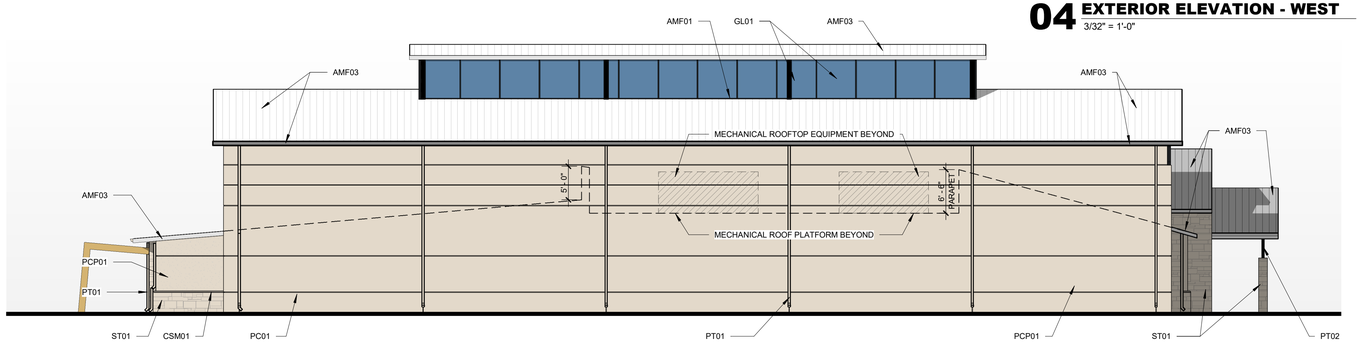
CMU01:
a. MANUFACTURER: FEATHERLITE
b. SPLIT FACE MASONRY BLOCK
c. COLOR: CREAM

Building "D" Elevation Material Calculations

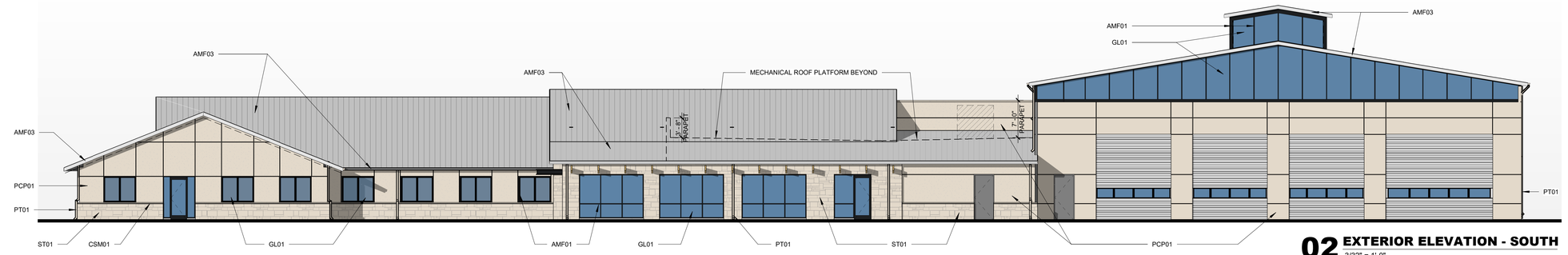
	MATERIAL	AMOUNT (SF)	AMOUNT (%)
NORTH			
	PORTLAND CEMENT PLASTER (PCP01)	460	21%
	WOOD SIDING (WD01)	160	7%
	STONE VENEER (ST01)	607	28%
	TILT UP CONCRETE PANELS (PC01)	975	44%
		2202	100%
SOUTH			
	PORTLAND CEMENT PLASTER (PCP01)	547	21%
	WOOD SIDING (WD01)	0	0%
	STONE VENEER (ST01)	635	24%
	TILT UP CONCRETE PANELS (PC01)	1,457	55%
		2639	100%
EAST			
	PORTLAND CEMENT PLASTER (PCP01)	54	1%
	WOOD SIDING (WD01)	0	0%
	STONE VENEER (ST01)	120	3%
	TILT UP CONCRETE PANELS (PC01)	3540	95%
		3714	100%
WEST			
	PORTLAND CEMENT PLASTER (PCP01)	1465	37%
	WOOD SIDING (WD01)	154	4%
	STONE VENEER (ST01)	680	17%
	TILT UP CONCRETE PANELS (PC01)	1,629	41%
		3928	100%



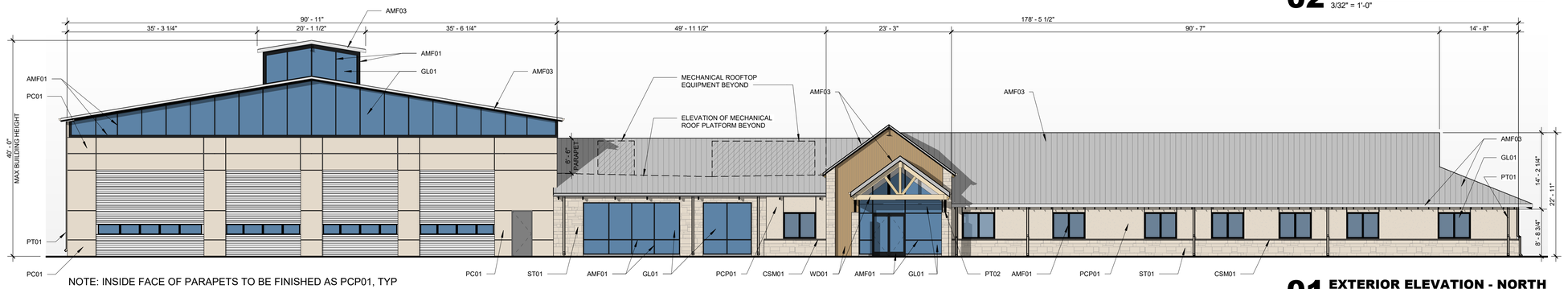
04 EXTERIOR ELEVATION - WEST
3/32" = 1'-0"



03 EXTERIOR ELEVATION - EAST
3/32" = 1'-0"



02 EXTERIOR ELEVATION - SOUTH
3/32" = 1'-0"



NOTE: INSIDE FACE OF PARAPETS TO BE FINISHED AS PCP01, TYP

01 EXTERIOR ELEVATION - NORTH
3/32" = 1'-0"

APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ___ day of _____, ____.

WITNESS OUR HANDS, this ___ day of _____, ____.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1–4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
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618 MAIN STREET
GARLAND, TEXAS 75040

Rayburn Electric COOPERATIVE

INTERIM REVIEW ONLY
These documents are incomplete, and are released for interim review only and are not intended for regulatory approval, permit, or construction purposes.
Architect: _____
Arch. Reg. No.: _____
Date: _____

KEY PLAN

REVISION
NO. DESCRIPTION DATE

HKS PROJECT NUMBER
25370.000
DATE
11/01/22
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
BLDG ELEVATIONS - D

CASE# SP2022-058

SHEET NO.
PA5.01

EXTERIOR MATERIALS LEGEND

ST01:
a. STONE TYPE: LIMESTONE
b. STONE NAME: LEUDERS CHOPPED BUFF
c. GROUT/SEALANT COLOR: MATCH EXISTING
d. LOCATION: EXTERIOR STONE MASONRY VENEER

AMF01:
a. MATERIAL TYPE: ALUMINIUM
b. FINISH TYPE: ANODIZED
c. ANODIZED COLOR: DARK BRONZE
d. COATING COLOR: MATCH EXISTING
e. LOCATION: MULLIONS

AMF02:
a. MATERIAL TYPE: STEEL
b. FINISH TYPE: HIGH-PERFORMANCE ORGANIC FLUOROPOLYMER
c. COATING COLOR: MATCH PT02
d. LOCATION: EXPOSED TRELLIS COLUMNS

AMF03:
a. MATERAL TYPE: STEEL
b. COATING COLOR: MATCH EXISTING ROOF, BERRIDGE PREWEATHERED GALVALUME
c. MATTE FINISH
d. LOCATION: STANDING SEAM METAL ROOF

WD01:
a. SPECIES AND CUT: WESTERN RED CEDAR
b. FINISH: CLEAR MATTE FINISH
c. LOCATION: WOOD BEAM CLADDING. EXTERIOR SOFFITS, INTERIOR CEILINGS AND TRIM.

CSM01:
a. MATERIAL TYPE: CAST STONE
b. COLOR: NATURAL
c. AGGREGATE:
d. EXPOSED TEXTURE FINISH: [SMOOTH] [HONED] [SAND TEXTURE]
e. LOCATION: WAINSCOT SILL @ STONE, PARAPET CAP

PCP01:
a. MATERIAL TYPE: PORTLAND CEMENT PLASTER
b. COLOR: MATCH SW 9111 ANTLER VELVET

PC01:
a. MATERIAL TYPE: TILT UP CONCRETE PANELS
b. COLOR: MATCH SW 9111 ANTLER VELVET

PT01:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: GUTTERS AND DOWNSPOUTS

PT02:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: EXPOSED STRUCTURAL STEEL & ENTRY CANOPIES

GL01: INSULATING COATED GLASS - VISION
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: CLEAR HS; 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE.
3) AIR SPACE: 1/2", ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS

GL02: INSULATING COATED GLASS - SPANDREL
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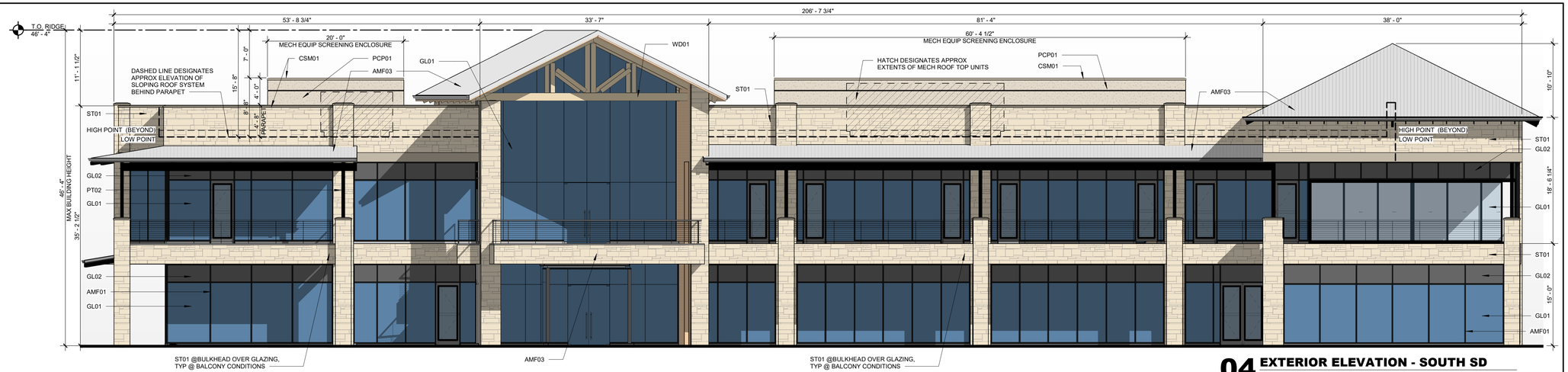
3) AIR SPACE: 1/2", ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS
COLOR: V908 GRAY

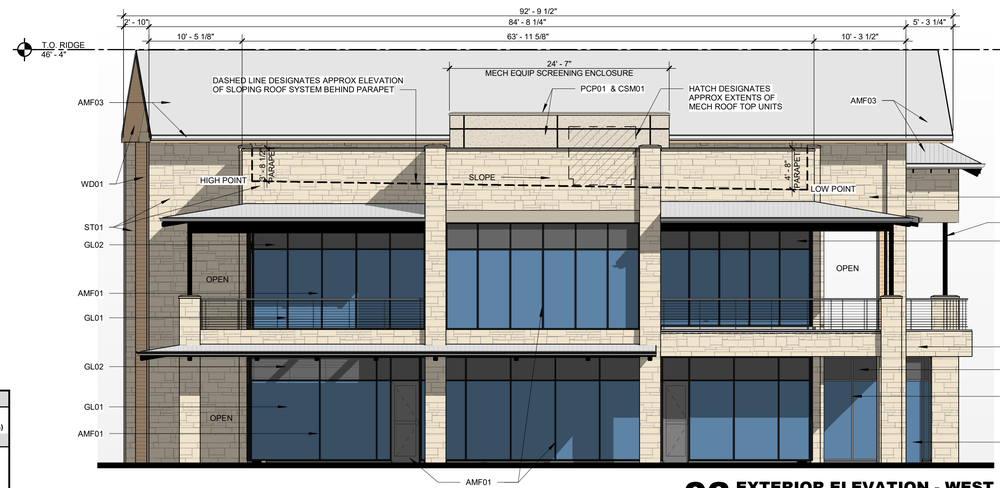
CMU01:
a. MANUFACTURER: FEATHERLITE
b. SPLIT FACE MASONRY BLOCK
c. COLOR: CREAM

Building "E" Elevation Material Calculations

	MATERIAL	AMOUNT (SF)	AMOUNT (%)
NORTH			
	PORTLAND CEMENT PLASTER (PCP01)	190	6%
	WOOD SIDING (WD01)	150	4%
	STONE VENEER (ST01)	3020	90%
		3360	100%
SOUTH			
	PORTLAND CEMENT PLASTER (PCP01)	190	5%
	WOOD SIDING (WD01)	93	3%
	STONE VENEER (ST01)	3410	92%
		3693	100%
EAST			
	PORTLAND CEMENT PLASTER (PCP01)	110	6%
	WOOD SIDING (WD01)	56	3%
	STONE VENEER (ST01)	1683	91%
		1849	100%
WEST			
	PORTLAND CEMENT PLASTER (PCP01)	110	6%
	WOOD SIDING (WD01)	56	3%
	STONE VENEER (ST01)	1750	91%
		1916	100%



04 EXTERIOR ELEVATION - SOUTH SD
1/8" = 1'-0"



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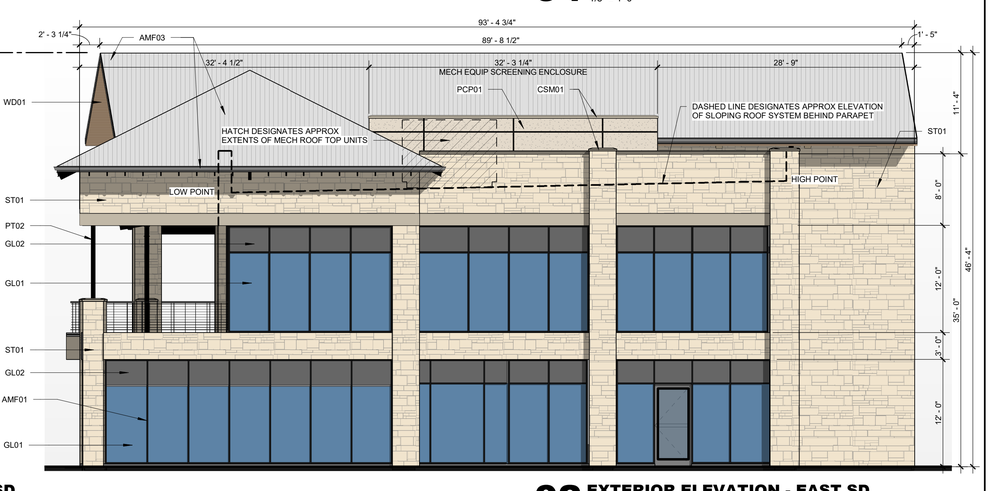
1/8" = 1'-0"



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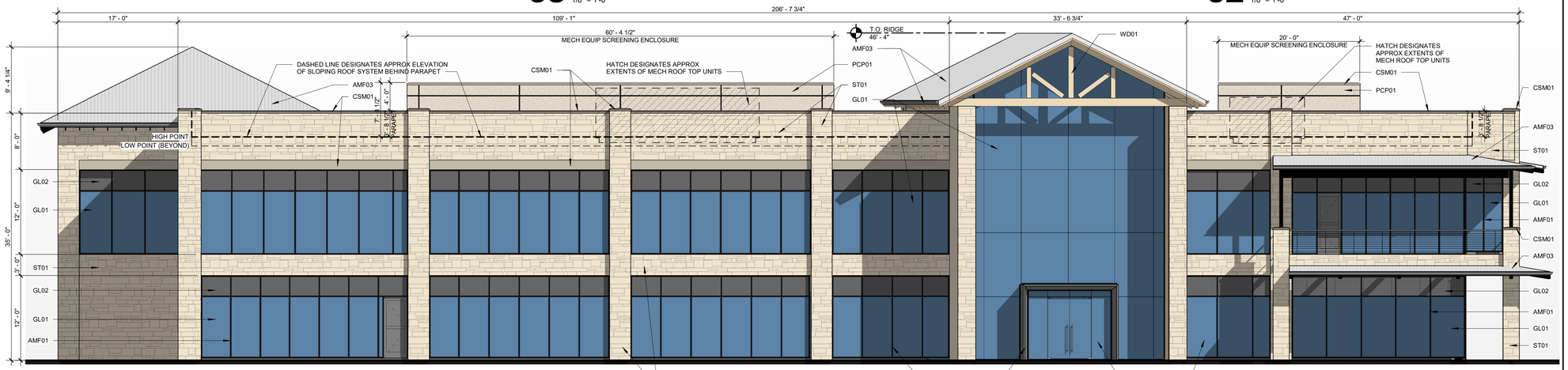

NOTE: INSIDE FACE OF PARAPETS TO BE FINISHED AS PCP01, TYP

01 EXTERIOR ELEVATION - NORTH SD
1/8" = 1'-0"

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Arch. Reg. No.: _____
Date: _____

KEY PLAN

REVISION
NO. DESCRIPTION DATE

HKS PROJECT NUMBER
25370.001
DATE
11/01/22
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
BLDG ELEVATIONS - E

CASE# SP2022-058

SHEET NO.
PA5.02

EXTERIOR MATERIALS LEGEND

ST01:
a. STONE TYPE: LIMESTONE
b. STONE NAME: LEUDERS CHOPPED BUFF
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c. ANODIZED COLOR: DARK BRONZE
d. COATING COLOR: MATCH EXISTING
e. LOCATION: MULLIONS

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b. FINISH TYPE: HIGH-PERFORMANCE ORGANIC FLUOROPOLYMER
c. COATING COLOR: MATCH PT02
d. LOCATION: EXPOSED TRELLIS COLUMNS

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b. COATING COLOR: MATCH EXISTING ROOF, BERRIDGE PREWEATHERED GALVALUME
c. MATTE FINISH
d. LOCATION: STANDING SEAM METAL ROOF

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a. SPECIES AND CUT: WESTERN RED CEDAR
b. FINISH: CLEAR MATTE FINISH
c. LOCATION: WOOD BEAM CLADDING. EXTERIOR SOFFITS, INTERIOR CEILINGS AND TRIM.

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b. COLOR: NATURAL
c. AGGREGATE:
d. EXPOSED TEXTURE FINISH: [SMOOTH] [HONED] [SAND TEXTURE]
e. LOCATION: WAINSCOT SILL @ STONE, PARAPET CAP

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a. MATERIAL TYPE: PORTLAND CEMENT PLASTER
b. COLOR: MATCH SW 9111 ANTLER VELVET

PC01:
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PT01:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: GUTTERS AND DOWNSPOUTS

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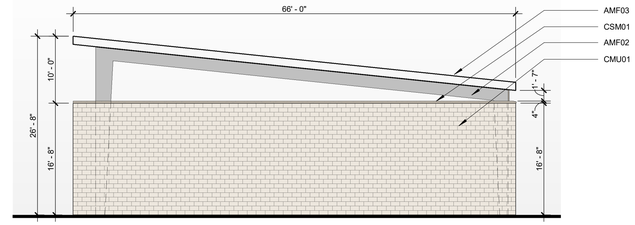
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS

GL02: INSULATING COATED GLASS - SPANDREL
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: SPANDREL 1/4" THICK GLASS WITH COATING ON NO.2 SURFACE.
3) AIR SPACE: 1/2"; ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS; 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E GLASS
COLOR: V908 GRAY

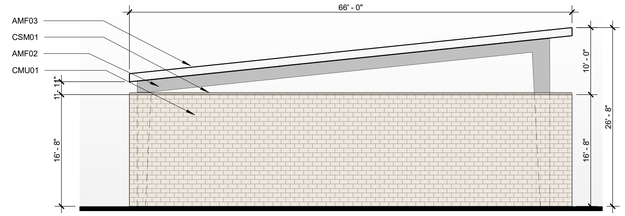
CMU01:
a. MANUFACTURER: FEATHERLITE
b. SPLIT FACE MASONRY BLOCK
c. COLOR: CREAM

Building "F" Elevation Material Calculations

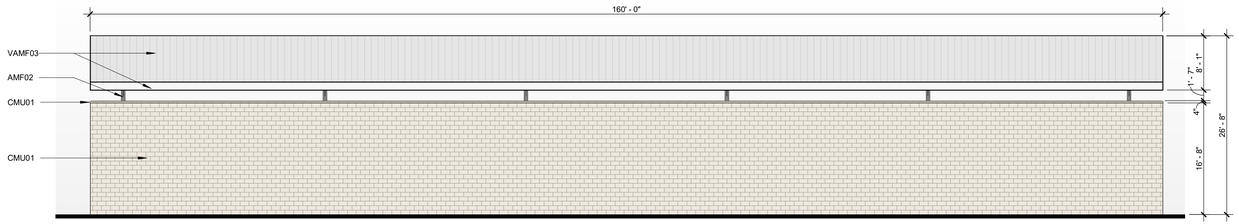
	MATERIAL	AMOUNT (SF)	AMOUNT (%)
NORTH			
	CMU SPLIT FACE (CMU01)	2667	100%
		2667	100%
SOUTH			
	CMU SPLIT FACE (CMU01)	22	100%
		22	100%
EAST			
	CMU SPLIT FACE (CMU01)	1090	100%
		1090	100%
WEST			
	CMU SPLIT FACE (CMU01)	1090	100%
		1090	100%



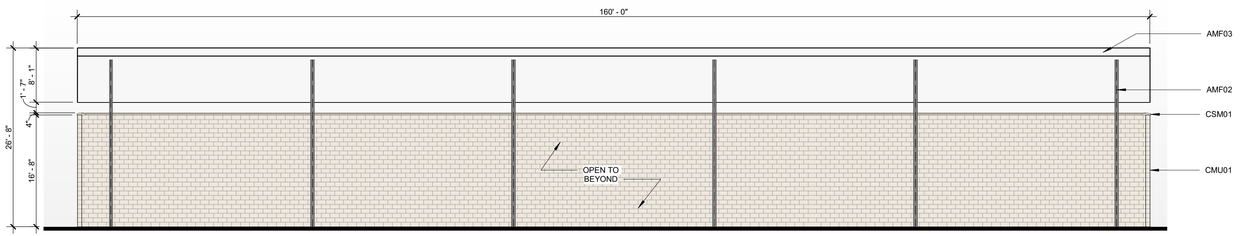
04 EXTERIOR ELEVATION - BUILDING F EAST
3/32" = 1'-0"



03 EXTERIOR ELEVATION - BUILDING F WEST
3/32" = 1'-0"



02 EXTERIOR ELEVATION - BUILDING F NORTH
3/32" = 1'-0"



01 EXTERIOR ELEVATION - BUILDING F SOUTH
3/32" = 1'-0"

APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ___ day of _____, ____.

WITNESS OUR HANDS, this ___ day of _____, ____.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1–4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
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STRUCTURAL ENGINEER
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MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
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OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

Rayburn Electric COOPERATIVE

INTERIM REVIEW ONLY
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Architect:
Arch. Reg. No.:
Date:

KEY PLAN

REVISION
NO. DESCRIPTION DATE

HKS PROJECT NUMBER
25370.000
DATE
11/01/2022
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
BLDG ELEVATIONS - F
CASE# SP2022-058
SHEET NO.
PA5.03

EXTERIOR MATERIALS LEGEND

ST01:
a. STONE TYPE: LIMESTONE
b. STONE NAME: LEUDERS CHOPPED BUFF
c. GROUT/SEALANT COLOR: MATCH EXISTING
d. LOCATION: EXTERIOR STONE MASONRY VENEER

AMF01:
a. MATERIAL TYPE: ALUMINIUM
b. FINISH TYPE: ANODIZED
c. ANODIZED COLOR: DARK BRONZE
d. COATING COLOR: MATCH EXISTING
e. LOCATION: MULLIONS

AMF02:
a. MATERIAL TYPE: STEEL
b. FINISH TYPE: HIGH-PERFORMANCE ORGANIC FLUOROPOLYMER
c. COATING COLOR: MATCH PT02
d. LOCATION: EXPOSED TRELLIS COLUMNS

AMF03:
a. MATERAL TYPE: STEEL
b. COATING COLOR: MATCH EXISTING ROOF, BERRIDGE PREWEATHERED GALVALUME
c. MATTE FINISH
d. LOCATION: STANDING SEAM METAL ROOF

WD01:
a. SPECIES AND CUT: WESTERN RED CEDAR
b. FINISH: CLEAR MATTE FINISH
c. LOCATION: WOOD BEAM CLADDING. EXTERIOR SOFFITS, INTERIOR CEILINGS AND TRIM.

CSM01:
a. MATERIAL TYPE: CAST STONE
b. COLOR: NATURAL
c. AGGREGATE:
d. EXPOSED TEXTURE FINISH: [SMOOTH] [HONED] [SAND TEXTURE]
e. LOCATION: WAINSCOT SILL @ STONE, PARAPET CAP

PCP01:
a. MATERIAL TYPE: PORTLAND CEMENT PLASTER
b. COLOR: MATCH SW 9111 ANTLER VELVET

PC01:
a. MATERIAL TYPE: TILT UP CONCRETE PANELS
b. COLOR: MATCH SW 9111 ANTLER VELVET

PT01:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: GUTTERS AND DOWNSPOUTS

PT02:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMIGLOSS
e. LOCATION: EXPOSED STRUCTURAL STEEL & ENTRY CANOPIES

GL01: INSULATING COATED GLASS - VISION
1) OVERALL THICKNESS: 1 IN NOMINAL
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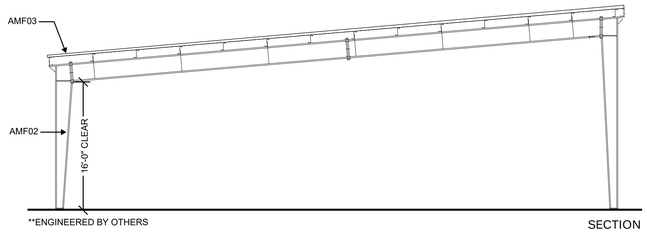
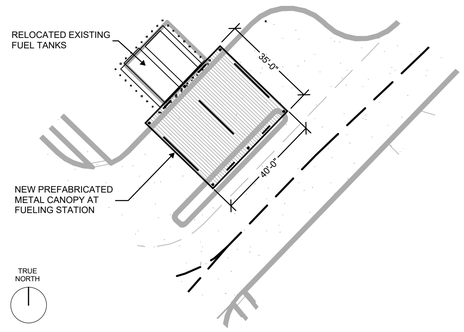
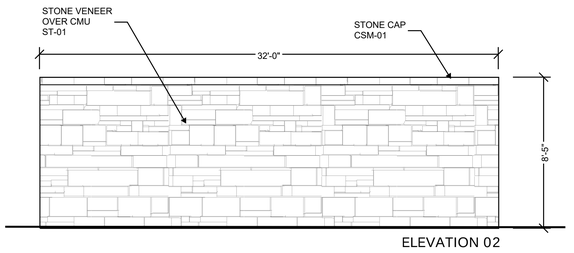
b. SPLIT FACE MASONRY BLOCK
c. COLOR: CREAM

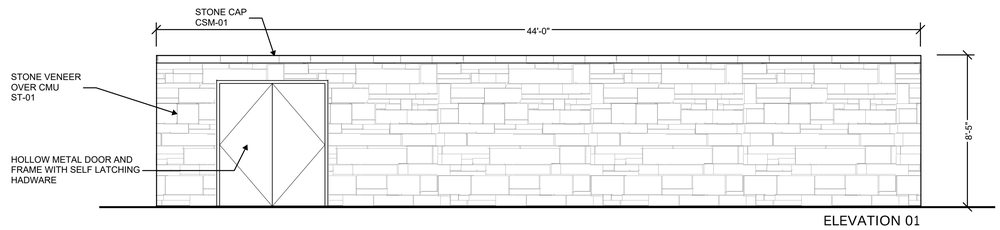




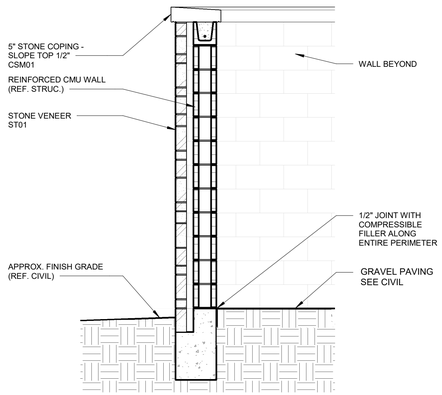
03 FUEL STATION CANOPY



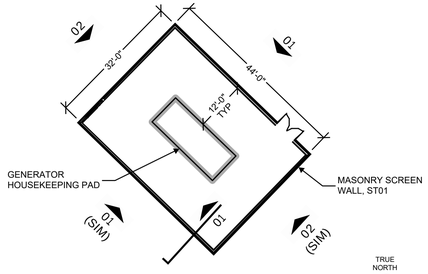
ELEVATION 02



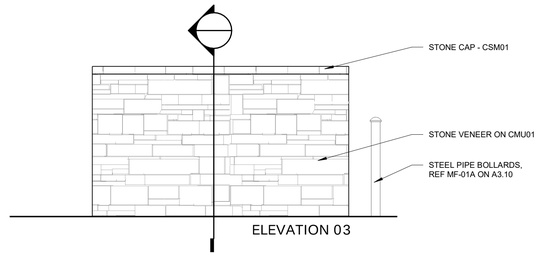
ELEVATION 01



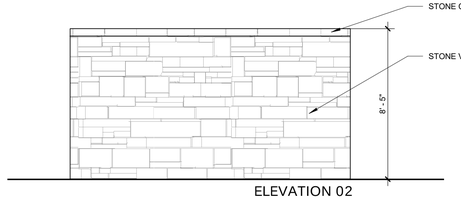
SECTION 01



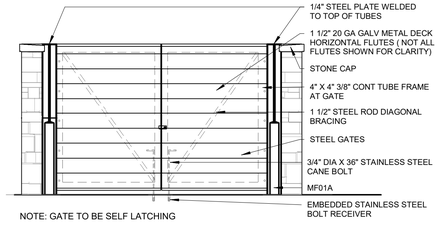
02 GENERATOR ENCLOSURE



ELEVATION 03

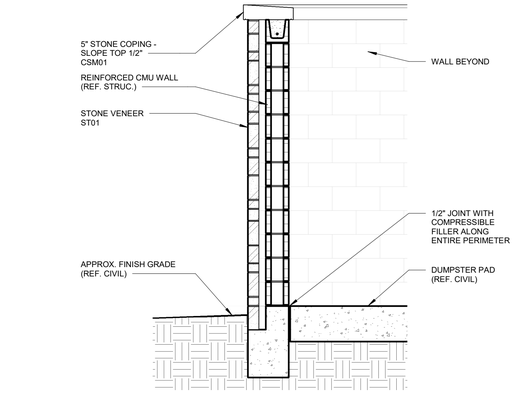


ELEVATION 02



NOTE: GATE TO BE SELF LATCHING

ELEVATION 01



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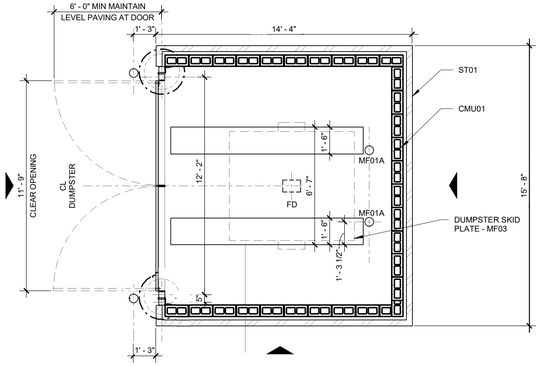
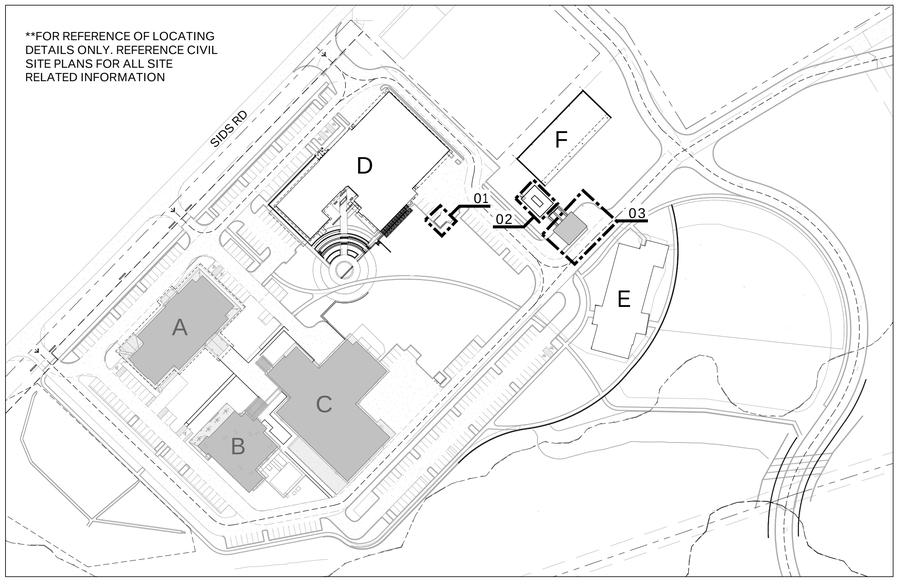


NOTE: PAVEMENT AT DUMPSTER PAD TO BE FLAT.

01 TRASH ENCLOSURE DETAILS



ACCESSORY SITE STRUCTURES - KEY PLAN

TRUE NORTH

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_____ Director of Planning and Zoning

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1–4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

HKS

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SUITE 100
DALLAS, TX 75201

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MEP ENGINEERS
SYSKA HENNESSY GROUP
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DALLAS, TX 75206

OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

Rayburn Electric COOPERATIVE

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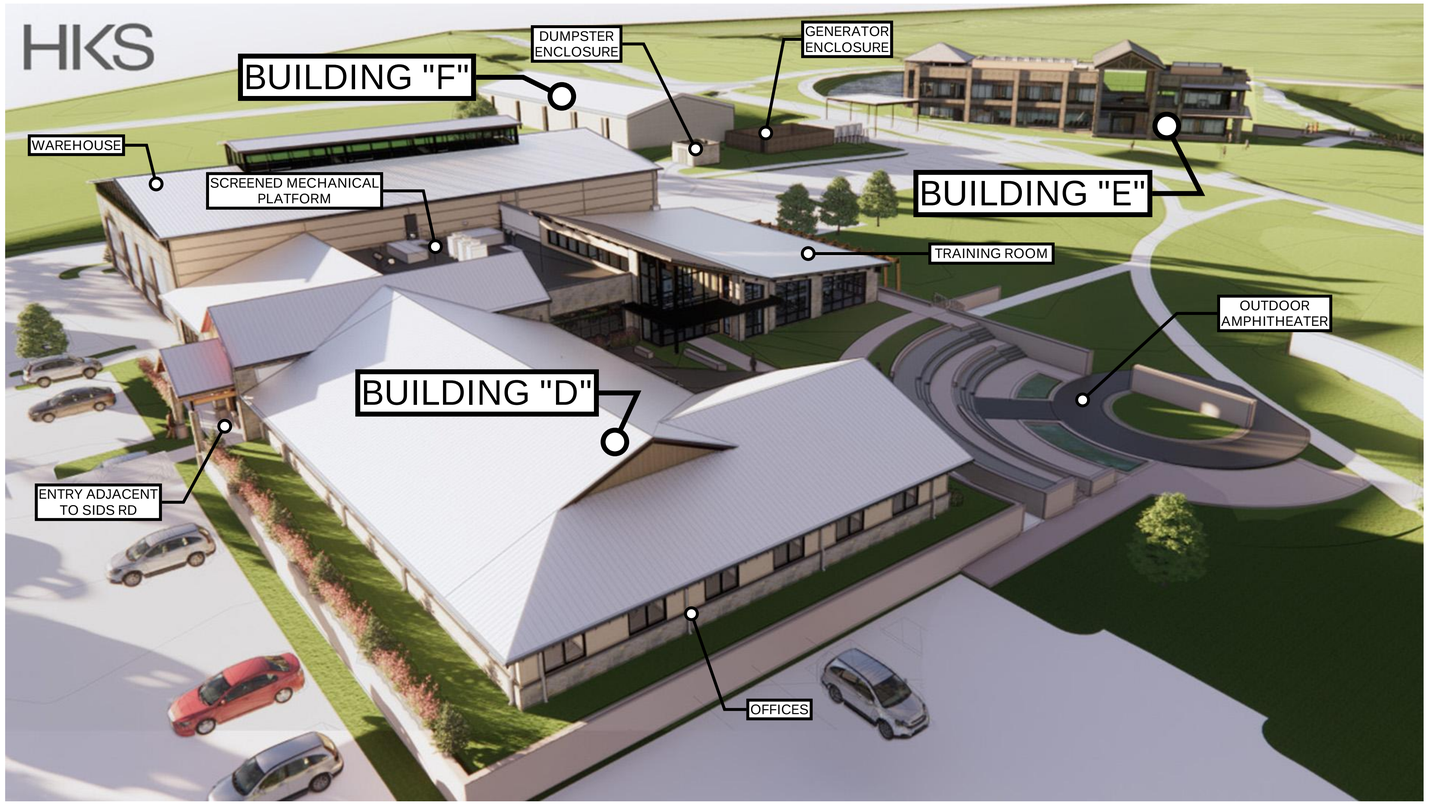
Architect:
Arch. Reg. No.:
Date:

KEY PLAN

REVISION
NO. DESCRIPTION DATE

HKS PROJECT NUMBER
25370.001
DATE
11/01/22
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
SITE DETAILS
CASE# SP2022-058
SHEET NO.
PA5.04



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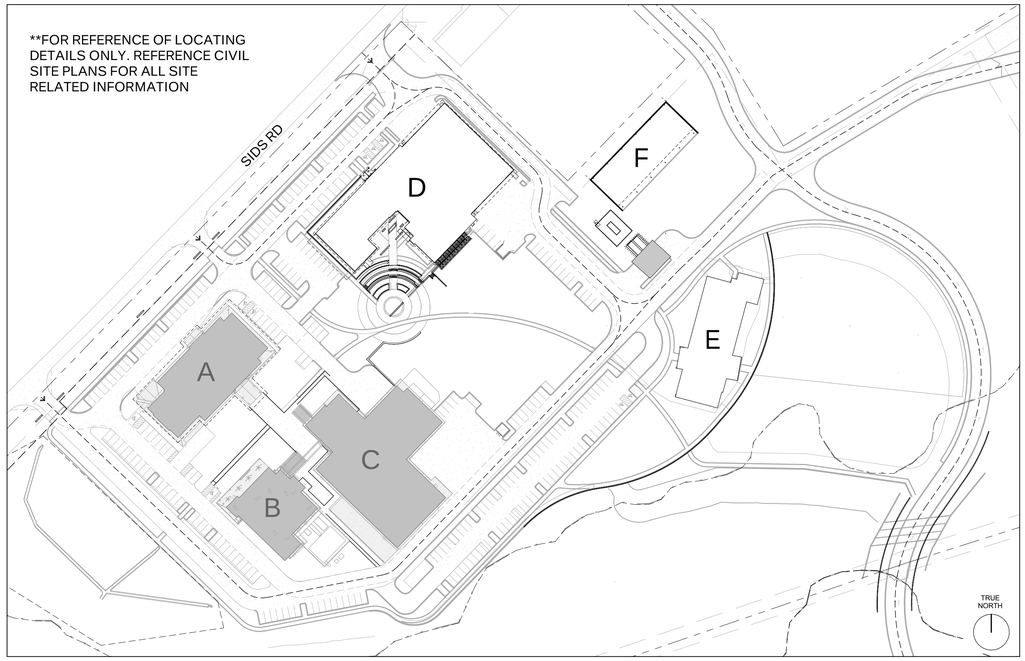
c. COLOR: CREAM

**FOR REFERENCE OF LOCATING DETAILS ONLY. REFERENCE CIVIL SITE PLANS FOR ALL SITE RELATED INFORMATION



KEY PLAN

APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ____ day of _____, _____.

WITNESS OUR HANDS, this ____ day of _____, _____.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1-4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
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DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

REC Rayburn Electric COOPERATIVE

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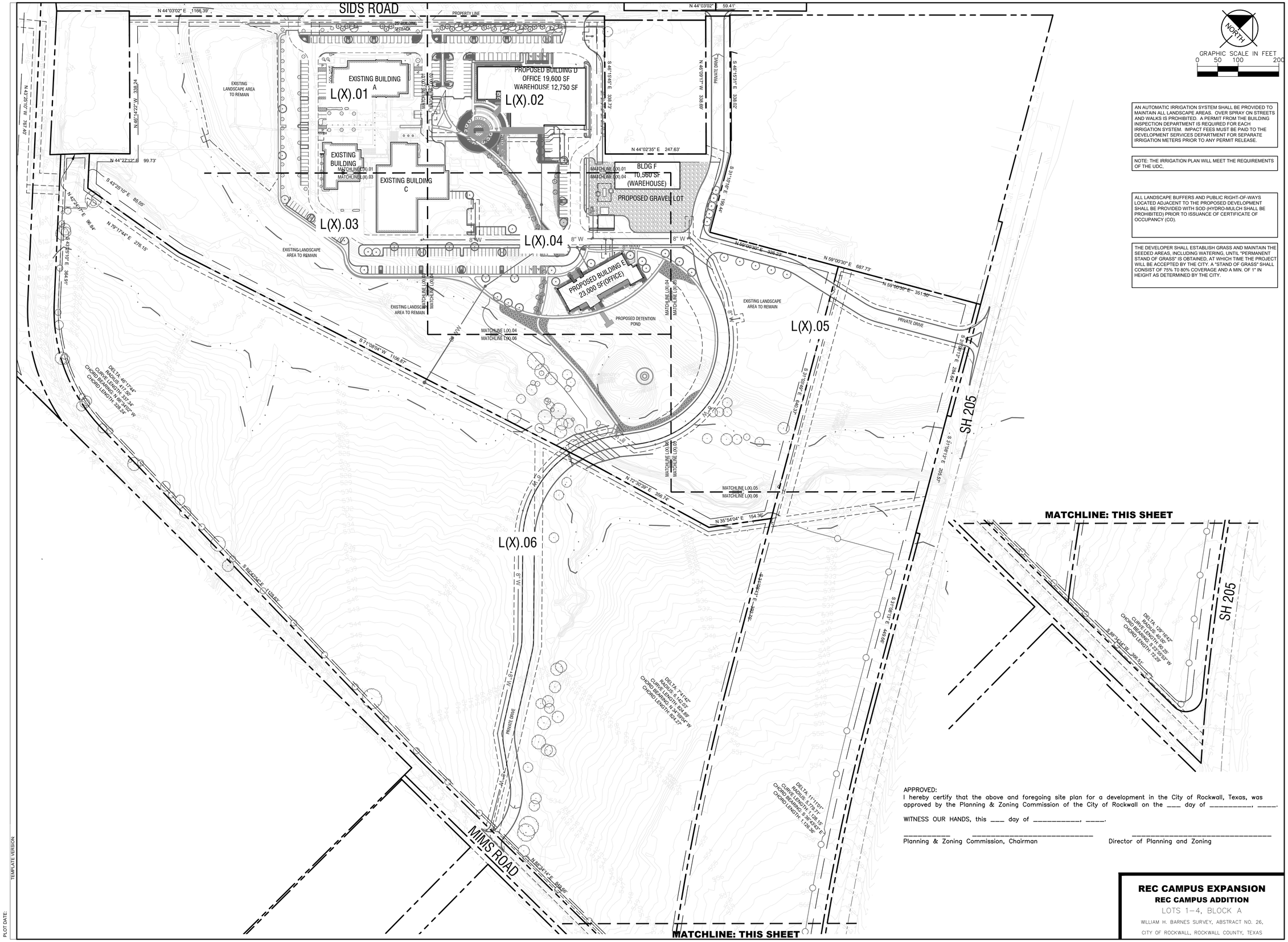
Date:

KEY PLAN

REVISION
NO. DESCRIPTION DATE

HKS PROJECT NUMBER
25370.001
DATE
11/01/22
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
3D IMAGES
CASE# SP2022-058
SHEET NO.
PA5.05



AN AUTOMATIC IRRIGATION SYSTEM SHALL BE PROVIDED TO MAINTAIN ALL LANDSCAPE AREAS. OVER SPRAY ON STREETS AND WALKS IS PROHIBITED. A PERMIT FROM THE BUILDING INSPECTION DEPARTMENT IS REQUIRED FOR EACH IRRIGATION SYSTEM. IMPACT FEES MUST BE PAID TO THE DEVELOPMENT SERVICES DEPARTMENT FOR SEPARATE IRRIGATION METERS PRIOR TO ANY PERMIT RELEASE.

NOTE: THE IRRIGATION PLAN WILL MEET THE REQUIREMENTS OF THE UDC.

ALL LANDSCAPE BUFFERS AND PUBLIC RIGHT-OF-WAYS LOCATED ADJACENT TO THE PROPOSED DEVELOPMENT SHALL BE PROVIDED WITH SOD (HYDRO-MULCH SHALL BE PROHIBITED) PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY (CO).

THE DEVELOPER SHALL ESTABLISH GRASS AND MAINTAIN THE SEEDED AREAS, INCLUDING WATERING, UNTIL "PERMANENT STAND OF GRASS" IS OBTAINED, AT WHICH TIME THE PROJECT WILL BE ACCEPTED BY THE CITY. A "STAND OF GRASS" SHALL CONSIST OF 75% TO 80% COVERAGE AND A MIN. OF 1" IN HEIGHT AS DETERMINED BY THE CITY.

MATCHLINE: THIS SHEET

APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ____ day of _____, _____.

WITNESS OUR HANDS, this ____ day of _____, _____.

_____ _____ _____
Planning & Zoning Commission, Chairman Director of Planning and Zoning

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1–4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

HKS

ARCHITECT
HKS, INC.
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ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

RayburnElectric COOPERATIVE

REGISTERED LANDSCAPE ARCHITECT
LANDON P. [illegible]
3480
STATE OF TEXAS

10/31/22

KEY PLAN

REVISION
NO. DESCRIPTION DATE

HKS PROJECT NUMBER
25370.000

DATE
10/31/22

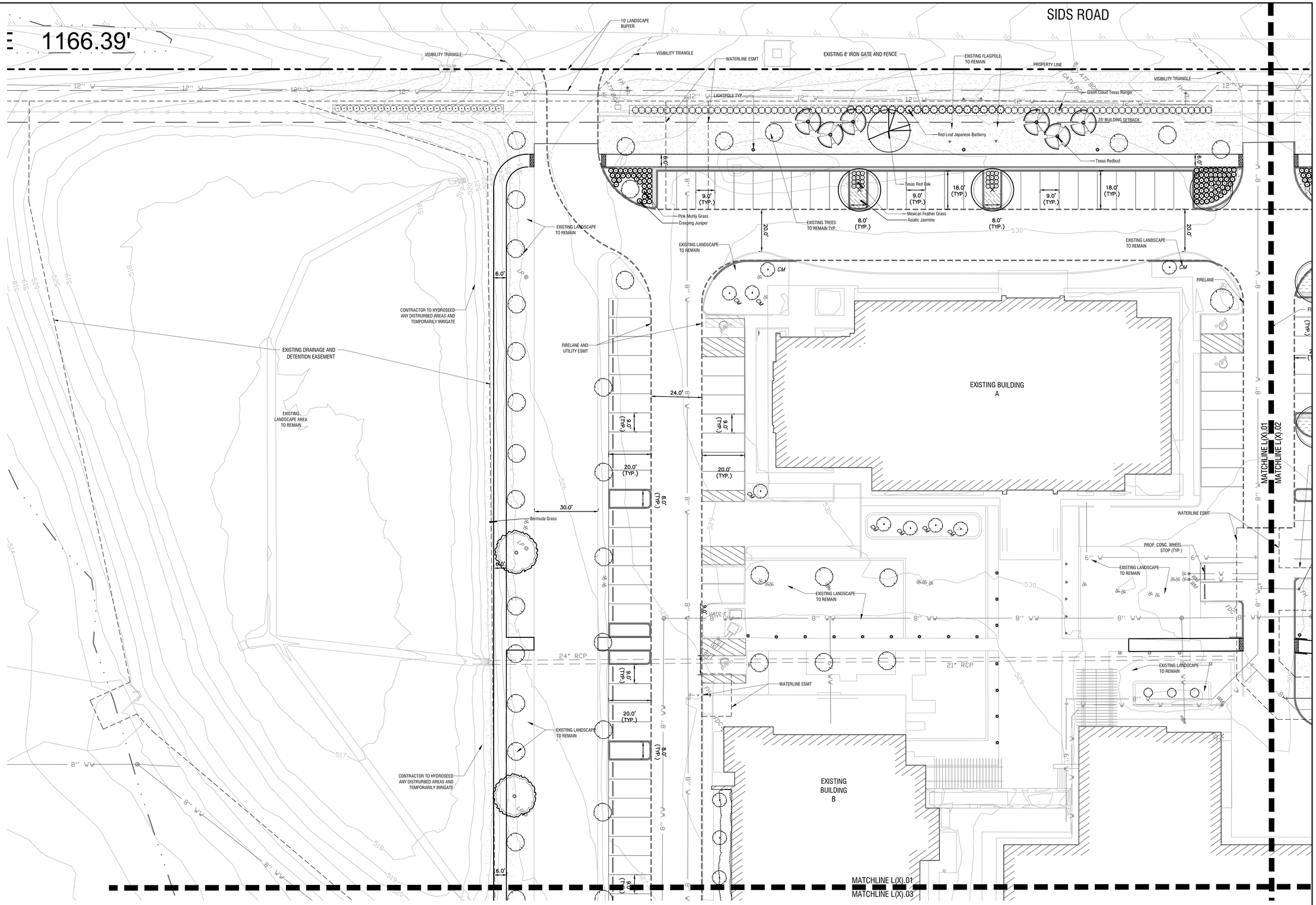
ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
OVERALL PLAN

CASE# SP2022-058

SHEET NO.
L1.01

PLOT DATE:
TEMPLATE VERSION:



NORTH

0' 20' 40'

Scale: 1" = 20'-0"

Landscape Plan

Scale: 1" = 20' - 0"

A

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_____
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REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1-4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

PLOT DATE:
TEMPLATE VERSION:

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

REC RayburnElectric COOPERATIVE

REGISTERED LANDSCAPE ARCHITECT
LANDON R. [illegible]
3480
STATE OF TEXAS

10/31/22

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000

DATE
10/31/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
LANDSCAPE PLAN

CASE# SP2022-058

SHEET NO.
L5.01

SIDS ROAD

S 46°15'45" E 338.73'

N 44°02'35" E 24

PROPOSED BUILDING D
OFFICE 19,600 SF
WAREHOUSE 12,750 SF

BLDG F
10,560 SF
(WAREHOUSE)

VISIBILITY TRIANGLE
EXISTING 8' IRON GATE AND FENCE
PROPOSED 8' IRON GATE AND FENCE
10' LANDSCAPE BUFFER
VISIBILITY TRIANGLE
VISIBILITY TRIANGLE
WATERLINE ESMT
FIRELANE
FIRELANE
20' BUILDING SETBACK
45.0'
139.8'
30.0'
80.0'
41.4'
6.0'
Texas Redbud
Texas Red Oak
Live Oak
DECOMPOSED GRANITE TYP.
18.0' (TYP.)
9.0' (TYP.)
8.0' (TYP.)
Purple Wintercreeper
Brakelights Red Yucca
Giant Liriope
Cedar Elm
24.0'
11.0'
Texas Sedge
Mahonia Soft Caress
Common Boxwood
Dwarf Yaupon
26.3'
6.0' (TYP.)
9.0' (TYP.)
20.0' (TYP.)
Duraheat River Birch Multi-Trunk
Giant Liriope
Autumn Sage
Dwarf Podocarpus
DECOMPOSED GRANITE TYP.
PROP. 20' WATER ESMT
Bermuda Grass
EXISTING POLE LIGHT TO BE RELOCATED
Dwarf Podocarpus
Brakelights Red Yucca
Pink Muhly Grass
Specimen Live Oak Tree
EXISTING POLE LIGHT TO BE RELOCATED
EX. COMM TOWER, GENERATOR, & CONTROL HOUSE
Dwarf Yaupon
Mahonia Soft Caress
Purple Wintercreeper
Texas Sedge
Giant Liriope
Lacebark Elm
Autumn Sage
Little Bluestem Grass
Lacebark Elm
11.0'
DUMPSTER ENCLOSURE BY OTHERS, REF. ARCH
Green Cloud Texas Ranger
Mexican Feather Grass
Brakelights Red Yucca
Purple Wintercreeper
Creeping Juniper
Mexican Feather Grass
MATCHLINE L(X).01
MATCHLINE L(X).02
MATCHLINE L(X).01
MATCHLINE L(X).04

NORTH
0' 20' 40'
Scale: 1" = 20'-0"

Landscape Plan
Scale: 1" = 20' - 0"

A

APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ____ day of _____, _____.

WITNESS OUR HANDS, this ____ day of _____, _____.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

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ROCKWALL, TX 75087

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GARLAND, TEXAS 75040

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10/31/22

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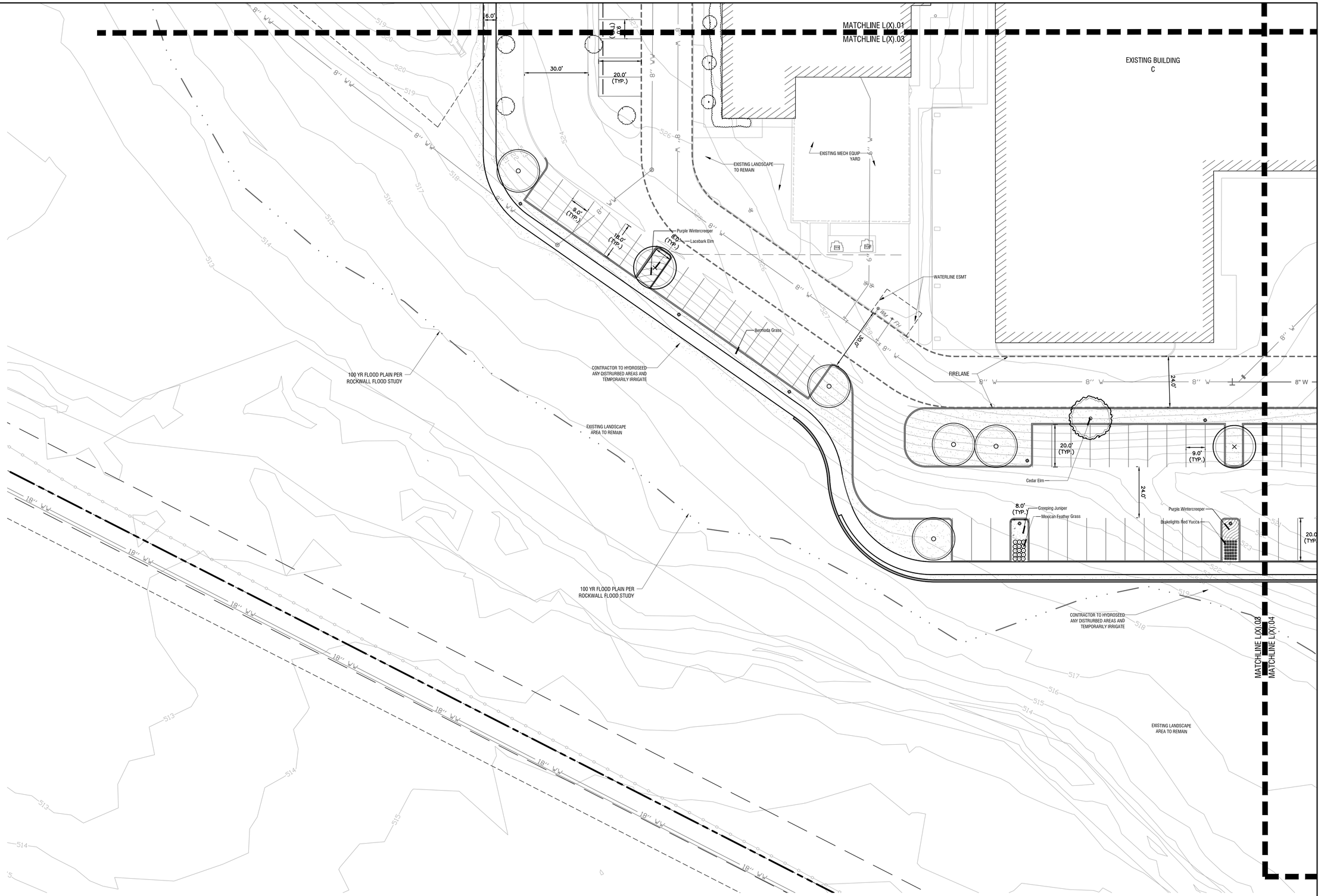
SHEET TITLE
LANDSCAPE PLAN

CASE# SP2022-058

SHEET NO.
L5.02



NORTH

0' 20' 40'

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Landscape Plan

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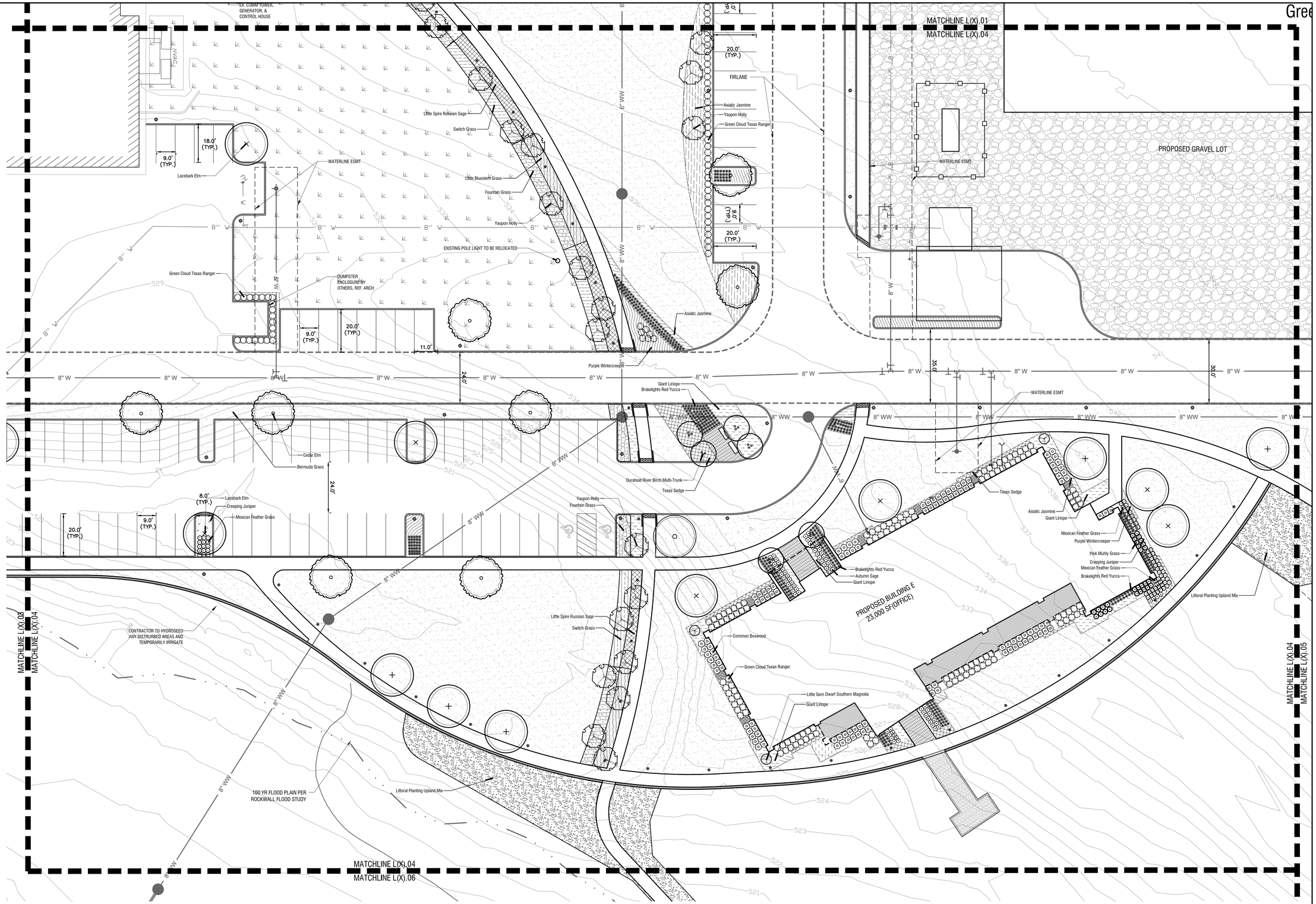
LANDSCAPE PLAN

CASE# SP2022-058

SHEET NO.
L5.03



Landscape Plan

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LAWSON P. [illegible]
3489
STATE OF TEXAS

10/31/22

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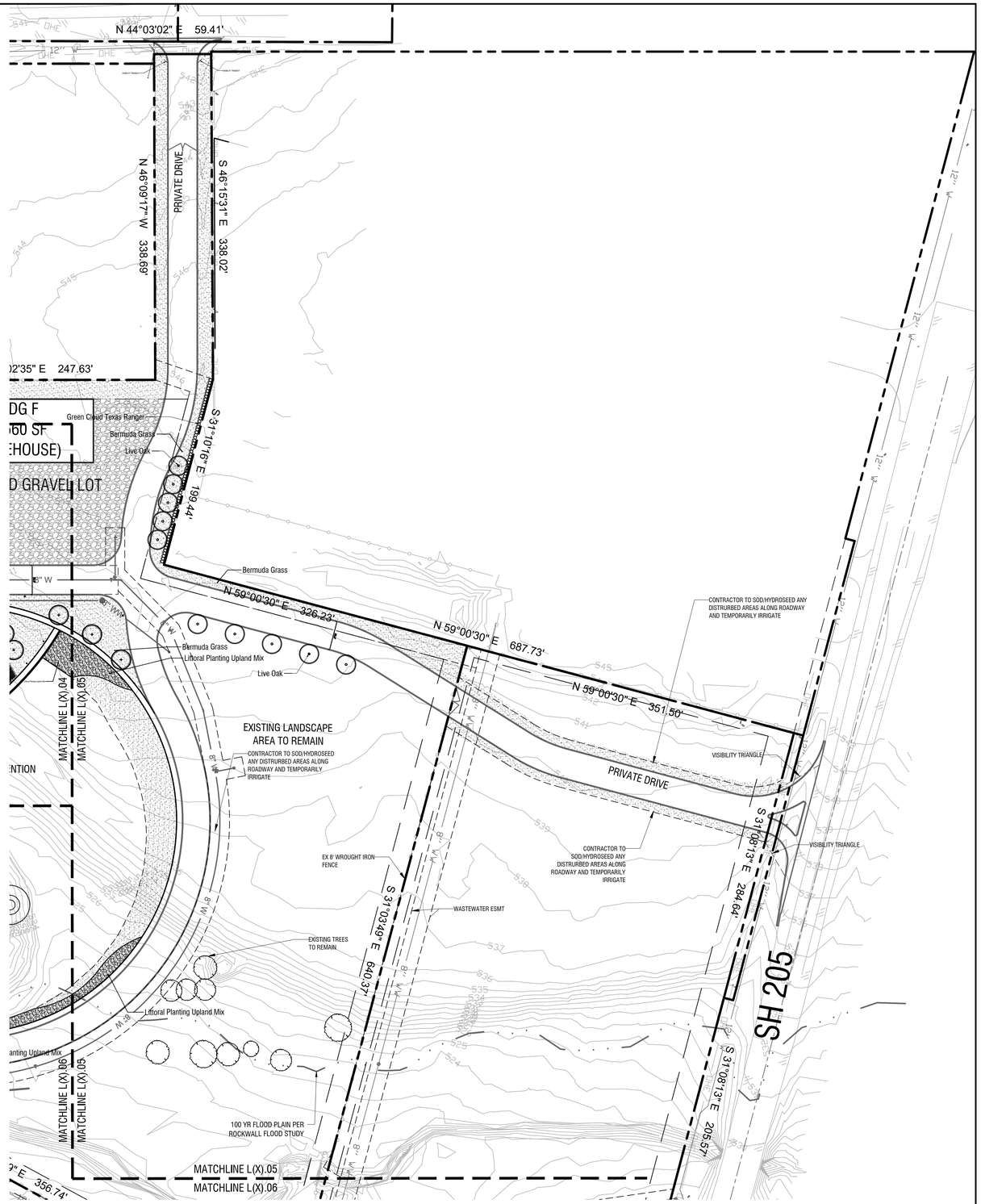
SHEET TITLE
LANDSCAPE PLAN

CASE# SP2022-058

SHEET NO.
L5.04



PLOT DATE:

TEMPLATE VERSION:

NORTH

0' 60' 120'

Scale: 1" = 60'-0"

Landscape Plan

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LAWSON P.
9480
STATE OF TEXAS

10/31/22

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LANDSCAPE PLAN

CASE# SP2022-058

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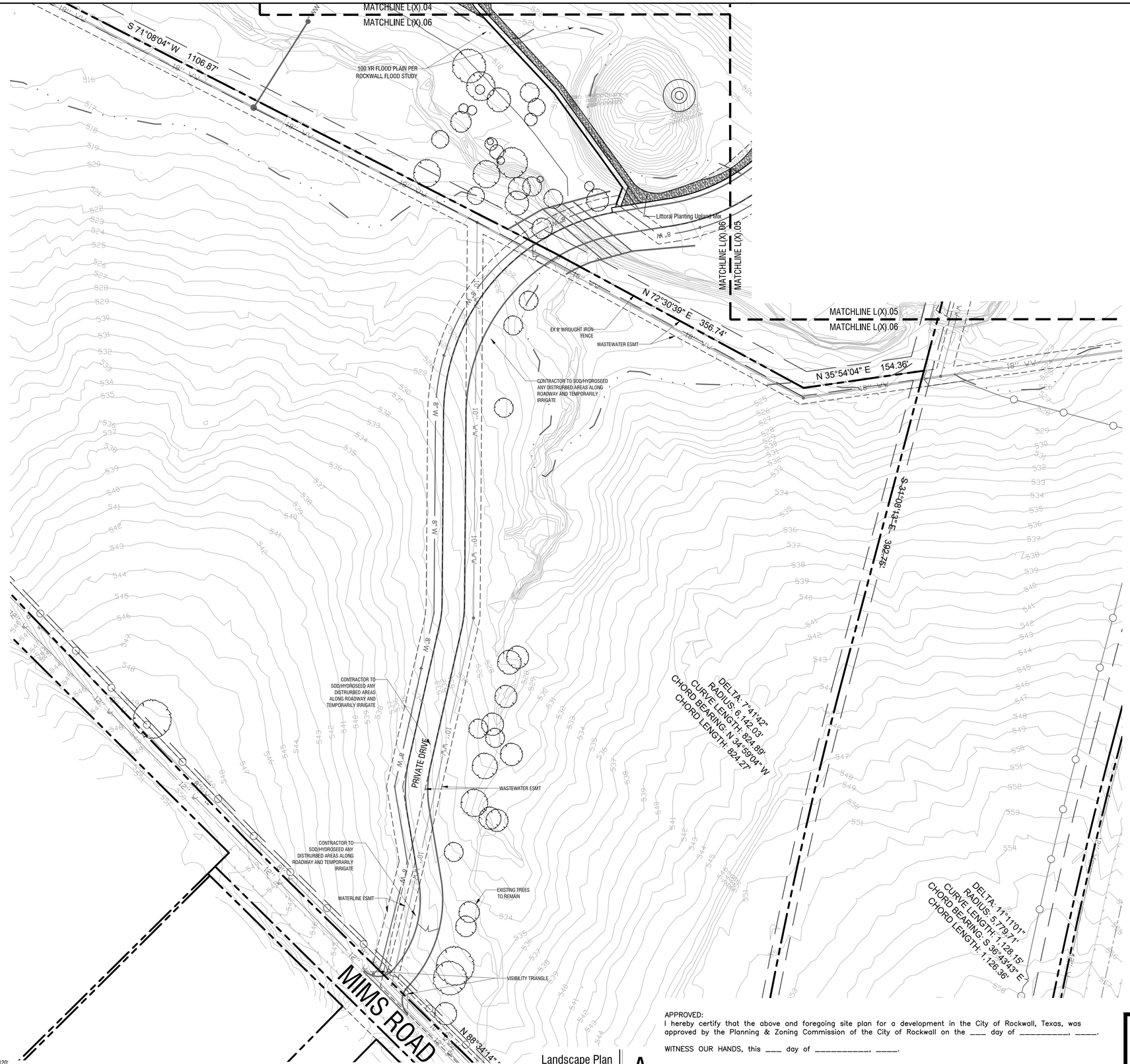

NORTH

0' 60' 120'

Scale: 1" = 60'-0"

Landscape Plan

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LANDON P. [illegible]
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SHEET TITLE
LANDSCAPE PLAN

CASE# SP2022-058

SHEET NO.
L5.06

PLANT SCHEDULE

TREES	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	QTY	REMARKS
	Cedar Elm / Ulmus crassifolia	4" cal	12``-14`	As Shown	13	B&B, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, STRONG CENTRAL LEADER
	Duraheat River Birch Multi-Trunk / Betula nigra `Duraheat`	65 gal	10``-12`` ht		18	CONTAINER, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, MULTI-TRUNK (3-5 TRUNKS)
	Lacebark Elm / Ulmus parvifolia	4" cal	14``-16`	As Shown	25	B&B, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, STRONG CENTRAL LEADER
	Live Oak / Quercus virginana	4" cal	12``-14`` ht	As Shown	22	B&B, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, STRONG CENTRAL LEADER
	Specimen Live Oak Tree / Quercus virginana	5" cal	18``-20`` ht.		8	B&B, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, MULTI-TRUNK (3-5 TRUNKS)
	Texas Red Oak / Quercus texana	5" cal	16``-18`	As Shown	9	B&B, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, STRONG CENTRAL LEADER

ORNAMENTAL TREES	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	QTY	REMARKS
	Little Gem Dwarf Southern Magnolia / Magnolia grandiflora 'Little Gem'	65 gal	8``-10`` ht	As Shown	3	CONTAINER, NURSERY GROWN, MATCHED, FULL TO BASE, WELL-BRANCHED, STRONG CENTRAL LEADER
	Texas Redbud / Cercis canadensis texensis	45 gal	8``-10``	As Shown	16	CONTAINER, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED
	Yaupon Holly / Ilex vomitoria	45 Gal.	8``-10``	As Shown	22	CONTAINER, NURSERY GROWN, MATCHED, FULL, WELL-BRANCHED, MULTI-TRUNK (3 MIN.), TREE FORM

SHRUBS	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	QTY	REMARKS
	Autumn Sage / Salvia greggii	5 gal	12" h X 18" w	24" OC	205	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Brakelights Red Yucca / Hesperaloe parviflora `Brakelights` TM	5 gal	12" h X 12" w	18" OC	1,237	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Common Boxwood / Buxus sempervirens	5 gal	24" h x 24" w	36" OC	262	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Dwarf Podocarpus / Podocarpus macrophyllus `Pringles`	5 gal	24" h x 18" w	24" OC	257	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Dwarf Yaupon / Ilex vomitoria `Nana`	5 gal	24" h x 24" w	36" OC	102	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Green Cloud Texas Ranger / Leucophyllum frutescens `Green Cloud` TM	7 gal	36" h X 30" w	36" OC	490	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Mahonia Soft Caress / Mahonia eurybracteata `Soft Caress`	5 gal	18" h X 18" w	24" OC	125	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Mexican Feather Grass / Nassella tenuissima	5 gal	12" h X 12" w	24" OC	212	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Pink Muhly Grass / Muhlenbergia capillaris	5 gal	18" h X 18" w	30" OC	729	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Red Leaf Japanese Barberry / Berberis thunbergii 'Atropurpurea'	7 gal	36" h X 30" w	36" OC	49	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED

SHRUB AREAS	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	SPACING	QTY	REMARKS
	Littoral Planting Upland Mix	SEED				10,491 sf	
	Fountain Grass / Cenchrus advena	3 gal	12" Ht. x 12" W	24" OC	24" o.c.	305	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Little Spire Russian Sage / Perovskia atriplicifolia 'Little Spire'	1 gal	12" Ht. x 12" W	24" O.C.	24" o.c.	263	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Switch Grass / Panicum virgatum	3 gal	18" Ht. 12" Spr.	36" O.C.	36" o.c.	117	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED

GROUND COVERS	COMMON / BOTANICAL NAME	CONT.	SIZE	SPACING	QTY	
	Hydroseed	HYDROMULCH			27,926 sf	REFER TO SPECIFICATIONS
	Asiatic Jasmine / Trachelospermum asiaticum	1 gal	8"h x 8"w	18" o.c.	1,022	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Bermuda Grass / Cynodon dactylon	sod			137,859 sf	REFER TO SPECIFICATIONS
	Creeping Juniper / Juniperus horizontalis	1 gal	8"h x 8"w	18" o.c.	272	
	Giant Liriope / Liriope gigantea	1 gal	12" h x 12" w	18" o.c.	1,130	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Little Bluestem Grass / Schizachyrium scoparium	3 gal	24" h x 18" w	24" o.c.	195	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Purple Wintercreeper / Euonymus fortunei 'Coloratus'	1 gal	8"h x 8"w	18" o.c.	1,482	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED
	Texas Sedge / Carex texensis	1 gal	12" h x 12" w	18" o.c.	1,072	CONTAINER, NURSERY GROWN, MATCHED AND WELL ROOTED

NOTE: PLANT QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. IN THE CASE OF A DISCREPANCY, THE DRAWING SHALL TAKE PRECEDENCE.

NOTE: PLANTS ARE SPECIFIED BY HEIGHT, SPREAD AND CONTAINER SIZE. ALL PLANTINGS ARE EXPECTED TO MEET ALL SPECIFICATIONS PROVIDED.

PLOT DATE:

TEMPLATE VERSION:

Rayburn Co-Op - Rockwall Code Calculations Chart		
Site Data	**AC**	**SF**
Total Site Area	31.38	1,366,902
Surface Parking Spaces	271	
Site Landscape Area	**Required (% / SF)**	**Provided (% / SF)**
15% of site to be landscaped (Heavy Commercial zoning district)*	15%	16%
**Developed area only*	205,035	214,086
Street Frontage	**Required**	**Provided**
Sids Road - 832 LF(773 LF Frontage + 59.41 LF of Drive connection)		
10' Buffer	YES	YES
1 Canopy Tree/ 50 LF (Min. 4" Cal.)	17	17 (8 Existing)
1 Accent Tree/ 50LF (4' ht. Min.)	17	17
Continuous row of shrubs (min. 36" ht.- 3 Gal.)	YES	YES*
SH 205 - Drive connection 200LF		
1 Canopy Tree/ 50 LF (Min. 4" Cal.)	N/A	N/A
Mims Road - Drive connection 78 LF		
1 Canopy Tree/ 50 LF (Min. 4" Cal.)	N/A	N/A
*36" tall shrubs provided in lieu of berm and 5" cal. trees		
Parking Lot	**Required**	**Provided**
1 Large Canopy Tree/ 10 parking spaces	27	35
One tree within 80' of each parking space	YES	YES
Headlight Screening (min. 2' ht. berm with evergreen shrubs)	YES	YES
Total Trees	**Required**	**Provided**
Total Canopy Trees		95
Total Trees Existing (within parking areas)		36
Total Trees (Canopy Trees only)		131

EXISTING SITE PARKING DATA

PUBLIC SPACES	ACCESSIBLE SPACES	TOTAL
125	5	130

PROPOSED SITE PARKING DATA

PUBLIC SPACES	ACCESSIBLE SPACES	TOTAL
262	9	271

SITE INFORMATION:

EXISTING ZONING: HEAVY COMMERCIAL (HC), COMMERCIAL (C), & AGRICULTURAL (AG)

PROPOSED ZONING: NO CHANGE

PROPOSED USE: EXPANSION OF EXISTING SITE TO INCLUDE 2 NEW OFFICE BUILDINGS, TRUCK WAREHOUSE, AND LAYDOWN STORAGE WAREHOUSE

TOTAL AREA LOT 1: 1,366,902 SQ FT 31.38 AC
TOTAL AREA LOTS 1–4: 4,146,392 SQ FT 95.19 AC

LOT 1 "HC" ZONING

MAXIMUM BUILDING HEIGHT: 60 FT
MAXIMUM LOT COVERAGE: 60%
MAXIMUM FLOOR AREA RATIO: 4:1
MAXIMUM IMPERVIOUS PARKING: 90–95%

PROPOSED MAX. BUILDING D HEIGHT: 40'
PROPOSED MAX. BUILDING E HEIGHT: 46'–4"
PROPOSED MAX. BUILDING F HEIGHT: 26'–8"
PROPOSED LOT COVERAGE: 106,281/1,366,902 = 7.8%
PROPOSED FLOOR AREA RATIO: 113,260/1,366,902 = 0.08:1
PROPOSED IMPERVIOUS PARKING: 69,510/1,366,902 = 5.1%

EXISTING PARKING:
EXISTING WAREHOUSE 23,520 SQ FT (1:1000) = 24 SPACES
EXISTING OFFICE 31,530 SQ FT (1:300) = 106 SPACES
REMOVED OFFICE 7,700 SQ FT (1:300) = –26 SPACES

EXISTING REQUIRED PARKING = 104 SPACES

REQUIRED PARKING:
PROPOSED WAREHOUSE D 12,750 SQ FT (1:1000) = 13 SPACES
PROPOSED OFFICE D 19,600 SQ FT (1:300) = 66 SPACES
PROPOSED OFFICE E 23,000 SQ FT (1:300) = 77 SPACES
PROPOSED WAREHOUSE F 10,560 SQ FT (1:1000) = 11 SPACES

TOTAL REQUIRED PARKING = 271 SPACES
TOTAL PROVIDED PARKING = 271 SPACES

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CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

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950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

REC RayburnElectric COOPERATIVE

REGISTERED LANDSCAPE ARCHITECT — LANDON R. — 9480 — STATE OF TEXAS

10/31/22

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000

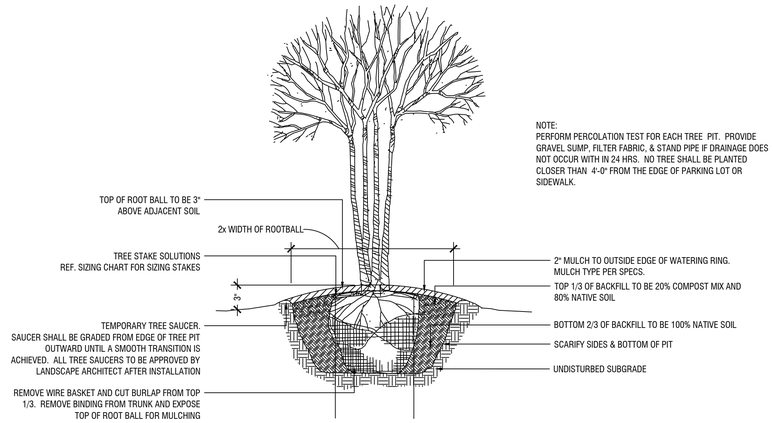
DATE
10/31/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
PLANTING SCHEDULE

CASE# SP2022-058

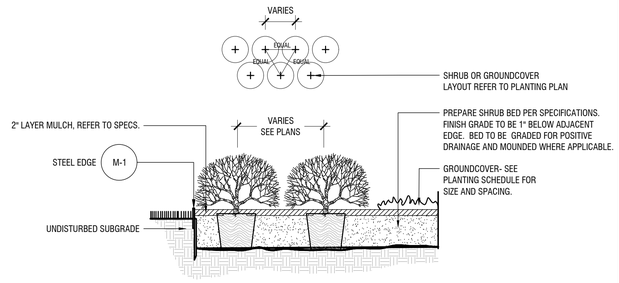
SHEET NO.
L5.07



NOTE:
PERFORM PERCOLATION TEST FOR EACH TREE PIT. PROVIDE GRAVEL SUMP, FILTER FABRIC, & STAND PIPE IF DRAINAGE DOES NOT OCCUR WITH IN 24 HRS. NO TREE SHALL BE PLANTED CLOSER THAN 4'-0" FROM THE EDGE OF PARKING LOT OR SIDEWALK.

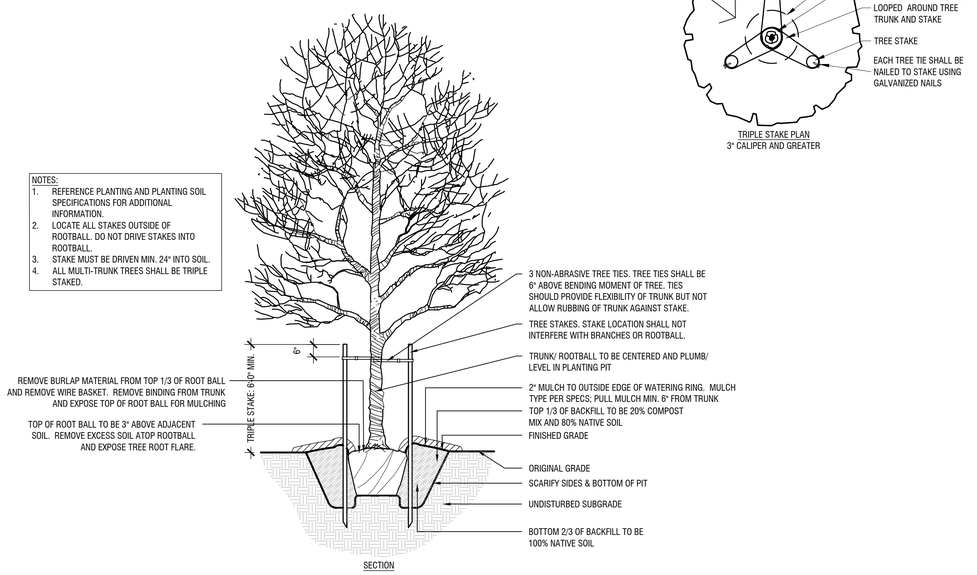
Multi-trunk / Ornamental Tree — B

Scale: 1/2" = 1'-0"



Shrubs & Groundcover — D

Scale: 1/2" = 1'-0"



Canopy Tree (Above Grade Stakes) — A

Scale: 1/2"=1'-0"

APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ___ day of _____, ____.

WITNESS OUR HANDS, this ___ day of _____, ____.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1–4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

PLOT DATE:
TEMPLATE VERSION:

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

Rayburn Electric COOPERATIVE

REGISTERED LANDSCAPE ARCHITECT — LANDON — 3480 — STATE OF TEXAS

10/31/22

KEY PLAN

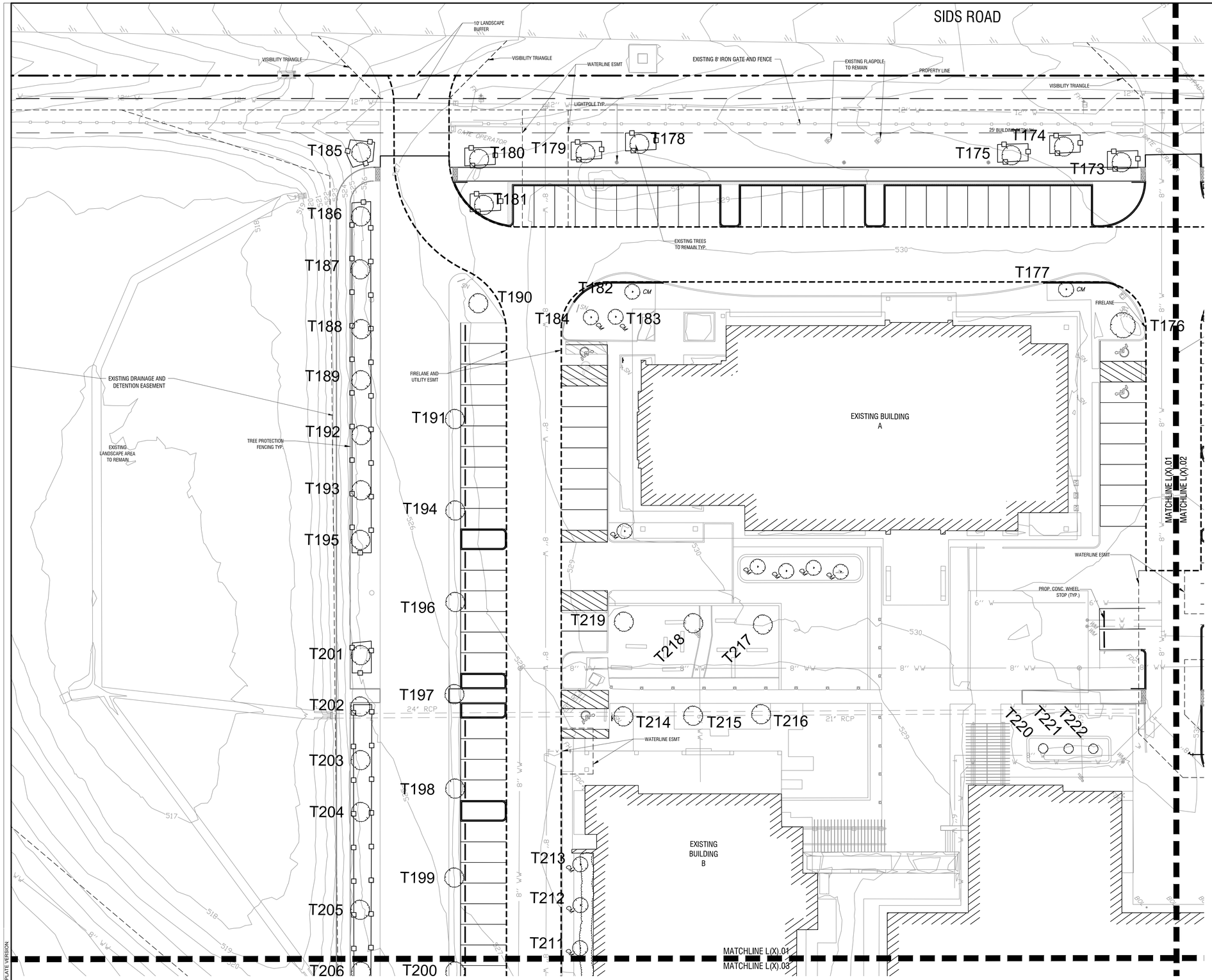
REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000
DATE
10/31/22
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
PLANTING DETAILS

CASE# SP2022-058

SHEET NO.
L5.08



NORTH Scale: 1" = 20'-0"

Treescape Plan

Scale: 1" = 20' - 0"

A

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_____ Director of Planning and Zoning

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1-4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

LEGEND

T40 EXISTING TREE TAG NUMBER

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED

TREE PROTECTION FENCING

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

Rayburn Electric COOPERATIVE

REGISTERED LANDSCAPE ARCHITECT
LANDON R. [illegible]
3480
STATE OF TEXAS

10/31/22

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000

DATE
10/31/22

ISSUE
CITY SITE PLAN SUBMITTAL

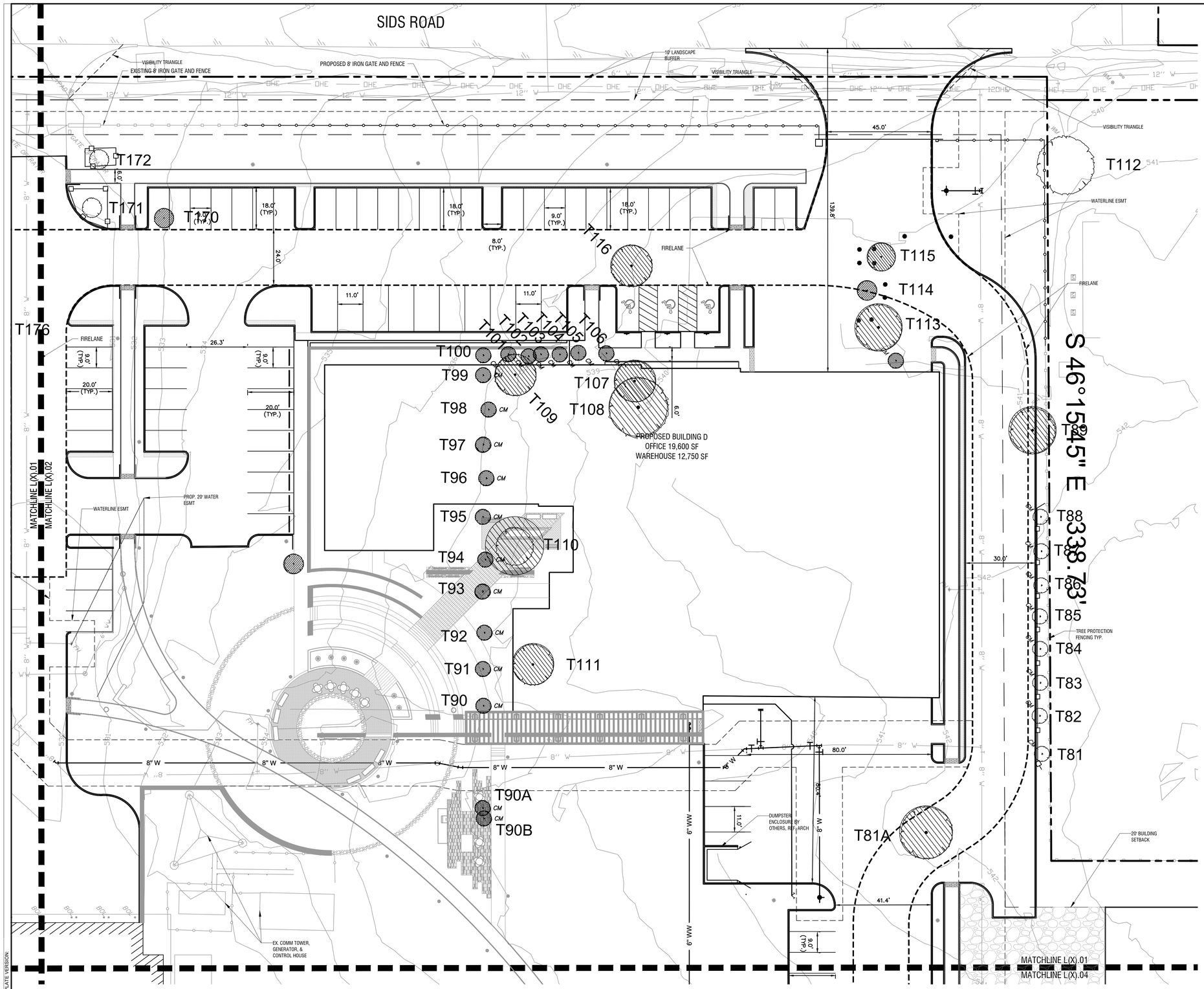
SHEET TITLE
TREESCAPE PLAN

CASE# SP2022-058

SHEET NO.
L7.01

TEMPLATE VERSION:

PLOT DATE:



LEGEND

- T40 — EXISTING TREE TAG NUMBER
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCING

NORTH Scale: 1" = 20'-0" (0', 20', 40')

Treescape Plan

Scale: 1" = 20' - 0"

A

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WITNESS OUR HANDS, this ____ day of _____, _____.

_____
Planning & Zoning Commission, Chairman

_____
Director of Planning and Zoning

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1-4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

PLOT DATE:
TEMPLATE VERSION:

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ARCHITECT
HKS, INC.
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SUITE 100
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LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

Rayburn Electric COOPERATIVE

REGISTERED LANDSCAPE ARCHITECT — LANCON PAUL — 3489 — STATE OF TEXAS

10/31/22

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000

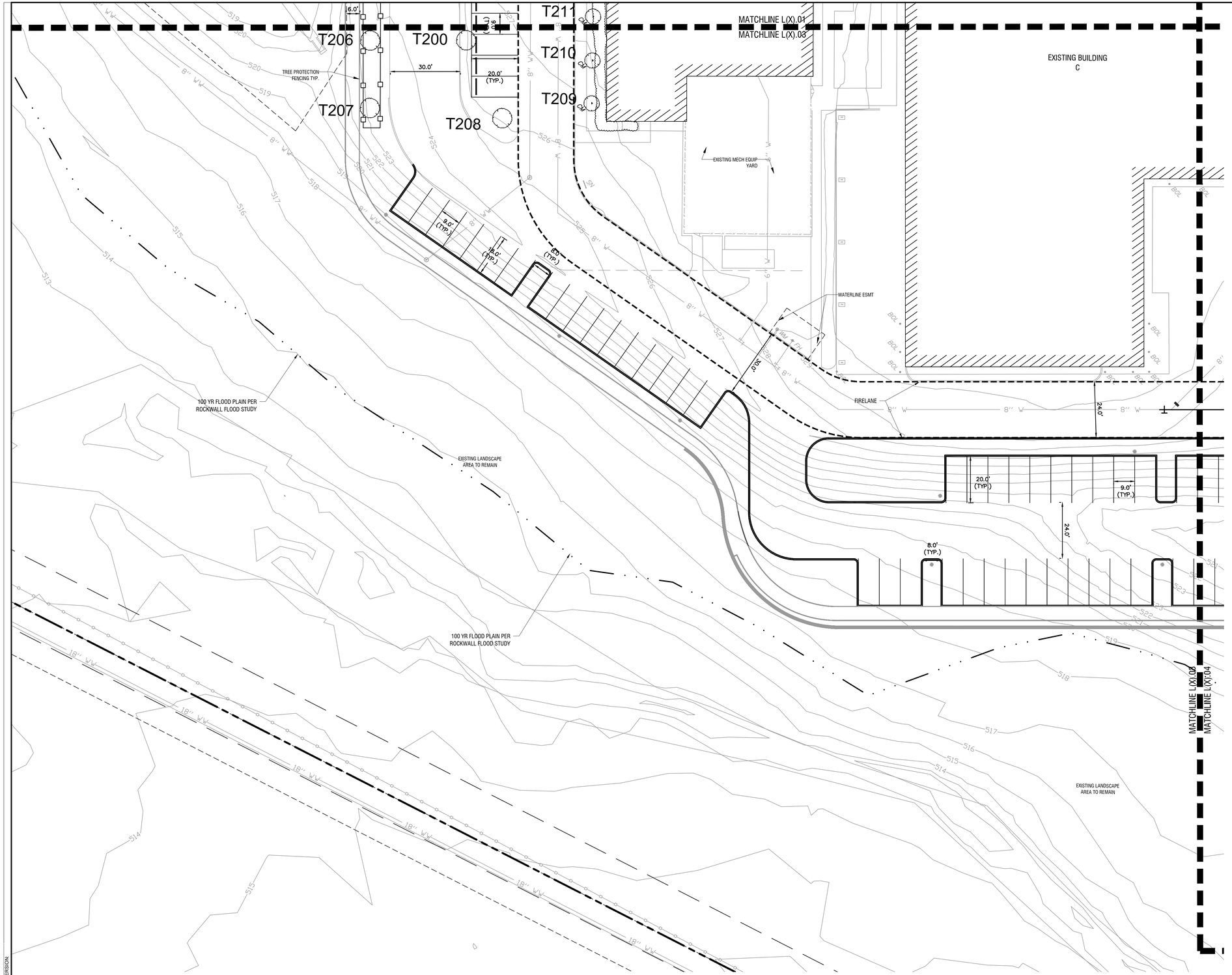
DATE
10/31/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
TREESCAPE PLAN

CASE# SP2022-058

SHEET NO.
L7.02



LEGEND

- T40 — EXISTING TREE TAG NUMBER
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCING

NORTH Scale: 1" = 20'-0" (0', 20', 40')

Treescape Plan
Scale: 1" = 20' - 0"

A

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_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1–4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

PLOT DATE:
TEMPLATE VERSION:

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

REC RayburnElectric COOPERATIVE

REGISTERED LANDSCAPE ARCHITECT — JASON P. [illegible] — 3480 — STATE OF TEXAS

10/31/22

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000

DATE
10/31/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
TREESCAPE PLAN

CASE# SP2022-058

SHEET NO.
L7.03

CONTROL HOUSE

MATCHLINE L(X).01
MATCHLINE L(X).04

LEGEND

T40 EXISTING TREE TAG NUMBER

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED

TREE PROTECTION FENCING

20.0' (TYP.)

FIRLANE

9.0' (TYP.)

18.0' (TYP.)

WATERLINE ESMT

DUMPSTER ENCLOSURE BY OTHERS, REF. ARCH

11.0'

24.0'

35.0'

32.0'

8.0' (TYP.)

PROPOSED BUILDING E
23,000 SF(OFFICE)

100 YR FLOOD PLAIN PER ROCKWALL FLOOD STUDY

MATCHLINE L(X).04
MATCHLINE L(X).06

MATCHLINE L(X).03
MATCHLINE L(X).04

MATCHLINE L(X).04
MATCHLINE L(X).05

T67 T68 T69

NORTH Scale: 1" = 20'-0"

Treescape Plan

Scale: 1" = 20' - 0"

A

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_____
Planning & Zoning Commission, Chairman

_____
Director of Planning and Zoning

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1–4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

PLOT DATE:

TEMPLATE VERSION:

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

Rayburn Electric COOPERATIVE

REGISTERED LANDSCAPE ARCHITECT
LANCON PAUL
3489
STATE OF TEXAS

10/31/22

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000

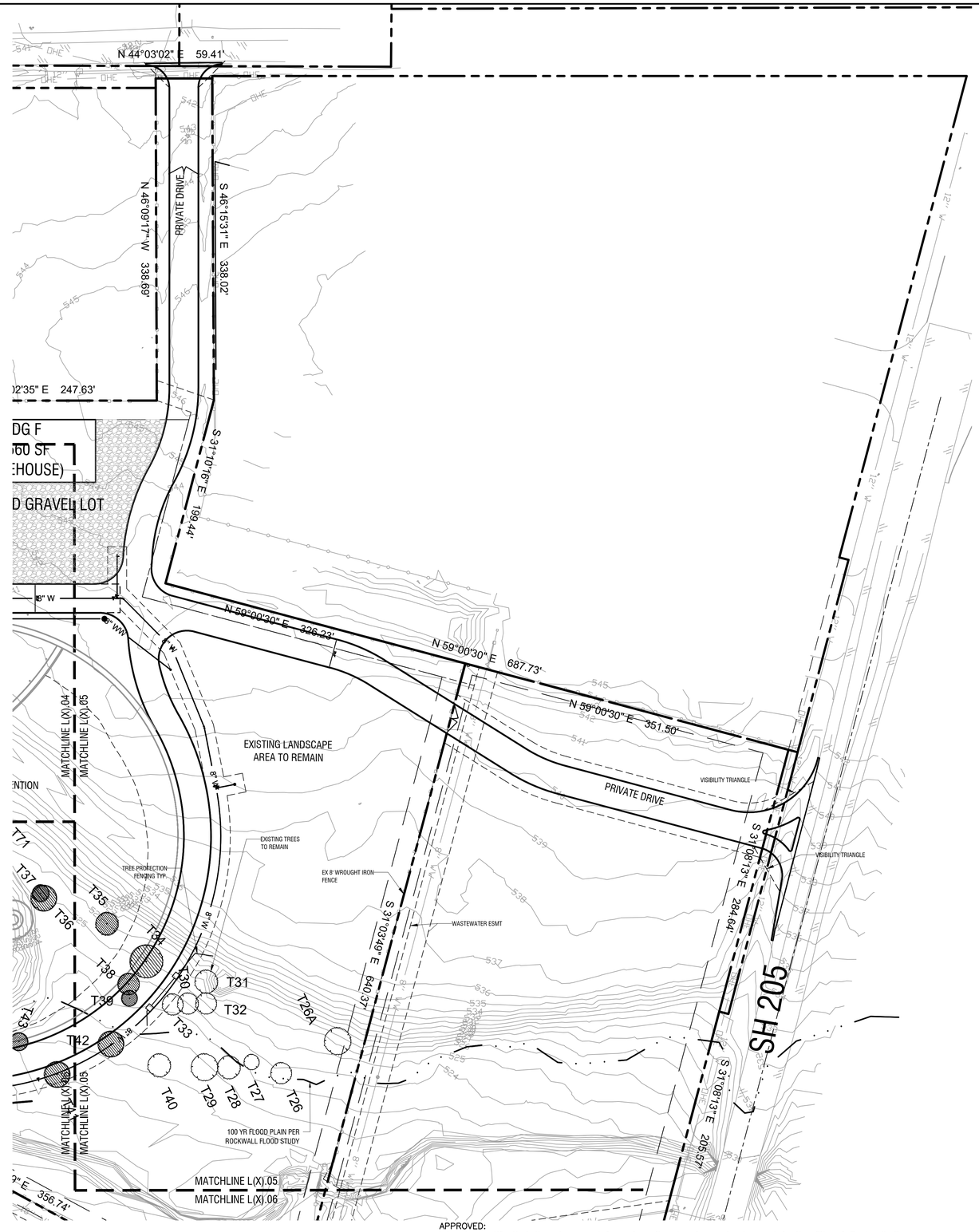
DATE
10/31/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
TREESCAPE PLAN

CASE# SP2022-058

SHEET NO.
L7.04



LEGEND

T40 EXISTING TREE TAG NUMBER

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED

TREE PROTECTION FENCING

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_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

NORTH

0' 60' 120'

Scale: 1" = 60'-0"

Landscape Plan

Scale: 1" = 60' - 0"

A

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1-4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

PLOT DATE:

TEMPLATE VERSION:

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KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

Rayburn Electric COOPERATIVE

REGISTERED LANDSCAPE ARCHITECT
LANSON P. LOWE
3489
STATE OF TEXAS

10/31/22

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000

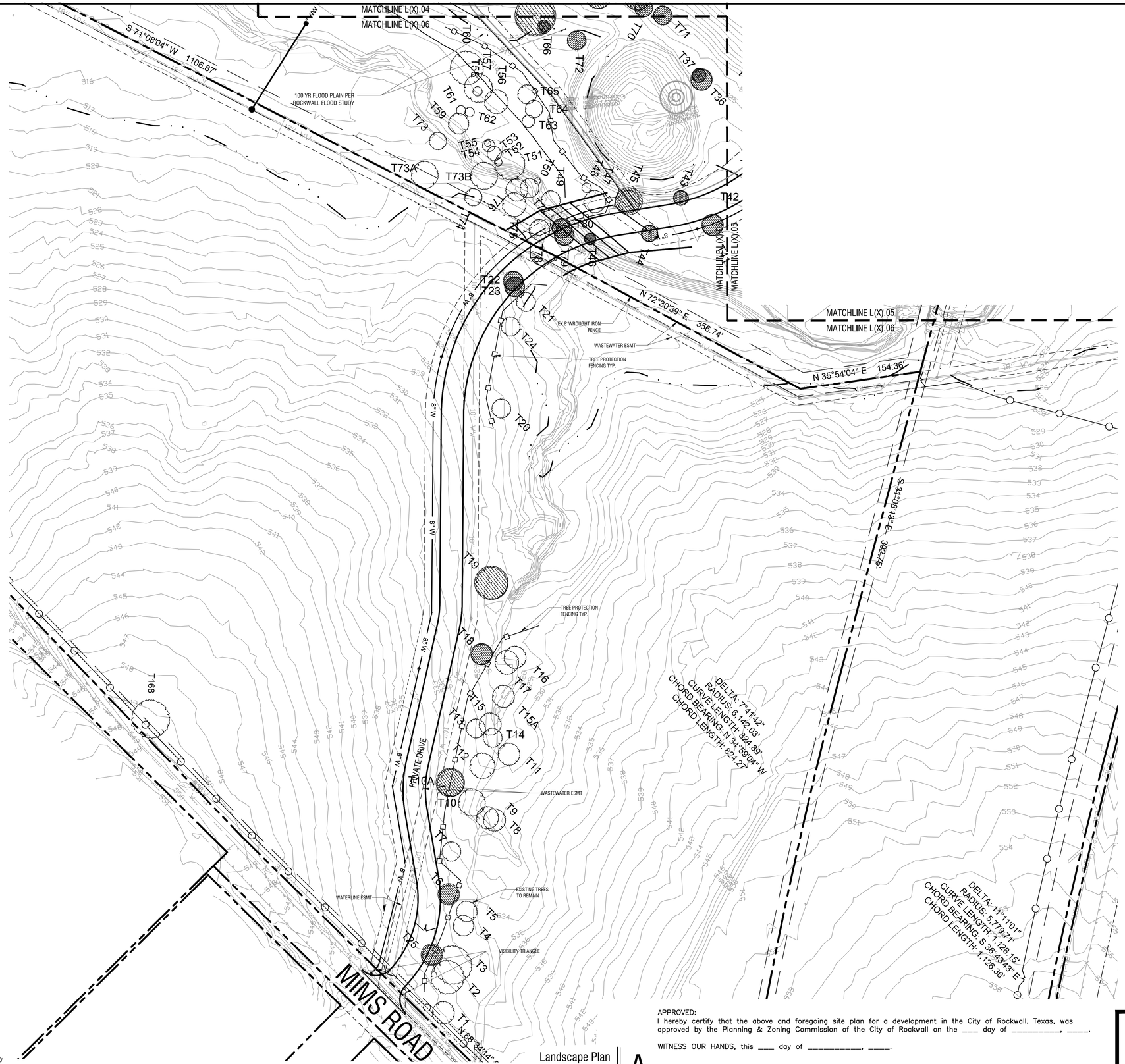
DATE
10/31/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
TREESCAPE PLAN

CASE# SP2022-058

SHEET NO.
L7.05



NORTH

0' 60' 120'

Scale: 1" = 60'-0"

Landscape Plan

Scale: 1" = 60' - 0"

A

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_____ Director of Planning and Zoning

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1–4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

PLOT DATE:
TEMPLATE VERSION:

LEGEND

T40 EXISTING TREE TAG NUMBER

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED

TREE PROTECTION FENCING

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
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OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

REC RayburnElectric COOPERATIVE

REGISTERED LANDSCAPE ARCHITECT
LANDON P. [illegible]
3480
STATE OF TEXAS

10/31/22

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000

DATE
10/31/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
TREESCAPE PLAN

CASE# SP2022-058

SHEET NO.
L7.06

Location Key	Size DBH (Inches)	Description	Common Name	Comments	Tree Designation				Removal Status	Replacement Caliper Inches
					Feature	Primary	Secondary	Non-Protected		
T1	14	M.T.	Bois D'Arc					X		
T2	24	M.T.	Bois D'Arc					X		
T3	24		Bois D'Arc					X		
T4	16	M.T.	Hackberry				X			
T5	13		American Elm			X				
T6	12		Eastern Red Cedar				X		Removed	6
T7	12		Eastern Red Cedar				X			
T8	14		Hackberry				X			
T9	15	M.T.	Bois D'Arc					X		
T10	18	M.T.	American Elm			X				
T10A	30		Cottonwood					X	Removed	60
T11	14		Black Willow					X		
T12	16		Black Willow					X		
T13	12		Eastern Red Cedar				X			
T14	15	M.T.	Hackberry	Dying and Covered with Poison Ivy			X			
T15	14		Hackberry	Diseased Crown			X			
T15A	14	M.T.	Hackberry				X			
T16	14		Hackberry				X			
T17	15		American Elm			X				
T18	13		Hackberry				X		Removed	6.5
T19	14	M.T.	Bois D'Arc	Tagged as "20"				X	Removed	
T20	12		Eastern Red Cedar				X			
T21	13	M.T.	Eastern Red Cedar				X			
T22	12		Eastern Red Cedar				X		Removed	6
T23	12		Eastern Red Cedar				X		Removed	6
T24	12		Eastern Red Cedar				X			
T25	12		Eastern Red Cedar				X		Removed	6
T26A	9		Cedar Elm			X				
T26	11		Eastern Red Cedar				X			
T27	8		White Ash			X				
T28	13	M.T.	Eastern Red Cedar				X			
T29	14	M.T.	Eastern Red Cedar				X			
T30	11		Eastern Red Cedar				X			
T31	12		Eastern Red Cedar				X			
T32	11		Eastern Red Cedar	Branched to Ground			X			
T33	11		Eastern Red Cedar				X			
T34	17		White Ash			X			Removed	17
T35	12		Eastern Red Cedar	Only Top 1/4 of Tree is Alive.			X		Removed	6
T36	13		Eastern Red Cedar	Entirely Dead			X		Removed	6.5
T37	9		White Ash			X			Removed	9
T38	11		Hackberry				X		Removed	5.5
T39	8		Slippery Elm	Entire Tree is Wilted.		X			Removed	8
T40	12		Hackberry				X			
T41	13		Hackberry				X		Removed	6.5
T42	14	M.T.	Eastern Red Cedar				X		Removed	7
T43	8		Hackberry					X	Removed	
T44	10"		Bois D'Arc					X	Removed	
T45	14		American Elm			X			Removed	14
T46	7		Slippery Elm			X			Removed	7
T47	14		White Ash			X				
T48	6		Cedar Elm			X				
T49	12		Eastern Red Cedar				X			
T50	4		Bois D'Arc					X		
T51	19		Bois D'Arc					X		
T52	5		Persimmon			X				
T53	9		Persimmon			X				
T54	8		Black Willow					X		
T55	4		Persimmon			X				
T56	15		White Ash			X				
T57	18		Bois D'Arc					X		
T58	6		Bois D'Arc					X		
T59	14	M.T.	Bois D'Arc					X		
T60	21	M.T.	Bois D'Arc					X		
T61	6		Bois D'Arc	Tagged as "62"				X		
T62	6		Bois D'Arc	Tagged as "63"				X		
T63	8		American Elm			X				
T64	8	M.T.	Hackberry					X		
T65	12		White Ash			X				
T66	6		Bois D'Arc					X	Removed	
T67	24	M.T.	Bois D'Arc					X	Removed	
T68	17	M.T.	Hackberry				X		Removed	8.5
T69	15	M.T.	Hackberry				X		Removed	7.5
T70	11		Hackberry				X		Removed	5.5
T71	12		Bois D'Arc					X	Removed	
T72	14		Hackberry				X		Removed	7
T73	11		Cedar Elm			X				
T73A	8		American Elm			X				
T73B	12		Eastern Red Cedar				X			
T74	15		Eastern Red Cedar				X			
T75	15		Eastern Red Cedar				X			
T76	14		Eastern Red Cedar				X			
T77	12		Black Willow					X		
T78	13		Eastern Red Cedar				X			
T79	12		Eastern Red Cedar				X		Removed	6
T80	12		Eastern Red Cedar				X		Removed	6
T81	12	M.T.	'Natchez' Crape Myrtle					X		
T81A	18		Live Oak			X			Removed	18
T82	7	M.T.	'Natchez' Crape Myrtle					X		
T83	6	M.T.	'Natchez' Crape Myrtle					X		
T84	11	M.T.	'Natchez' Crape Myrtle					X		
T85	16	M.T.	'Natchez' Crape Myrtle					X		
T86	18	M.T.	'Natchez' Crape Myrtle					X		
T87	15	M.T.	'Natchez' Crape Myrtle					X		
T88	11	M.T.	'Natchez' Crape Myrtle					X		
T89	15		Bradford Pear			X			Removed	15
T90	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T90A	20	M.T.	'Natchez' Crape Myrtle					X	Removed	
T90B	9	M.T.	'Watermelon Red' Crape Myrtle					X	Removed	
T91	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T92	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T93	15	M.T.	'Natchez' Crape Myrtle					X	Removed	
T94	9	M.T.	'Natchez' Crape Myrtle					X	Removed	
T95	19	M.T.	'Natchez' Crape Myrtle					X	Removed	
T96	7	M.T.	'Watermelon Red' Crape Myrtle					X	Removed	
T97	19	M.T.	'Natchez' Crape Myrtle					X	Removed	
T98	9	M.T.	'Watermelon Red' Crape Myrtle					X	Removed	
T99	13	M.T.	'Natchez' Crape Myrtle					X	Removed	
T100	8	M.T.	'Natchez' Crape Myrtle					X	Removed	
T101	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T102	7	M.T.	'Natchez' Crape Myrtle					X	Removed	
T103	10	M.T.	'Natchez' Crape Myrtle					X	Removed	
T104	7	M.T.	'Natchez' Crape Myrtle					X	Removed	
T105	11	M.T.	'Natchez' Crape Myrtle					X	Removed	
T106	6	M.T.	'Natchez' Crape Myrtle					X	Removed	
T107	18		Red Oak			X			Removed	18
T108	22		Bradford Pear			X			Removed	22
T109	12		Bradford Pear	Diseased		X			Removed	12
T110	15		Bradford Pear	Wind Damaged		X			Removed	15
T111	15		Live Oak			X			Removed	15
T112	17		Live Oak			X				
T113	13		Live Oak	Bad Freeze Damaged Trunk		X			Removed	13
T114	5		Magnolia			X			Removed	5
T115	9		Live Oak	Bad Freeze Damaged Trunk		X			Removed	9
T116	12		Texas Red Oak	Substantial Trunk Damage with Borer Infestation		X			Removed	12
T138	18	M.T.	Hackberry				X			
T141	12		Eastern Red Cedar				X			
T142	14		Eastern Red Cedar				X			
T143	17	M.T.	Eastern Red Cedar				X			
T144	4		Cedar Elm			X				
T145	16		Eastern Red Cedar				X			
T146	11		Eastern Red Cedar				X			
T147	14		Eastern Red Cedar				X			
T148	12		Eastern Red Cedar				X			
T149	12		Eastern Red Cedar				X			
T150	12		Eastern Red Cedar				X			
T151	12	M.T.	Eastern Red Cedar				X			
T152	15		Eastern Red Cedar				X			
T153	11		Eastern Red Cedar				X			
T155	16		Eastern Red Cedar				X			
T156	12		Eastern Red Cedar				X			
T157	14		Eastern Red Cedar				X			
T158	8		Cedar Elm			X				
T158A	7		Cedar Elm			X				
T159	8		Locust					X		
T160	5		White Ash			X				
T161	5		Cedar Elm			X				
T162	4		White Ash			X				
T163	4		Cedar Elm			X				
T164	8		Cedar Elm			X				
T164A	7		Cedar Elm			X				
T164B	10	M.T.	Cedar Elm			X				
T164C	6		Cedar Elm			X				
T165	7		Black Willow					X		
T166	20		Black Willow					X		
T168	19	M.T.	Eastern Red Cedar				X			
T168A	23	M.T.	Eastern Red Cedar				X			
T170	6		Live Oak			X			Removed	6
T171	6		Live Oak			X				
T172	6		Bur Oak			X				
T173	6		Bur Oak			X				
T174	6		Bur Oak			X				
T175	6		Bur Oak			X				
T176	7		Live Oak			X				
T177	8	M.T.	'Natchez' Crape Myrtle					X		
T178	6		Bur Oak			X				
T179	6		Bur Oak			X				
T180	6		Bur Oak			X				
T181	6		Live Oak	Stunted- Old Sapsucker Damage		X				
T182	10	M.T.	'Natchez' Crape Myrtle					X		
T183	7.5	M.T.	'Natchez' Crape Myrtle					X		
T184	7	M.T.	'Natchez' Crape Myrtle					X		
T185	6		Bald Cypress			X				
T186	6		Bald Cypress			X				
T187	6		Bald Cypress			X				
T188	6		Bald Cypress			X				
T189	6		Bald Cypress			X				
T190	6		Live Oak	Stunted- Old Sapsucker Damage		X				
T191	6		Live Oak			X				
T192	6		Bald Cypress			X				
T193	6		Bald Cypress			X				
T194	6		Live Oak			X				
T195	6		Bald Cypress			X				
T196	6		Live Oak			X				
T197	6		Live Oak			X				
T198	6		Live Oak			X				
T199	6		Live Oak			X				
T200	6		Live Oak			X				
T201	6		Bald Cypress			X				
T202	6		Bald Cypress			X				
T203	6		Bald Cypress			X				
T204	6		Bald Cypress			X				
T205	6		Bald Cypress			X				
T206	6		Bald Cypress			X				
T207	6		Bald Cypress			X				
T208	6		Live Oak			X				
T209	-		Crape Myrtle	Dead, Coming Back From Roots						
T210	3.5	M.T.	'Natchez' Crape Myrtle					X		
T211	2.5	M.T.	'Natchez' Crape Myrtle					X		
T212	2.5	M.T.	'Natchez' Crape Myrtle					X		
T213	3	M.T.	'Natchez' Crape Myrtle					X		
T214	6		Live Oak	Weeping Habit		X				
T215	6		Live Oak	Weeping Habit		X				
T216	6		Live Oak	Weeping Habit		X				
T217	6		Live Oak	Weeping Habit		X				
T218	6		Live Oak	Weeping Habit		X				
T219	6		Live Oak	Weeping Habit		X				
T223	14		Black Willow					X		
TOTAL	**2,210**									

TOTAL REPLACEMENT INCHES REQUIRED:	377.5
MITIGATION INCHES PROVIDED ON SITE:	380
MITIGATION INCHES (CREDITS) REMAINING:	-2.5

SITE INFORMATION:

EXISTING ZONING: HEAVY COMMERCIAL (HC), COMMERCIAL (C), & AGRICULTURAL (AG)

PROPOSED ZONING: NO CHANGE

PROPOSED USE: EXPANSION OF EXISTING SITE TO INCLUDE 2 NEW OFFICE BUILDINGS, TRUCK WAREHOUSE, AND LAYDOWN STORAGE WAREHOUSE

TOTAL AREA LOT 1: 1,366,902 SQ FT 31.38 AC
TOTAL AREA LOTS 1–4: 4,146,392 SQ FT 95.19 AC

LOT 1 "HC" ZONING

MAXIMUM BUILDING HEIGHT: 60 FT
MAXIMUM LOT COVERAGE: 60%
MAXIMUM FLOOR AREA RATIO: 4:1
MAXIMUM IMPERVIOUS PARKING: 90–95%

PROPOSED MAX. BUILDING D HEIGHT: 40'
PROPOSED MAX. BUILDING E HEIGHT: 46'–4"
PROPOSED MAX. BUILDING F HEIGHT: 26'–8"
PROPOSED LOT COVERAGE: 106,281/1,366,902 = 7.8%
PROPOSED FLOOR AREA RATIO: 113,260/1,366,902 = 0.08:1
PROPOSED IMPERVIOUS PARKING: 69,510/1,366,902 = 5.1%

EXISTING PARKING:
EXISTING WAREHOUSE 23,520 SQ FT (1:1000) = 24 SPACES
EXISTING OFFICE 31,530 SQ FT (1:300) = 106 SPACES
REMOVED OFFICE 7,700 SQ FT (1:300) = –26 SPACES

EXISTING REQUIRED PARKING = 104 SPACES

REQUIRED PARKING:
PROPOSED WAREHOUSE D 12,750 SQ FT (1:1000) = 13 SPACES
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APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ___ day of _____, _____.

WITNESS OUR HANDS, this ___ day of _____, _____.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1–4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

HKS

ARCHITECT
HKS, INC.
350 N SAINT PAUL ST
SUITE 100
DALLAS, TX 75201

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

STRUCTURAL ENGINEER
HKS, INC.
350 N SAINT PAUL ST, SUITE 100
DALLAS, TX 75201- 4240

MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER
R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

Rayburn Electric COOPERATIVE

REGISTERED LANDSCAPE ARCHITECT — ANDREW P. — 3480 — STATE OF TEXAS

10/31/22

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000
DATE
10/31/22
ISSUE
CITY SITE PLAN SUBMITTAL
SHEET TITLE
TREESCAPE TABLE

CASE# SP2022-058

SHEET NO.
L7.07

PLOT DATE:
TEMPLATE VERSION:

Luminaire Schedule

Symbol	Type	Qty	Manufacturer / Catalog Number	Total Lumen Output	Total Input Watts	Ballast Factor	Light Lost Factor	User Defined Factor
	AA	51	LITHONIA CSX1 LED 60C 700 40K T4M HS	12377	134	1.000	0.900	1.000
	BB	40	LITHONIA KBD8 LED 12C 350 40K ASY MVOLT	809	16	1.000	0.900	1.000
	CC	2	LITHONIA DSXW2 LED 20C 350 40K T2S MVOLT	2988	25	1.000	0.900	1.000

Calculation Summary

Calculation Grid Location	Calc. Height (Ft.)	Units	Avg	Max	Min	Avg/Min
GROUND_Planar	0	Fc	0.76	5.2	0.0	N.A.
PARKING LOT 1		Fc	2.69	4.2	1.4	1.92
PARKING LOT 2 & ROADWAY		Fc	2.91	5.1	0.8	3.64

AA

CSX1 LED
LED Area Luminaire

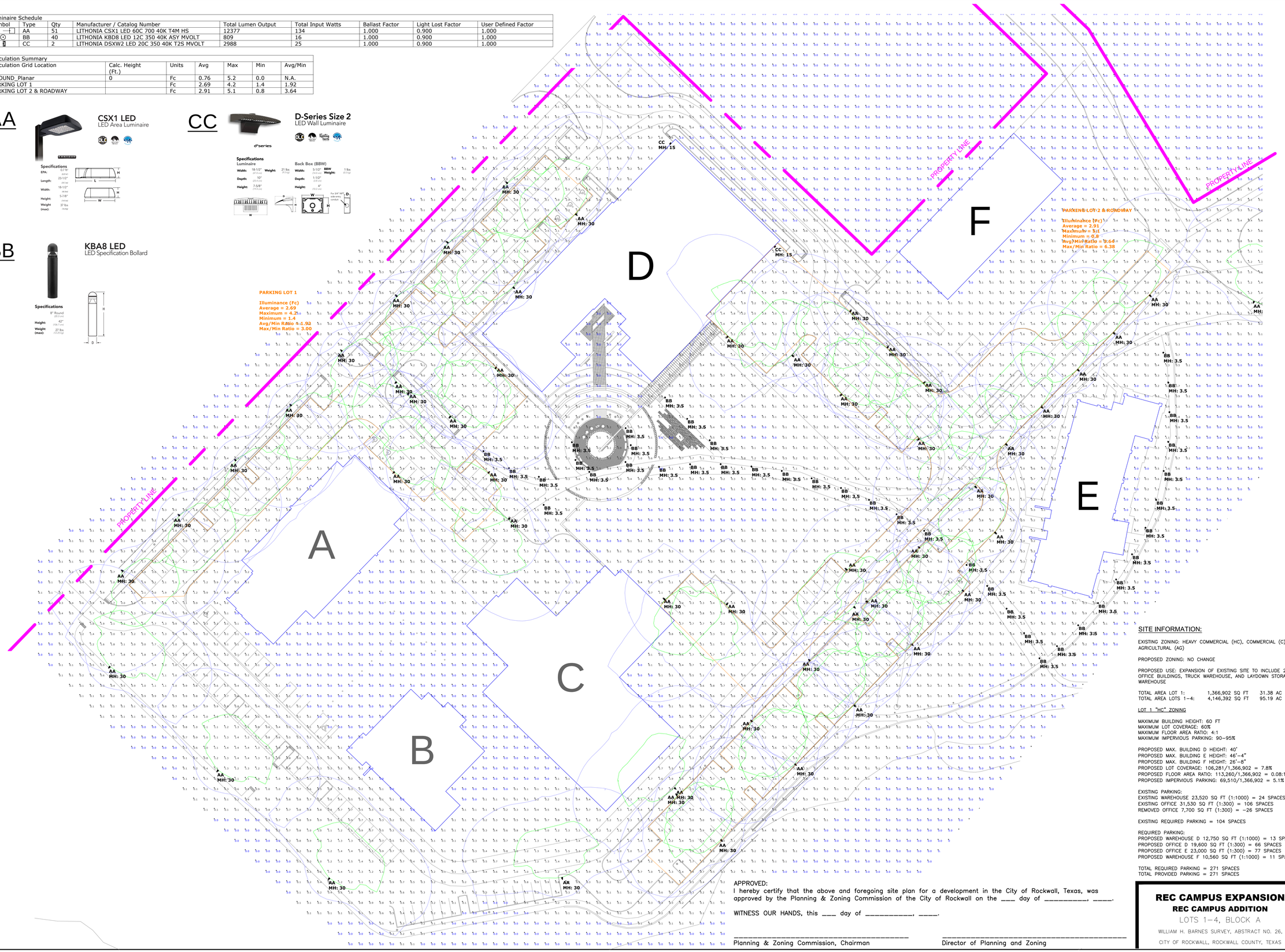
CC

D-Series Size 2
LED Wall Luminaire

BB

KBA8 LED
LED Specification Bollard

Specifications
8" Round
Height:
Weight (max):
H
D



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APPROVED:
I hereby certify that the above and foregoing site plan for a development in the City of Rockwall, Texas, was approved by the Planning & Zoning Commission of the City of Rockwall on the ___ day of _____, ____.

WITNESS OUR HANDS, this ___ day of _____, ____.

_____ Planning & Zoning Commission, Chairman

_____ Director of Planning and Zoning

REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1–4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

HKS

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SUITE 100
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950 SIDS ROAD
ROCKWALL, TX 75087

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R - DELTA ENGINEERS, INC.
618 MAIN STREET
GARLAND, TEXAS 75040

RayburnElectric COOPERATIVE

INTERIM REVIEW ONLY

These documents are incomplete, and are released for interim review only and are not intended for regulatory approval, permit, or construction purposes.

Architect: _____
Arch. Reg. No.: _____
Date: _____

KEY PLAN

REVISION

NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.001

DATE
11/01/22

ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
SITE LIGHTING

CASE# SP2022-058

SHEET NO.
SL.00

Traffic Impact Analysis

Rayburn Electric Cooperative
Rockwall, Texas

October 13, 2022

Kimley-Horn and Associates, Inc.
Dallas, Texas

Project #67075002
Registered Firm F-928

Kimley»Horn

Traffic Impact Analysis

Rayburn Electric Cooperative Campus Expansion
Rockwall, Texas

Prepared by:

Kimley-Horn and Associates, Inc.
13455 Noel Road, Two Galleria Tower, Suite 700
Dallas, Texas 75240
Registered Firm F-928

10/13/2022

Contact:
Christian DeLuca, P.E., PTOE
972-770-1300
October 13, 2022

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EXECUTIVE SUMMARY

The proposed Rayburn Electric Cooperative (REC) Campus Expansion development is located within the block bounded by Goliad Street, Sims Road, and Mims Road in Rockwall, Texas. The site is proposed to be built as a distribution center. This study is intended to identify traffic generation characteristics, identify potential traffic related impacts on the local street system, and to develop mitigation measures required for identified impacts. The following existing intersections were selected to be part of this study:

- Goliad Street & Sids Road
- Mims Road & Sids Road
- Goliad Street & Mims Road
- Mims Road & National Drive

The analysis also included the following driveways having access in and out of the site:

- Drive 1, which is an existing full-access driveway for the REC Campus to Sids Road
- Drive 2, which is an existing full-access driveway for the REC Campus to Sids Road. The driveway is across from the driveway for Air Performance.
- Drive 3, which is an existing full-access driveway for the REC Campus to Sids Road. The driveway is across from the driveway for Rockwall ISD school bus parking lot.
- Drive 4, which is an existing full-access driveway for the REC Campus to Sids Road
- Drive 5, which is a proposed right-in right-out driveway to Goliad Street.
- Drive 6, which is an existing full-access driveway for the REC Campus to Mims Road. The driveway is across from the existing roadway, National Drive.

Traffic operations were analyzed at the study intersections for existing volumes and 2024 background traffic volumes and 2024 background plus site-generated traffic volumes. The future years correspond to the expected buildout year of the site. Conditions were analyzed for the weekday AM and PM peak hours. The background traffic conditions include existing traffic with compound growth rates.

The REC campus expansion development is expected to generate approximately 26 new weekday AM peak hour one-way vehicle trips and 37 new weekday PM peak hour one-way vehicle trips at buildout. The distribution of the site-generated traffic volumes onto the street system was based on the surrounding roadway network, existing traffic patterns, and the project's proposed access locations.

Based on the analysis presented in this report, the proposed Rayburn Electric Cooperative Campus Expansion development can be successfully incorporated into the surrounding roadway network. The proposed site driveways provide the appropriate level of access for the development. The site-generated traffic does not have a significant or disproportionate effect on the existing vehicle traffic operations. The following recommendations should be included in the development of the site:

1. Construct Drive 4 to Goliad Street as a right-in/right-out driveway due to not meeting TxDOT driveway access spacing.

I.INTRODUCTION

A. Purpose

Kimley-Horn was retained to conduct a Traffic Impact Analysis (TIA) of future traffic conditions associated with the development of the Rayburn Electric Cooperative Campus Expansion site located within the block bounded by Goliad Street, Sims Road, and Mims Road in Rockwall, Texas. A site vicinity map is provided as **Exhibit 1**. **Exhibit 2** shows the proposed conceptual site plan. This study is intended to identify traffic generation characteristics, identify potential traffic related impacts on the local street system, and to develop mitigation measures required for identified impacts.

B. Methodology

Traffic operations were analyzed at the study intersections for AM and PM peak hours for the following scenarios due to falling into Analysis Category 1 based on the requirements listed in Table 2.6 in the City of Rockwall's Standards of Design & Construction.

- 2022 existing traffic
- 2024 background traffic
- 2024 background plus site traffic

The capacity analyses were conducted using the *Synchro*™ software package and its associated *Intersection* reports for signalized intersections and *Highway Capacity Manual* reports for unsignalized intersections.

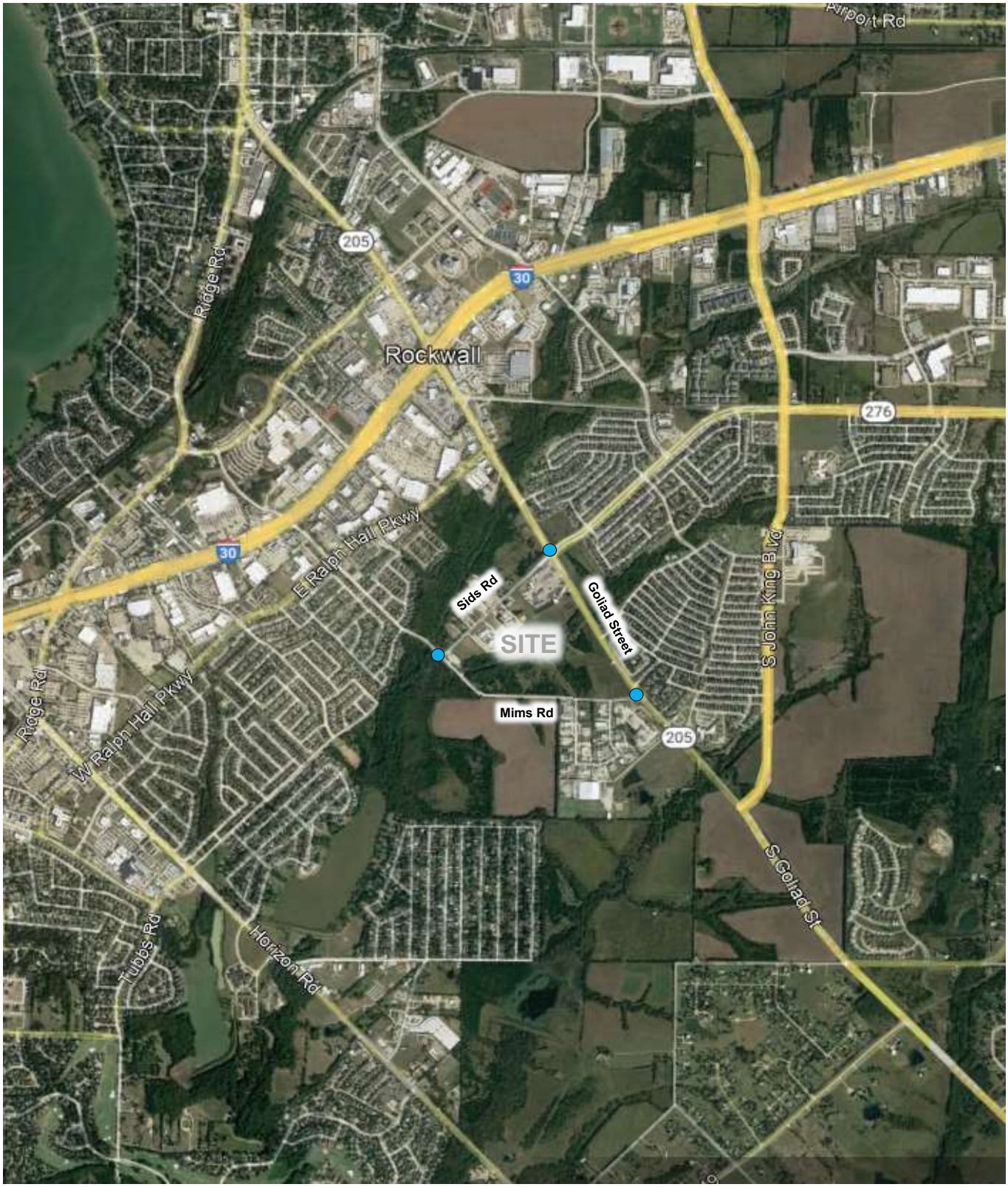


EXHIBIT 1

Vicinity Map

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

= Study Intersection

North

Not To Scale

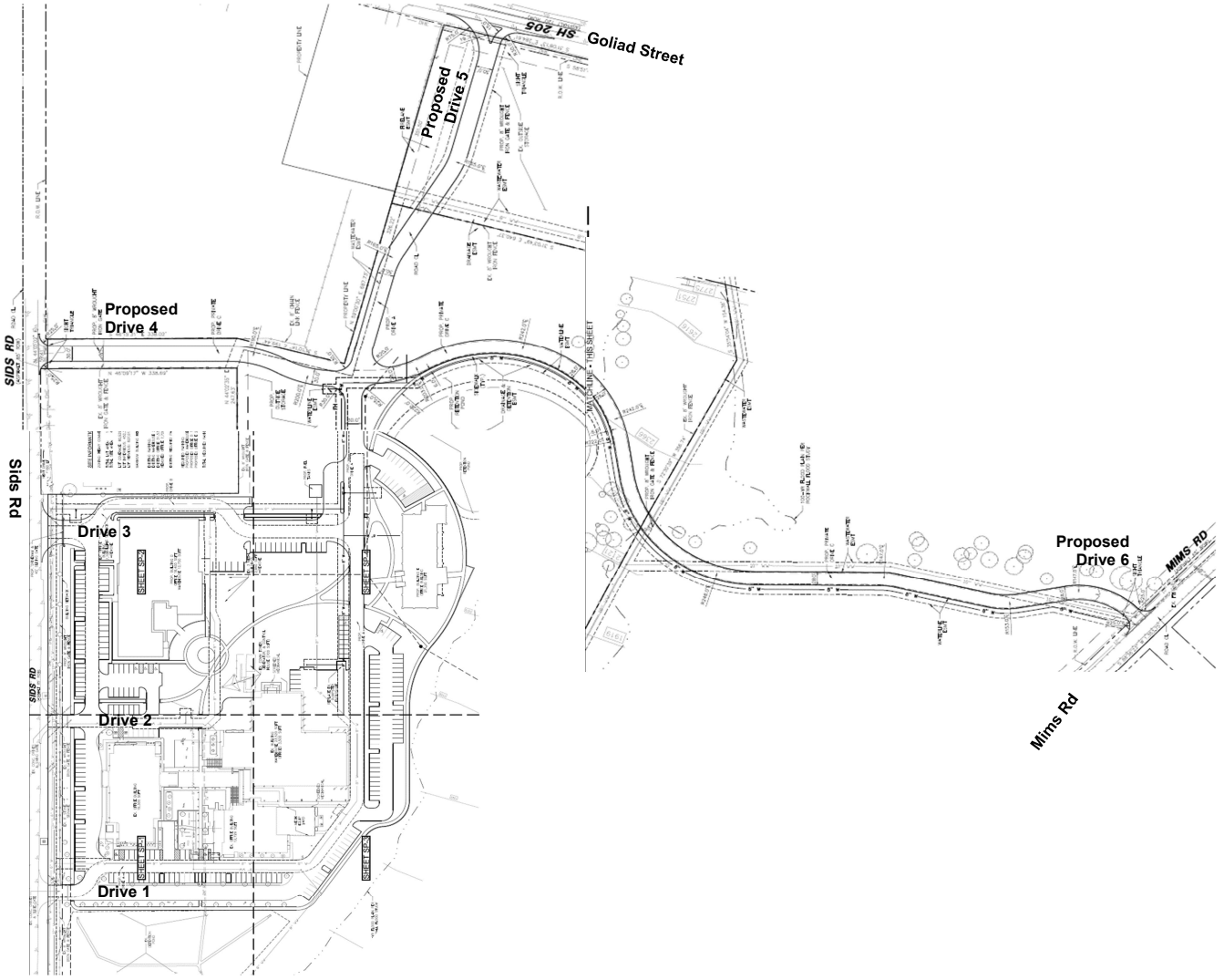


EXHIBIT 2

Conceptual Site Plan

Lineman Building - Rockwall, Texas

Kimley»Horn

North

Not To Scale

II. EXISTING AND FUTURE AREA CONDITIONS

A. Roadway Characteristics

The following signalized intersections were evaluated as part of this study:

- Goliad Street & Sids Road

The following unsignalized intersections were evaluated as part of this study:

- Mims Road & Sids Road
- Goliad Street & Mims Road
- Mims Road & National Drive

The major study area roadways are described below.

Sids Road – is a two-lane undivided roadway between Mims Road to Goliad Street and then transitions into a four-lane divided roadway east of Goliad Street. The speed limit is 30 mph west of Goliad Street adjacent to the proposed site and 50 mph east of Goliad Street. Sids Road is identified as a 4-lane undivided minor arterial, west of Goliad Street, and a 6-lane divided arterial, east of Goliad Street.

Goliad Street (SH 205) – is a two-lane undivided roadway between John King Boulevard to Sids Road and then transitions into a six-lane divided roadway north of Sids Road. The speed limit is 55 mph south of Sids Road adjacent to the proposed site and 45 mph north of Sids Road. Goliad Street is identified as a 6-lane divided arterial on the City of Rockwall Thoroughfare Plan.

Mims Road – is a two-lane undivided roadway that runs from Goliad Street to I-30. On the City of Rockwall Thoroughfare Plan, Industrial Boulevard is designated as a four-lane undivided minor arterial. The speed limit near the site is 30 mph.

Exhibit 3 illustrates the intersection geometry used for the traffic analysis.

B. Existing Study Area

The property is zoned as Heavy Commercial (LHC with “office/warehouse combinations land uses” listed as a primary land use. The use of the property will not be changing.

C. Proposed Site Improvements

The development as proposed includes expansion of the Rayburn Electric.Cooperative Campus. The existing REC campus contains 62,750 square feet; 7700 square feet will be removed while two buildings totaling 52,500 square feet will be added. The net gain is 44,800 square feet.

As shown in **Exhibit 3**, the site has three proposed driveways. The driveways to be modeled in this analysis are as follows:

Drive 1 – is an existing full-access driveway to Sids Road. The drive is approximately 550 feet northeast of the intersection of Mims Road and Sids Road.

Drive 2 – is an existing full-access driveway to Sids Road and is located across from another commercial driveway. The drive is approximately 300 feet northeast of Drive 1.

Drive 3 – would reconstruct and widen the site's northenmost driveway to Sids Road. The drive is approximately 375 feet northeast of Drive 2 and meets the City of Rockwall's minimum driveway spacing of 200 feet.

Proposed Drive 4 – would be a full-access driveway to Sids Road approximately 285 feet north of Drive 3. Drive 4 is proposed to be 100 feet northeast of the existing commercial driveway servicing S & A Systems Inc. The City of Rockwall requires 200 feet driveway spacing on Arterials and 100 feet of spacing on Collectors. Sids Road is expected to be a 4-lane arterial in the future based on the thoroughfare plan, however, functions as a two-lane collector today. Furthermore, the roadway dead ends into Mims Road and traffic volumes will likely remain low for quite sometimes. Further attributing to collector characteristics. The S & A Systems driveway only services a few parking spaces and has very low traffic. For these reasons, the 100-foot driveway spacing is appropriate for this driveway.

Proposed Drive 5 – would be a right-in right-out driveway to Goliad Street (SH 205) approximately 810 feet south of Goliad Street. The driveway will be 155 feet south of the next driveway to the north. Goliad Street is a TxDOT roadway and therefore requires 360 feet of spacing as a 45 MPH road. This spacing requirement is not met. To provide reasonable access under these conditions but also provide the safest operation, the driveway connection should be constructed to only allow right-in/right out turning movements.

Proposed Drive 6 – would be a full access driveway to the existing intersection of Mims Road and National Drive. The access point will create the fourth leg of the existing three-legged intersection

The intersection spacing appears to meet the City of Rockwall standards for driveway spacing away from intersections of minor arterials, and between driveways to minor arterials. Intersection sight distance at the proposed driveways is acceptable with each on relatively straight segments of their respective roadway.

D. Existing Traffic Volumes

Exhibit 4 shows the existing weekday AM and PM peak hour traffic volumes. 24-hour machine counts were collected near the site at the intersection of Goliad Street and Sids Road. The raw count sheets, as well as a comparison between the 24-hour volumes collected and previous 24-hour counts, are provided at the end of this report.

The 24-hour count showed the daily volume on the roadway link as follows:

- Goliad Street, west of Sids Road: 11,423 vehicles per day (vpd)
- Sids Road, south of Goliad Street: 2,339 vpd

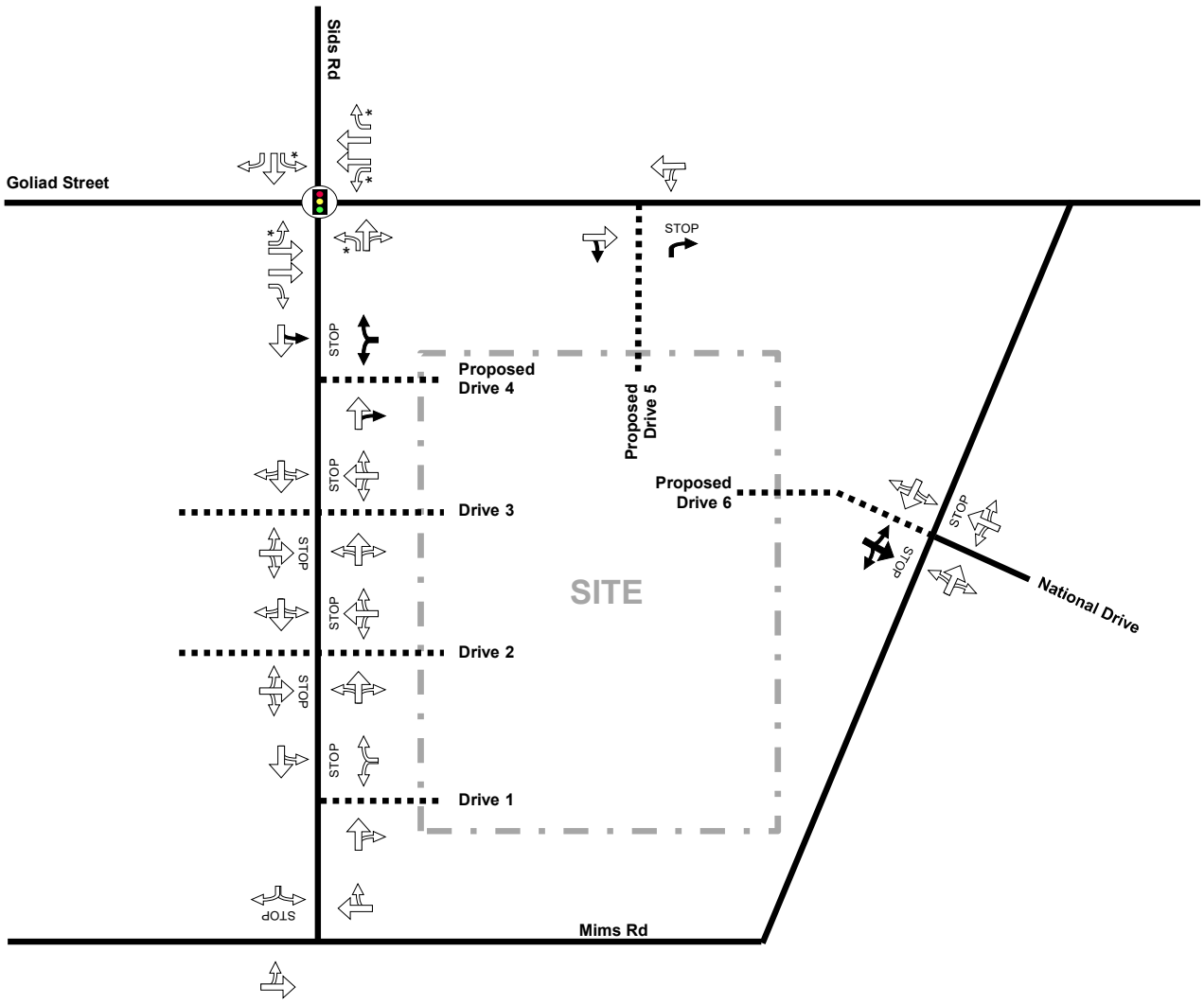


EXHIBIT 3

Lane Assignment and Intersection Control

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

= Signalized Intersection

STOP = Stop-Controlled Approach

= Travel Lane

* = Turn Bay

= Driveway Lanes or Off-Site Improvements

TWLTL = Two-Way Left Turn Lane

North

Not To Scale

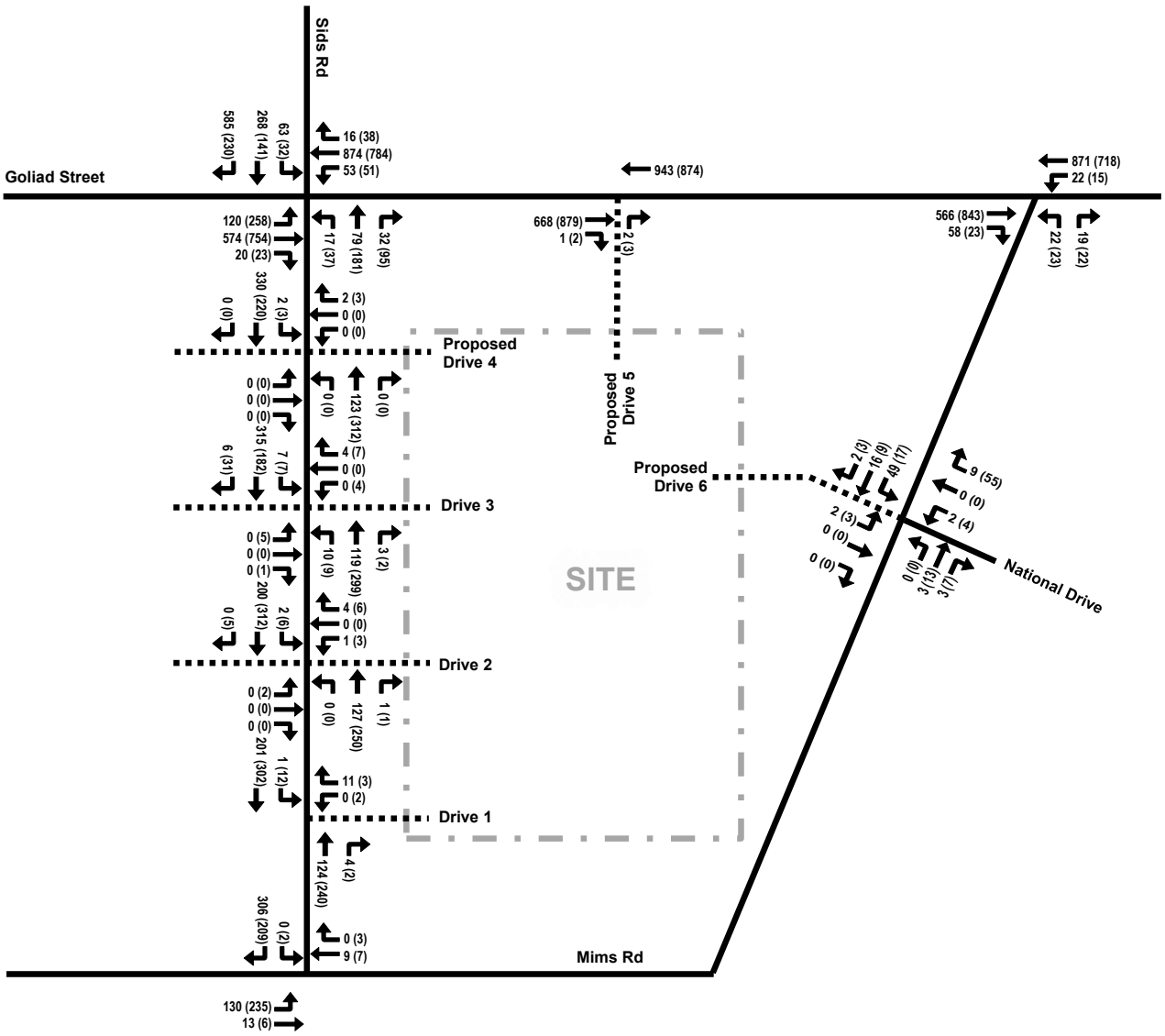


EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

Not To Scale

III. PROJECT TRAFFIC CHARACTERISTICS

A. Site-Generated Traffic

Site-generated traffic estimates are determined through a process known as trip generation. If site specific trip data is unknown, rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific tie interval using the 10th edition of *Trip Generation Manual* published by the Institute of Transportation Engineers (ITE). However, since the specific trip data of the existing site is known that data is a better indication of the expected trip data after the expansion is completed. The existing trip data was grown as a ratio based on the square footage of the existing REC campus and proposed REC campus. An additional 20% trip increase was applied to ensure a conservative analysis.

No reductions were taken for pass-by trips, internal capture, or multimodal use.

Table 1 shows the resulting daily and weekday AM and PM peak hour trip generation for the proposed development, showing new external trips.

Table 1 – Trip Generation

Land Uses	Amount	Units	ITE Code	Daily One-Way Trips	AM Peak Hour One-Way Trips			PM Peak Hour One-Way Trips		
					IN	OUT	TOTAL	IN	OUT	TOTAL
Existing Site (Observed)	*62,750*	*SF*	*170*	*636*[2]	*11*	*13*	*24*	*17*	*18*	*35*
Proposed Expansion (Estimated) [1]	44,800	SF	170	551[2]	8	10	18	13	13	25
Development Totals										
Subtotal Trip Generation Total:				1187[2]	19	23	42	30	31	60
Contingency (20% Increase)				-	4	5	8	6	6	12
Existing Site (Observed)				-636[2]	*-11*	*-13*	*-24*	*-17*	*-18*	*-35*
Total Net New External Vehicle Trips:				***551***[2]	**12**	**15**	**26**	**19**	**19**	**37**

(1) Trip Generation rates based on the existing site's observed inbound and outbound trips.
(2) Trip Generation rates based on ITE Trip Generation, 11th Edition.

B. Trip Distribution and Assignment

The distribution of the site-generated traffic volumes in to and out of the site driveways and onto the street system was based on the area street system characteristics, existing traffic patterns, relative land use density, and the locations of the proposed driveway access to/from the site. The corresponding distributions can be found in **Exhibit 5**. The corresponding inbound and outbound traffic assignment, where the directional distribution is applied using the most probable paths to and from the site can be found in **Exhibit 6**

C. Development of 2024 Background Traffic

In order to obtain 2024 background traffic, the existing traffic counts and historic counts near the site were compared to find expected growth trends within the study area. Based on the recent growth in the area, an annual growth rate of 3.2% was assumed for the background traffic through 2024. To calculate the 2024 background traffic, the existing 2022 traffic counts were grown by their respective growth rates annually for two years. The resulting 2024 background weekday AM and PM peak hour traffic volumes are shown in **Exhibit 7**.

D. Development of 2024 Total Traffic

Site traffic volumes were added to the background volumes to represent the estimated total (background plus site-generated) traffic conditions for the 2024 study year after completion of the proposed development. **Exhibit 8** shows the resulting 2024 weekday AM and PM peak hour total traffic volumes.

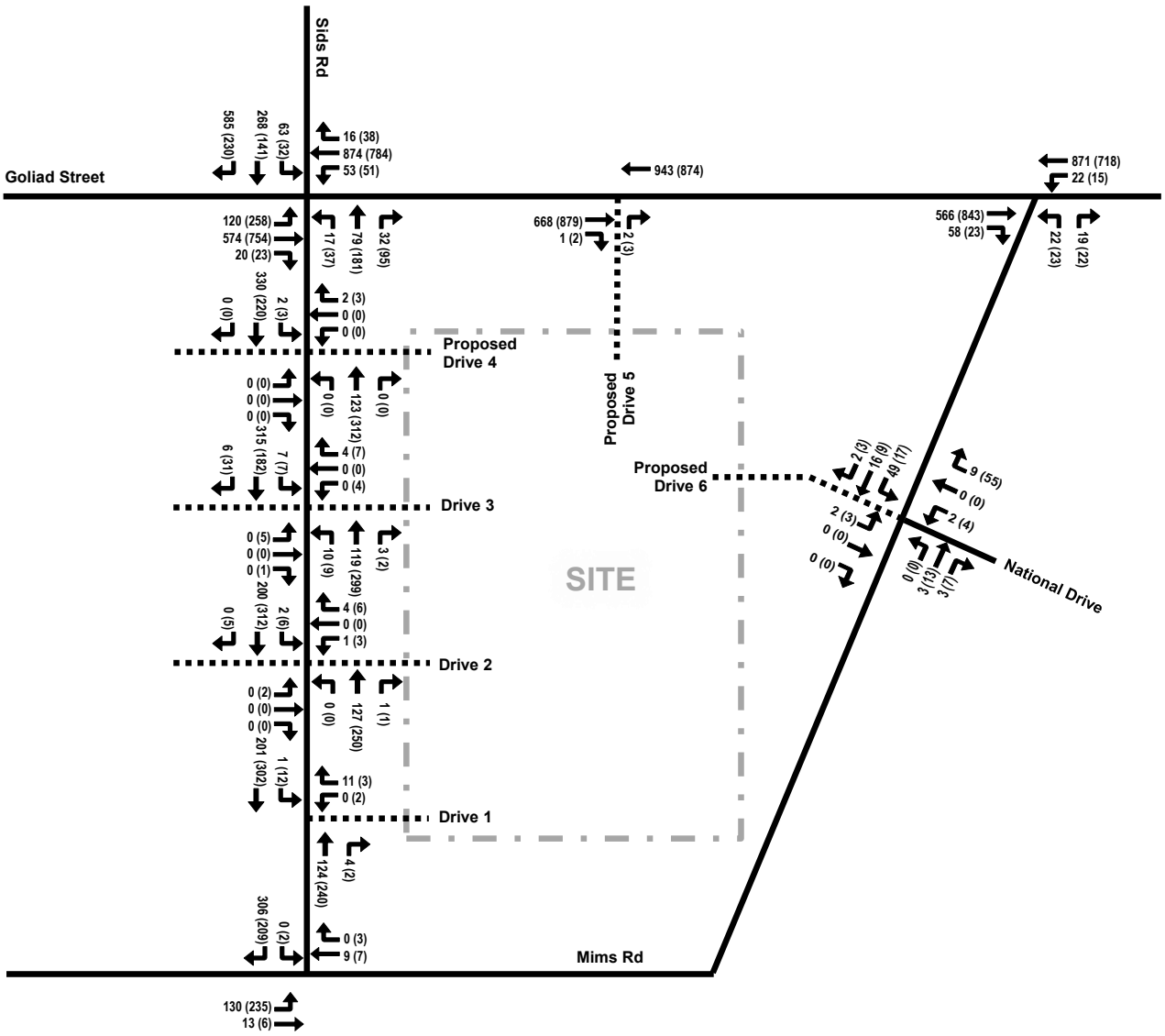


EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

Not To Scale

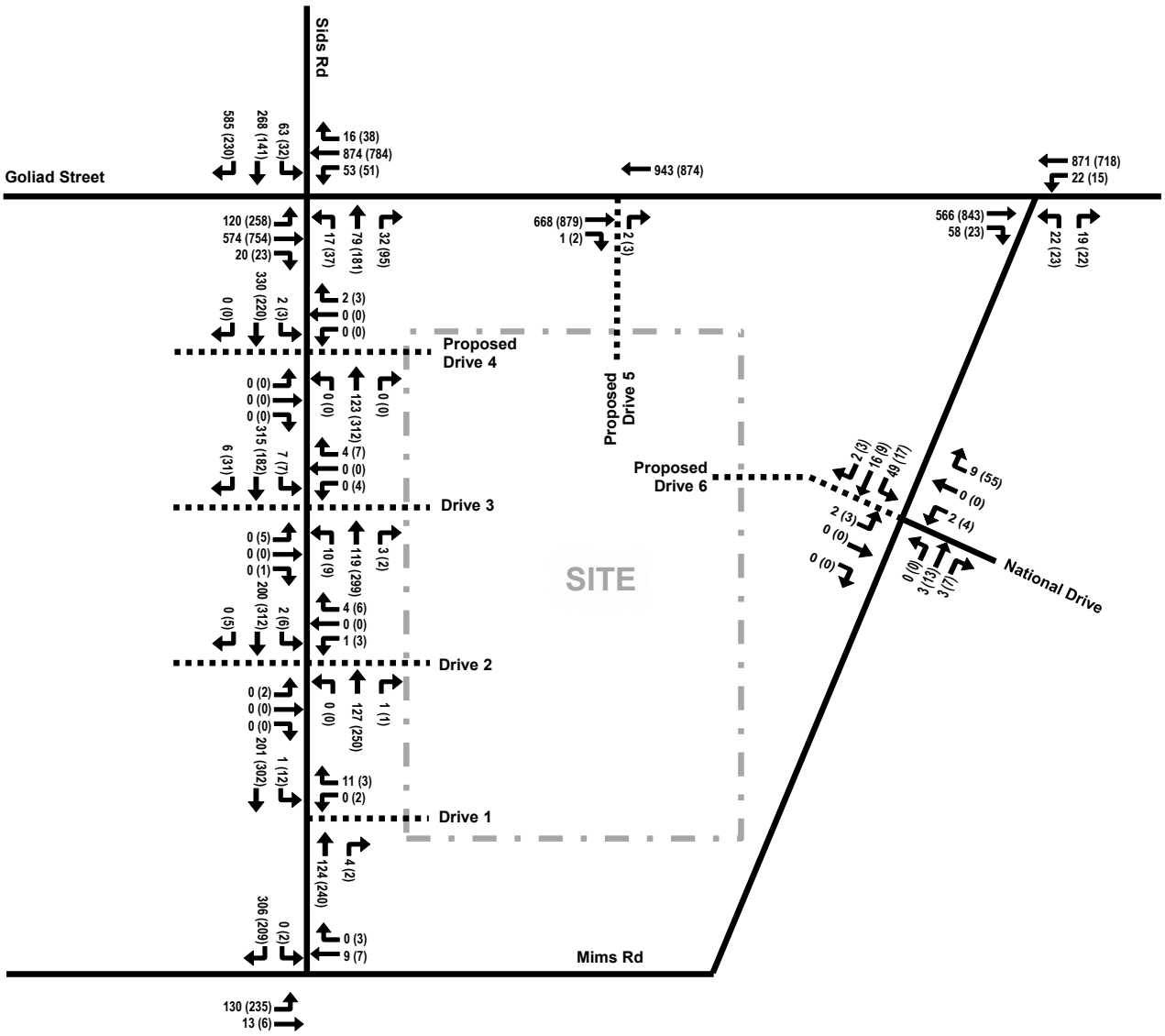


EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

Not To Scale

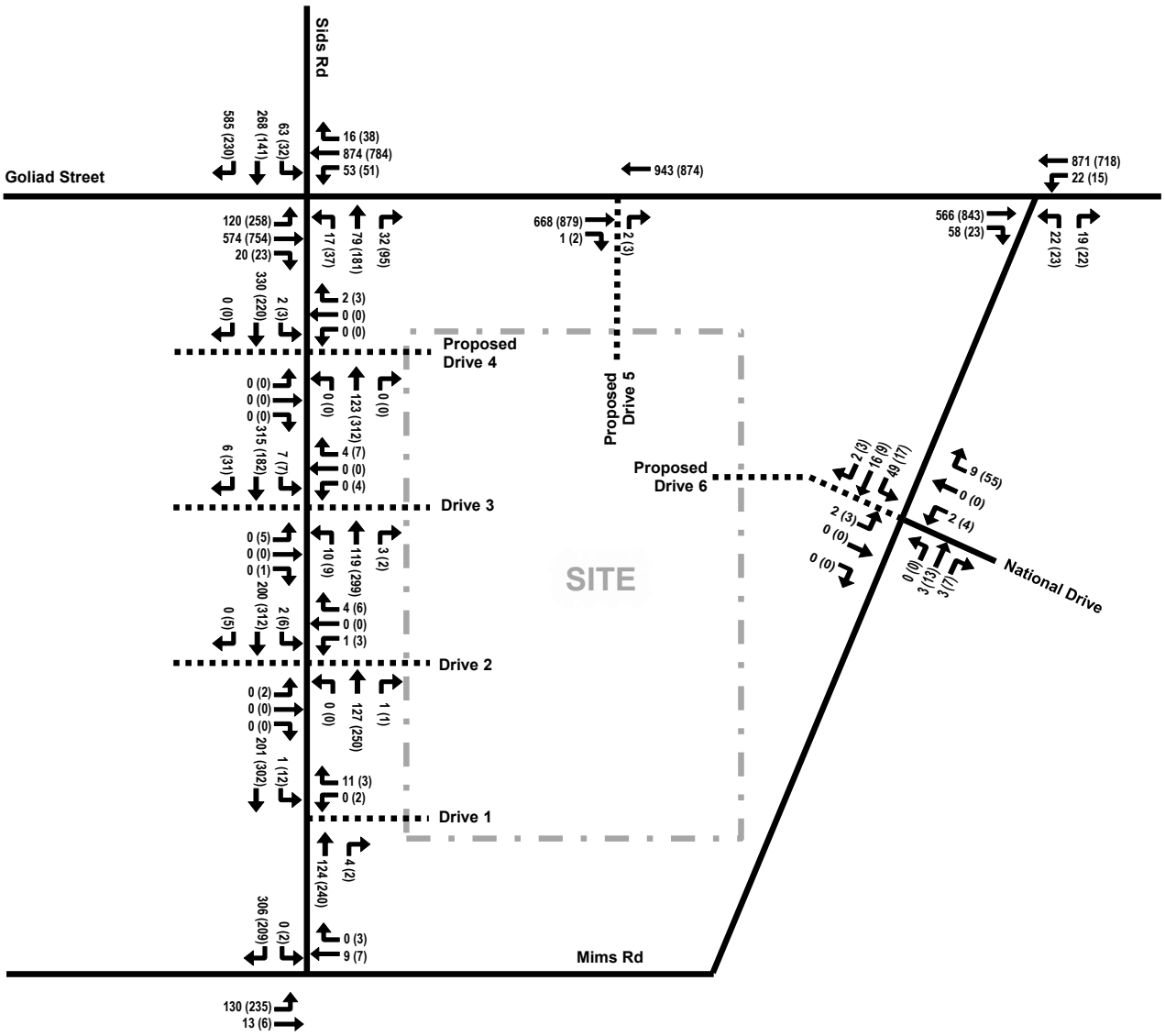


EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

Not To Scale

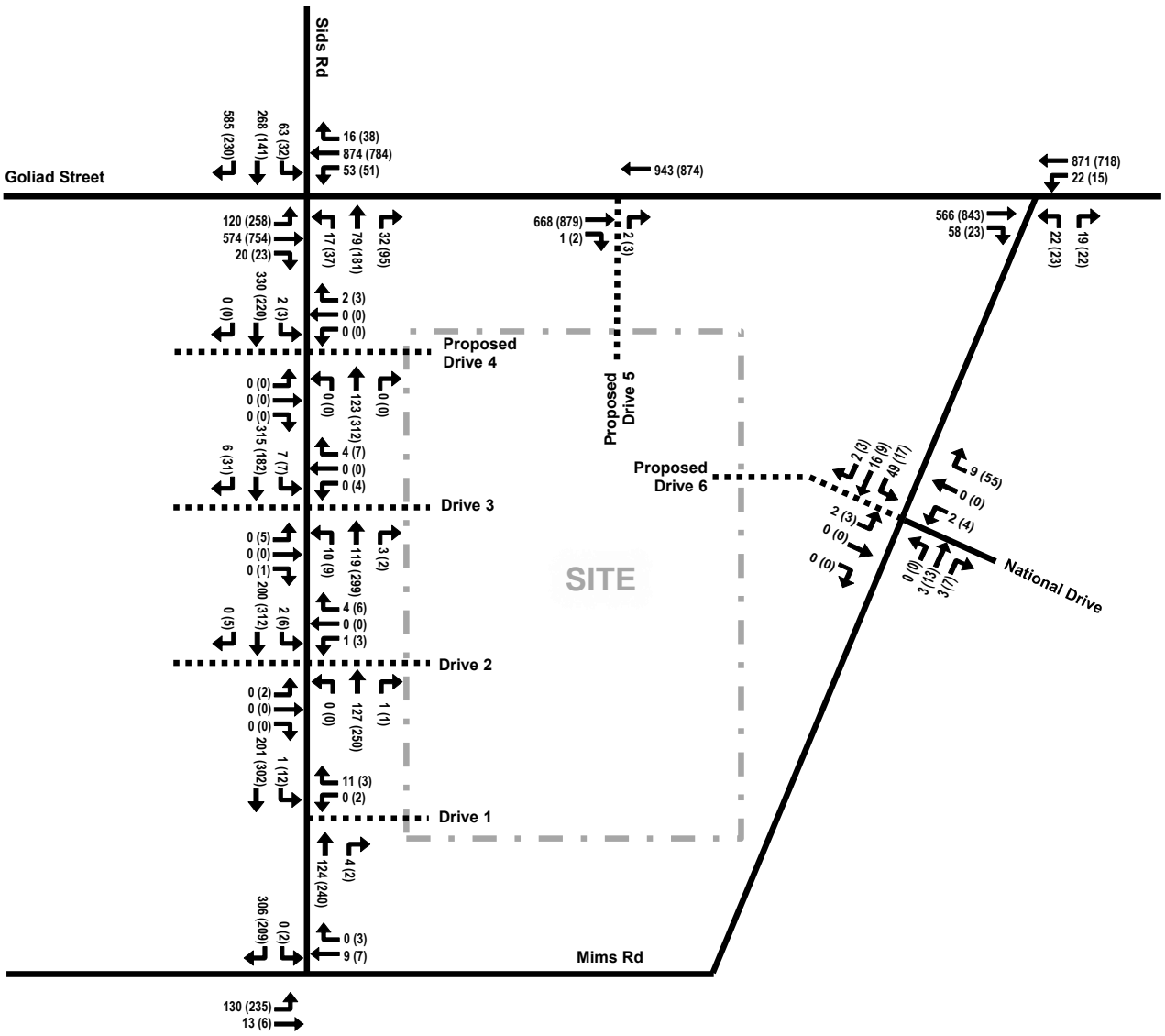


EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes

Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:

X (Y)

X = Weekday AM Peak Hour Turning Movements

Y = Weekday PM Peak Hour Turning Movements

Volumes may not sum from point to point due to rounding and presence of smaller driveways not included in analysis.

North

Not To Scale

IV. TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn conducted a traffic operations analysis to determine potential capacity deficiencies in the 2022 & 2024study years at the study intersections. The acknowledged source for determining overall capacity is the current edition of the *Highway Capacity Manual.*

A. Analysis Methodology

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). **Table 2** shows the definition of level of service for signalized and unsignalized intersections.

Table 2 – Level of Service Definitions

Level of Service	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤10	≤10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50

Definitions provided from the Highway Capacity Manual, Special Report 209, Transportation Research Board, 2010.

Study area intersections were analyzed based on average total delay analysis for signalized and unsignalized intersections. For the unsignalized analysis, the level of service (LOS) for a two-way stop-controlled intersection is defined for each movement. Unlike signalized intersections which define LOS for each approach and for the intersection as a whole, LOS for two-way stop-controlled intersections is not defined as a whole.

Signal timings for the signalized intersection were based on the observed signal timing in the field. No timing adjustments were made in future scenarios.

The analyses assumed the lane geometry and intersection control shown in **Exhibit 3**.

The peak hour factors (PHF) for the existing traffic is known from the counts collected at the study intersections and was assumed to remain the same through the analysis. PHF for the site-generated traffic is unknown, so at new driveways it was assumed to be 0.92.

B. Analysis Results

Table 3 show the intersection operational results for the weekday AM and PM peak hours, respectively.

Table 3 – Traffic Operational Results – Weekday AM & PM Peak Hour

INTERSECTION	APPROACH	2021 Existing Traffic		2023 Background Traffic		2023 Background plus Site Traffic		2021 Existing Traffic		2023 Background Traffic		2023 Background plus Site Traffic	
		AM PEAK HOUR		AM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR		PM PEAK HOUR		PM PEAK HOUR	
		DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS	DELAY (SEC/VEH)	LOS
Signalized Intersection													
Sids Road & Goliad Road	EB	24.6	C	24.7	C	24.7	C	34.4	C	34.4	C	36.1	D
	WB	34.0	C	34.2	C	34.1	C	32.2	C	32.2	C	31.8	C
	NB	21.8	C	23.3	C	23.2	C	24.9	C	24.9	C	25.2	C
	SB	17.9	B	20.9	C	23.2	C	12.7	B	12.7	B	13.0	B
	Overall	**25.5**	**C**	**26.7**	**C**	**27.4**	**C**	**29.3**	**C**	**29.3**	**C**	**29.8**	**C**
Unsignalized Intersection													
Mims Road & Sids Road	EBL	7.4	A	7.5	A	7.5	A	7.6	A	7.6	A	7.7	A
	SB	9.8	A	9.9	A	10.0	A	9.3	A	9.3	A	9.3	A
Goliad Road & Mims Road	EB	8.5	A	8.5	A	8.5	A	8.4	A	8.4	A	8.4	A
	NBL	7.3	A	7.3	A	7.3	A	7.3	A	7.3	A	7.3	A
Sids Road & Drive 1	WB	9.0	A	9.0	A	9.0	A	11.3	B	11.3	B	11.0	B
	SBL	-	-	-	-	7.5	A	7.8	A	7.8	A	7.8	A
Sids Road & Drive 2	EB	0.0	A	0.0	A	0.0	A	13.7	B	13.7	B	13.9	B
	WB	9.6	A	9.8	A	9.5	A	11.4	B	11.4	B	11.1	B
	NBL	-	-	-	-	-	-	-	-	-	-	-	-
	SBL	7.5	A	7.5	A	7.5	A	7.8	A	7.8	A	7.8	A
Sids Road & Drive 3	EB	-	-	-	-	-	-	12.8	B	12.8	B	13.1	B
	WB	8.9	A	8.9	A	9.0	A	12.0	B	12.0	B	11.4	B
	NBL	8.0	A	8.0	A	8.0	A	7.7	A	7.7	A	7.7	A
	SBL	7.5	A	7.5	A	7.5	A	7.9	A	7.9	A	7.9	A
Sids Road & Drive 4	WB	-	-	-	-	9.2	A	-	-	-	-	10.3	B
	SBL	-	-	-	-	7.6	A	-	-	-	-	8.0	A
Goliad Road & Drive 5	NBT	-	-	-	-	13.6	B	-	-	-	-	16.6	C
Mims Road & National Drive / Drive 6	EBL	-	-	-	-	-	-	-	-	-	-	-	-
	WBL	-	-	-	-	-	-	7.3	A	7.3	A	7.3	A
	NBT	8.6	A	8.6	A	8.6	A	8.7	A	8.7	A	8.7	A
	SBT	-	-	-	-	9.8	A	-	-	-	-	9.4	A

- No traffic movements in this analysis scenario

C. Traffic Operations

The results in **Table 3** show the intersection operational results for the weekday AM and PM peak hours. After the site-generated traffic is added to the roadway network, each approach operates at the same LOS and negligible increase in delay during both the AM and PM peak hours. The signalized intersection of Goliad Street and Sids Road performs at LOS C in the peak hours representing favorable operations; the analysis demonstrates that the site traffic can be incorporated into the roadway network with very limited disturbances to the existing traffic flow. The existing driveways remain operating with low delays and the proposed driveways are all expected to perform with low delays at LOS B or better. These results indicate favorable operations and that the development is provided the appropriate amount of access.

D. Link Volume Analysis

The volume to capacity ratio (V/C) of Sids Road and Goliad Street was calculated for the 2022 existing traffic and the 2024 background and background plus site traffic scenarios. The daily link capacity for each roadway is taken from the NTCOG model capacity volumes assuming the rural area type, Sids Road, as a secondary arterial, has a capacity of 875 vehicles per hour per lane (vphpl). Goliad Street, as a primary arterial, has a capacity of 925 vehicles per hour per lane (vphpl).

The link analyses displayed in **Table 4** shows that Sids Road currently operates with ample capacity of LOS A/B with current traffic volumes. After the traffic from the background growth and the project site are added to the network, the roadway continues to operate at a LOS A/B through the build-out of the site in 2024. Goliad Street currently operates with acceptable capacity of LOS D in a two-lane configuration with current traffic volumes. After the traffic from the background growth and the project site are added to the network, the roadway continues to operate at a LOS D through the build-out of the site in 2024.

The site as proposed does not have a significant negative impact on the link capacities of the study roadways.

Table 4 – Link Operational Results

Analysis Year	Roadway	Segment	Number of Lanes	Capacity	Background Volume	V/C	LOS	Back+Site Volume	V/C	LOS
2022	Sids Road	Mims Road to Goliad Street	2	17,500	11,423	0.65	D	-	-	-
	Goliad Street	Sids Road to Mims Road	2	17,500	2,339	0.13	A/B	-	-	-
2024	Sids Road	Mims Road to Goliad Street	2	17,500	12,166	0.70	D	12,500	0.71	D
	Goliad Street	Sids Road to Mims Road	2	17,500	2,491	0.14	A/B	2,571	0.15	A/B

E. Right-Turn Lane Analysis

Where justified, the addition of right-turn deceleration lanes can help inbound turning vehicles separate from the through traffic, avoiding conflicts and smoothing traffic flow. The TxDOT *Access Management Manual* sets forth criteria for auxiliary lanes on TxDOT roadways. Per Table 2.3 (Auxiliary Lane Thresholds), a right-turn deceleration lane should be considered on roads with a posted speed less than or equal to 45 MPH if the projected right-turn volume into a driveway is greater than 60 vehicles per hour. **Table 5** shows the driveway locations with right-turn driveway access to the site, and how they compare with the TxDOT threshold. The high inbound volume occurs in the PM peak hour for every driveway in this analysis.

In consideration to these recommendations and TxDOT criterion, a right-turn lane is not recommended at any of the site driveways.

Table 5 – Right-Turn Lane Analysis

Right-Turn Location	Projected Maximum Peak Hour Right-Turn Volume	TxDOT Threshold (Access Management Manual, Table 2-3)	Right-Turn Lane Recommended?
Drive 1 from Sids Road	4 vph	60 vph	No
Drive 2 from Sids Road	1 vph	60 vph	No
Drive 3 from Sids Road	3 vph	60 vph	No
Drive 4 from Sids Road	0 vph	60 vph	No
Drive 5 from Goliad Street	2 vph	50 vph	No
Drive 6 from Mims Road	3 vph	60 vph	No

V.CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this report, the proposed Rayburn Electric Cooperative Campus Expansion development can be successfully incorporated into the surrounding roadway network. The proposed site driveways provide the appropriate level of access for the development. The site-generated traffic does not have a significant or disproportionate effect on the existing vehicle traffic operations.

The following recommendations should be included in the development of the site:

1. Construct Drive 4 to Goliad Street as a right-in/right-out driveway due to not meeting TxDOT driveway access spacing.

Kimley»Horn

TRAFFIC COUNTS AND HISTORICAL DATA

Lineman Building - Rockwall, Texas

Historical Link Volumes and Growth Rates

Goliad Street						
Record	**Year**	**Link Start**	**Link End**	**Source**	**24-Hour Volume**	**Annual Growth Rate**
1	2011	Lochspring Drive	SH 276	TxDOT	20,696	-
2	2013	Lochspring Drive	SH 276	TxDOT	23,328	6.2%
3	2014	Lochspring Drive	SH 276	TxDOT	21,981	-5.8%
4	2015	Lochspring Drive	SH 276	TxDOT	23,046	4.8%
5	2016	Lochspring Drive	SH 276	TxDOT	24,309	5.5%
6	2017	Lochspring Drive	SH 276	TxDOT	26,274	8.1%
7	2018	Lochspring Drive	SH 276	TxDOT	26,568	1.1%
8	2019	Lochspring Drive	SH 276	TxDOT	26,846	1.0%
9	2020	Lochspring Drive	SH 276	TxDOT	26,590	-1.0%
10	2021	Lochspring Drive	SH 276	TxDOT	27,992	5.3%
					Average Growth 2011 - 2021:	**3.0%**

Mims Road						
Record	**Year**	**Link Start**	**Link End**	**Source**	**24-Hour Volume**	**Annual Growth Rate**
1	2009	Goliad Street	Sids Road	TxDOT	1,143	-
2	2014	Goliad Street	Sids Road	TxDOT	1,353	3.4%
					Average Growth 2009 - 2014:	**3.4%**

Average Annual Growth:	**3.2%**

National Data & Surveying Services Intersection Turning Movement Count

Location: Rayburn County Electric Middle Dwy & Sids Rd
City: Rockwall
Control: No Control

Project ID: 22-470030-006
Date: 9/20/2022

Data - Totals

NS/EW Streets:	Rayburn County Electric Middle Dwy				Rayburn County Electric Middle Dwy				Sids Rd				Sids Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	0	0	0	0	0	20	0	0	1	19	0	0	40
6:45 AM	0	0	0	0	0	0	0	0	0	12	0	0	2	17	0	0	31
7:00 AM	0	0	0	0	0	0	0	0	0	14	0	0	1	27	0	0	42
7:15 AM	0	0	1	0	0	0	0	0	0	23	0	0	0	42	0	0	66
7:30 AM	0	0	0	0	0	0	0	0	0	32	0	0	1	47	0	0	80
7:45 AM	1	0	1	0	0	0	0	0	0	38	0	0	1	74	1	0	116
8:00 AM	0	0	1	0	0	0	0	0	0	23	0	0	2	93	2	0	121
8:15 AM	0	0	0	0	0	0	0	0	0	25	0	0	0	77	2	0	104
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	3	0	0	0	0	0	0	187	0	0	8	396	5	0	600
APPROACH %'s :	25.00%	0.00%	75.00%	0.00%					0.00%	100.00%	0.00%	0.00%	1.96%	96.82%	1.22%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	1	0	2	0	0	0	0	0	0	118	0	0	4	291	5	0	421
PEAK HR FACTOR :	0.250	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.776	0.000	0.000	0.500	0.782	0.625	0.000	0.870
	0.375				0.000				0.776				0.773				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	0	0	0	0	0	0	0	0	62	0	0	0	31	0	0	93
4:45 PM	0	0	2	0	1	0	0	0	0	55	0	0	0	51	0	0	109
5:00 PM	1	0	0	0	1	0	0	0	0	59	0	0	0	51	0	0	112
5:15 PM	2	0	0	0	0	0	0	0	0	59	0	0	1	42	0	0	104
5:30 PM	0	0	2	0	0	0	0	0	0	60	0	0	0	43	0	0	105
5:45 PM	0	0	0	0	1	0	0	0	0	46	0	0	0	37	0	0	84
6:00 PM	0	0	0	0	0	0	0	0	0	50	0	0	0	31	0	0	81
6:15 PM	0	0	1	0	0	0	0	0	0	43	0	0	0	37	0	0	81
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	0	5	0	3	0	0	0	0	434	0	0	1	323	0	0	769
APPROACH %'s :	37.50%	0.00%	62.50%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.31%	99.69%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	3	0	4	0	2	0	0	0	0	233	0	0	1	187	0	0	430
PEAK HR FACTOR :	0.375	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.971	0.000	0.000	0.250	0.917	0.000	0.000	0.960
	0.875				0.500				0.971				0.922				

National Data & Surveying Services Intersection Turning Movement Count

Location: Rayburn County Electric West Dwy & Sids Rd
City: Rockwall
Control: No Control

Project ID: 22-470030-005
Date: 9/20/2022

Data - Totals

NS/EW Streets:	Rayburn County Electric West Dwy				Rayburn County Electric West Dwy				Sids Rd				Sids Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	0	0	0	0	0	20	0	0	2	17	0	0	39
6:45 AM	0	0	0	0	0	0	0	0	0	12	0	0	0	17	0	0	29
7:00 AM	0	0	0	0	0	0	0	0	0	15	0	0	1	26	0	0	42
7:15 AM	0	0	0	0	0	0	0	0	0	23	4	0	2	39	0	0	68
7:30 AM	0	0	1	0	0	0	0	0	0	30	0	0	2	46	0	0	79
7:45 AM	0	0	1	0	0	0	0	0	0	37	1	0	2	72	0	0	113
8:00 AM	0	0	0	0	0	0	0	0	0	23	2	0	5	89	0	0	119
8:15 AM	0	0	0	0	0	0	0	0	0	25	0	0	0	76	0	0	101
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	2	0	0	0	0	0	0	185	7	0	14	382	0	0	590
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%					0.00%	96.35%	3.65%	0.00%	3.54%	96.46%	0.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	2	0	0	0	0	0	0	115	3	0	9	283	0	0	412
PEAK HR FACTOR :	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.777	0.375	0.000	0.450	0.795	0.000	0.000	0.866
	0.500								0.776				0.777				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	0	1	0	0	0	0	0	0	58	0	0	0	31	0	0	90
4:45 PM	0	0	0	0	0	0	0	0	0	54	0	0	0	50	0	0	104
5:00 PM	4	0	3	0	0	0	0	0	0	56	0	0	0	52	0	0	115
5:15 PM	0	0	3	0	0	0	0	0	0	56	0	0	0	44	0	0	103
5:30 PM	1	0	3	0	0	0	0	0	0	57	0	0	0	43	0	0	104
5:45 PM	0	0	0	0	0	0	0	0	0	46	0	0	0	37	0	0	83
6:00 PM	0	0	0	0	0	0	0	0	0	50	0	0	0	31	0	0	81
6:15 PM	0	0	0	0	0	0	0	0	0	44	0	0	0	38	0	0	82
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	0	10	0	0	0	0	0	0	421	0	0	0	326	0	0	762
APPROACH %'s :	33.33%	0.00%	66.67%	0.00%					0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	5	0	9	0	0	0	0	0	0	223	0	0	0	189	0	0	426
PEAK HR FACTOR :	0.313	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.978	0.000	0.000	0.000	0.909	0.000	0.000	0.926
	0.500								0.978				0.909				

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 205/S Goliad St & Mims Rd
City: Rockwall
Control: 1-Way Stop(EB)

Project ID: 22-470030-004
Date: 9/20/2022

Data - Totals

NS/EW Streets:	SR 205/S Goliad St				SR 205/S Goliad St				Mims Rd				Mims Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	2	193	0	0	0	90	9	0	8	0	0	0	0	0	0	0	302
6:45 AM	7	202	0	0	0	72	15	0	1	0	0	0	0	0	0	0	297
7:00 AM	5	216	0	0	0	94	10	0	6	0	0	0	0	0	0	0	331
7:15 AM	2	195	0	0	0	119	16	0	4	0	3	0	0	0	0	0	339
7:30 AM	10	201	0	0	0	121	10	0	8	0	3	0	0	0	0	0	353
7:45 AM	1	210	0	1	0	161	15	0	5	0	6	0	0	0	0	0	399
8:00 AM	6	210	0	0	0	128	13	0	4	0	4	0	0	0	0	0	365
8:15 AM	5	171	0	0	0	137	10	0	8	0	5	0	0	0	0	0	336
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	38	1598	0	1	0	922	98	0	44	0	21	0	0	0	0	0	2722
APPROACH %'s :	2.32%	97.62%	0.00%	0.06%	0.00%	90.39%	9.61%	0.00%	67.69%	0.00%	32.31%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	19	816	0	1	0	529	54	0	21	0	16	0	0	0	0	0	1456
PEAK HR FACTOR :	0.475	0.971	0.000	0.250	0.000	0.821	0.844	0.000	0.656	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.912
		0.968				0.828				0.841							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	3	159	0	0	0	194	10	0	7	0	5	0	0	0	0	0	378
4:45 PM	2	154	0	0	0	198	2	0	10	0	7	0	0	0	0	0	373
5:00 PM	2	186	0	0	0	177	5	0	22	0	4	0	0	0	0	0	396
5:15 PM	2	188	0	0	0	165	3	0	7	0	4	0	0	0	0	0	369
5:30 PM	4	155	0	0	0	202	6	0	5	0	10	0	0	0	0	0	382
5:45 PM	2	152	0	0	0	210	9	0	5	0	1	0	0	0	0	0	379
6:00 PM	3	176	0	0	0	211	4	0	5	0	3	0	0	0	0	0	402
6:15 PM	1	144	0	0	0	202	4	0	2	0	0	0	0	0	0	0	353
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	19	1314	0	0	0	1559	43	0	63	0	34	0	0	0	0	0	3032
APPROACH %'s :	1.43%	98.57%	0.00%	0.00%	0.00%	97.32%	2.68%	0.00%	64.95%	0.00%	35.05%	0.00%					
PEAK HR :	05:15 PM - 06:15 PM																TOTAL
PEAK HR VOL :	11	671	0	0	0	788	22	0	22	0	18	0	0	0	0	0	1532
PEAK HR FACTOR :	0.688	0.892	0.000	0.000	0.000	0.934	0.611	0.000	0.786	0.000	0.450	0.000	0.000	0.000	0.000	0.000	0.953
		0.897				0.925				0.667							

National Data & Surveying Services Intersection Turning Movement Count

Location: National Dr & Mims Rd
City: Rockwall
Control: 1-Way Stop(NB)

Project ID: 22-470030-003
Date: 9/27/2022

Data - Totals

NS/EW Streets:	National Dr				National Dr				Mims Rd				Mims Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	5	0	0	0	0	0	0	0	3	0	8	0	0	0	16
6:45 AM	0	0	3	0	0	0	0	0	0	0	0	0	11	0	0	0	14
7:00 AM	1	0	5	0	0	0	0	0	0	0	1	0	5	0	0	0	12
7:15 AM	0	0	4	0	0	0	0	0	0	0	1	0	2	0	0	0	7
7:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4
7:45 AM	1	0	2	0	0	0	0	0	0	0	1	0	5	2	0	0	11
8:00 AM	0	0	2	0	0	0	0	0	0	0	2	0	5	8	0	0	17
8:15 AM	0	0	4	0	0	0	0	0	0	3	0	0	7	5	0	1	20
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	0	25	0	0	0	0	0	0	3	8	0	46	15	0	1	101
APPROACH %'s :	10.71%	0.00%	89.29%	0.00%					0.00%	27.27%	72.73%	0.00%	74.19%	24.19%	0.00%	1.61%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	2	0	8	0	0	0	0	0	0	3	3	0	20	15	0	1	52
PEAK HR FACTOR :	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.375	0.000	0.714	0.469	0.000	0.250	0.650
	0.625								0.500				0.692				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	1	0	10	0	0	0	0	0	0	5	3	0	3	3	0	0	25
4:45 PM	0	0	7	0	0	0	0	0	0	4	2	0	3	2	0	0	18
5:00 PM	1	0	14	0	0	0	0	0	0	1	2	0	5	2	0	0	25
5:15 PM	1	0	8	0	0	0	0	0	0	2	0	0	5	1	0	0	17
5:30 PM	0	0	3	0	0	0	0	0	0	5	2	0	6	2	0	0	18
5:45 PM	0	0	2	0	0	0	0	0	0	3	1	0	7	0	0	0	13
6:00 PM	1	0	7	0	0	0	0	0	0	0	0	0	0	2	0	0	10
6:15 PM	0	0	1	0	0	0	0	0	0	0	1	0	1	1	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	0	52	0	0	0	0	0	0	20	11	0	30	13	0	0	130
APPROACH %'s :	7.14%	0.00%	92.86%	0.00%					0.00%	64.52%	35.48%	0.00%	69.77%	30.23%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	3	0	39	0	0	0	0	0	0	12	7	0	16	8	0	0	85
PEAK HR FACTOR :	0.750	0.000	0.696	0.000	0.000	0.000	0.000	0.000	0.000	0.600	0.583	0.000	0.800	0.667	0.000	0.000	0.850
	0.700								0.594				0.857				

National Data & Surveying Services Intersection Turning Movement Count

Location: Mims Rd & Sids Rd
City: Rockwall
Control: 1-Way Yield(WB)

Project ID: 22-470030-002
Date: 9/20/2022

Data - Totals

NS/EW Streets:	Mims Rd				Mims Rd				Sids Rd				Sids Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	21	1	0	0	0	0	0	0	0	0	19	0	41
6:45 AM	0	0	0	0	13	0	0	0	0	0	0	0	0	0	16	0	29
7:00 AM	0	0	0	0	15	3	0	0	0	0	0	0	0	0	26	0	44
7:15 AM	0	1	1	0	25	1	0	0	0	0	0	0	0	0	39	0	67
7:30 AM	0	2	0	0	30	3	0	0	0	0	0	0	0	0	46	0	81
7:45 AM	0	0	0	0	38	2	0	0	0	0	0	0	0	0	72	0	112
8:00 AM	0	3	0	0	25	3	0	0	0	0	0	0	0	0	89	0	120
8:15 AM	0	2	0	0	27	4	0	0	0	0	0	0	0	0	77	0	110
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	8	1	0	194	17	0	0	0	0	0	0	0	0	384	0	604
APPROACH %'s :	0.00%	88.89%	11.11%	0.00%	91.94%	8.06%	0.00%	0.00%					0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	7	0	0	120	12	0	0	0	0	0	0	0	0	284	0	423
PEAK HR FACTOR :	0.000	0.583	0.000	0.000	0.789	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.798	0.000	0.881
	0.583				0.825								0.798				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	0	0	0	59	3	0	0	0	0	0	0	0	0	31	0	93
4:45 PM	0	1	1	0	51	4	0	0	0	0	0	0	0	0	49	0	106
5:00 PM	0	2	1	0	55	0	0	0	0	0	0	0	2	0	55	0	115
5:15 PM	0	2	1	0	53	1	0	0	0	0	0	0	0	0	43	0	100
5:30 PM	0	3	0	0	58	1	0	0	0	0	0	0	0	0	45	0	107
5:45 PM	0	0	0	0	47	1	0	0	0	0	0	0	0	0	37	1	86
6:00 PM	0	0	1	0	46	1	0	0	0	0	0	0	0	0	31	0	79
6:15 PM	0	3	0	0	46	1	0	0	0	0	0	0	0	0	37	0	87
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	11	4	0	415	12	0	0	0	0	0	0	2	0	328	1	773
APPROACH %'s :	0.00%	73.33%	26.67%	0.00%	97.19%	2.81%	0.00%	0.00%					0.60%	0.00%	99.09%	0.30%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	8	3	0	217	6	0	0	0	0	0	0	2	0	192	0	428
PEAK HR FACTOR :	0.000	0.667	0.750	0.000	0.935	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.873	0.000	0.930
	0.917				0.945								0.851				

National Data & Surveying Services Intersection Turning Movement Count

Location: Rayburn County Electric East Dwy & Sids Rd
City: Rockwall
Control: No Control

Project ID: 22-470030-007
Date: 9/20/2022

Data - Totals

NS/EW Streets:	Rayburn County Electric East Dwy				Rayburn County Electric East Dwy				Sids Rd				Sids Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	0	0	0	0	0	0	0	2	29	0	0	1	15	1	0	48
6:45 AM	0	0	0	0	0	0	0	0	0	16	1	0	1	18	0	0	36
7:00 AM	0	0	0	0	0	0	0	0	0	20	0	0	2	29	1	0	52
7:15 AM	0	0	2	0	0	0	0	0	0	24	0	0	0	41	1	0	68
7:30 AM	0	0	1	0	0	0	0	0	0	32	0	0	1	46	3	0	83
7:45 AM	0	0	0	0	0	0	0	0	0	37	2	0	3	74	2	0	118
8:00 AM	0	0	0	0	0	0	0	0	1	23	0	0	1	96	0	0	121
8:15 AM	0	0	0	0	0	0	0	0	8	18	0	0	0	78	1	0	105
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	3	0	0	0	0	0	11	199	3	0	9	397	9	0	631
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%					5.16%	93.43%	1.41%	0.00%	2.17%	95.66%	2.17%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	1	0	0	0	0	0	9	110	2	0	5	294	6	0	427
PEAK HR FACTOR :	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.281	0.743	0.250	0.000	0.417	0.766	0.500	0.000	0.882
	0.250				0.000				0.776				0.786				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	0	1	0	0	0	0	0	7	60	0	0	0	30	6	0	104
4:45 PM	3	0	0	0	0	0	0	0	3	69	0	0	2	45	14	0	136
5:00 PM	0	0	2	0	0	0	0	0	4	77	0	0	0	42	10	0	135
5:15 PM	0	0	0	0	4	0	0	0	0	70	0	0	1	38	4	0	117
5:30 PM	1	0	1	0	1	1	0	0	1	62	1	0	0	42	1	0	111
5:45 PM	0	0	1	0	0	0	0	0	0	50	0	0	0	37	2	0	90
6:00 PM	1	0	1	0	2	0	0	0	0	52	0	0	0	30	4	0	90
6:15 PM	0	0	0	0	0	0	0	0	0	46	0	0	0	36	1	0	83
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	0	6	0	7	1	0	0	15	486	1	0	3	300	42	0	866
APPROACH %'s :	45.45%	0.00%	54.55%	0.00%	87.50%	12.50%	0.00%	0.00%	2.99%	96.81%	0.20%	0.00%	0.87%	86.96%	12.17%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	4	0	3	0	5	1	0	0	8	278	1	0	3	167	29	0	499
PEAK HR FACTOR :	0.333	0.000	0.375	0.000	0.313	0.250	0.000	0.000	0.500	0.903	0.250	0.000	0.375	0.928	0.518	0.000	0.917
	0.583				0.375				0.886				0.816				

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 205/S Goliad St & SR 276/Sids Rd
City: Rockwall
Control: Signalized

Project ID: 22-470030-001
Date: 9/20/2022

Data - Totals

NS/EW Streets: SR 205/S Goliad St | SR 205/S Goliad St | SR 276/Sids Rd | SR 276/Sids Rd

AM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 AM	0	13	1	0	4	14	1	0	0	1	1	0	0	0	3	0	38
12:15 AM	0	6	1	0	7	17	0	1	0	0	1	0	0	1	1	0	35
12:30 AM	0	4	2	0	3	18	0	0	1	1	0	0	0	1	5	0	35
12:45 AM	0	4	0	0	0	7	0	0	0	0	0	0	0	0	2	0	13
1:00 AM	0	5	0	0	2	6	0	0	0	0	0	0	1	0	1	0	15
1:15 AM	0	8	0	0	4	6	0	0	0	1	0	0	0	0	2	0	21
1:30 AM	0	6	0	0	0	5	1	0	0	0	1	0	0	0	2	0	15
1:45 AM	0	3	0	0	1	8	1	0	0	1	0	0	1	1	3	0	19
2:00 AM	0	7	0	0	1	2	1	0	0	0	1	0	0	0	2	0	14
2:15 AM	0	7	0	0	0	5	0	0	0	0	0	0	0	0	1	0	13
2:30 AM	0	5	0	0	3	6	0	0	0	0	0	0	2	0	0	0	16
2:45 AM	0	9	0	0	1	4	0	0	0	0	0	0	0	0	1	0	15
3:00 AM	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0	0	9
3:15 AM	0	6	0	0	0	2	0	0	0	0	0	0	0	1	2	0	11
3:30 AM	1	7	0	0	2	3	0	0	0	0	0	0	0	0	0	0	13
3:45 AM	0	12	0	0	0	2	0	0	0	1	0	0	0	0	2	0	17
4:00 AM	0	20	0	0	1	9	0	0	0	0	0	0	0	0	4	0	34
4:15 AM	0	24	0	0	0	4	1	0	0	0	0	0	1	1	6	0	37
4:30 AM	0	21	0	0	1	16	1	0	0	0	0	0	0	0	8	0	47
4:45 AM	1	42	0	0	3	12	1	0	0	1	1	0	0	4	13	0	78
5:00 AM	3	54	1	0	3	11	4	0	1	1	1	0	1	2	7	0	89
5:15 AM	2	68	0	0	2	26	2	0	1	2	0	0	2	5	21	0	131
5:30 AM	3	94	1	0	5	28	2	0	1	3	2	0	1	3	15	0	158
5:45 AM	2	111	0	0	3	36	14	0	1	1	1	0	3	13	24	0	209
6:00 AM	3	145	1	0	5	29	5	0	4	5	5	0	4	9	41	0	256
6:15 AM	3	161	2	0	6	45	5	0	3	6	11	0	7	10	39	0	298
6:30 AM	6	210	4	0	9	84	4	0	1	13	14	0	10	9	60	0	424
6:45 AM	6	216	3	0	13	68	3	0	2	7	9	0	14	16	79	0	436
7:00 AM	13	241	3	0	15	115	3	0	3	12	3	0	7	16	95	0	526
7:15 AM	12	212	8	0	20	111	2	0	1	13	13	0	13	34	105	0	544
7:30 AM	9	213	5	0	27	134	5	0	2	23	7	0	13	39	121	0	598
7:45 AM	9	208	2	0	30	130	2	0	4	24	12	0	18	68	129	0	636
8:00 AM	19	211	4	0	32	132	4	1	2	16	4	0	17	82	148	0	672
8:15 AM	11	188	4	0	24	142	6	1	3	8	7	0	11	61	151	0	617
8:30 AM	19	148	7	0	25	109	4	0	5	15	9	0	19	49	132	0	541
8:45 AM	17	173	1	0	32	142	6	0	18	14	8	0	9	42	122	0	584
9:00 AM	9	207	9	0	27	113	3	0	7	14	11	0	7	32	99	0	538
9:15 AM	10	172	2	0	35	117	6	0	7	10	8	0	6	26	89	0	488
9:30 AM	3	162	7	0	52	133	6	0	7	15	8	0	3	28	68	0	492
9:45 AM	5	170	3	0	28	103	5	0	1	16	7	0	1	29	60	0	428
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	166	3577	71	0	426	1959	98	3	75	224	145	0	171	582	1663	0	9160
APPROACH %'s :	4.35%	93.79%	1.86%	0.00%	17.14%	78.80%	3.94%	0.12%	16.89%	50.45%	32.66%	0.00%	7.08%	24.09%	68.83%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	48	820	15	0	113	538	17	2	11	71	30	0	59	250	549	0	2523
PEAK HR FACTOR :	0.632	0.962	0.750	0.000	0.883	0.947	0.708	0.500	0.688	0.740	0.625	0.000	0.819	0.762	0.909	0.000	0.939
	0.943				0.968				0.700				0.868				

NOON

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
10:00 AM	8	192	4	0	23	101	1	0	4	8	10	0	4	14	59	0	428
10:15 AM	8	164	0	0	25	102	6	0	4	10	8	0	4	19	56	0	406
10:30 AM	10	147	4	0	28	124	5	0	2	23	17	0	3	17	60	0	440
10:45 AM	3	163	1	0	25	138	0	0	5	20	10	0	6	17	60	0	448
11:00 AM	7	152	3	0	28	111	4	0	3	14	12	0	7	20	60	0	421
11:15 AM	3	173	3	0	45	147	9	0	3	20	2	0	2	14	52	0	473
11:30 AM	14	171	6	0	35	144	4	0	6	18	16	0	4	17	48	0	483
11:45 AM	4	160	7	0	37	138	3	0	11	17	9	0	5	25	68	0	484
12:00 PM	4	153	5	0	36	188	10	0	8	14	12	0	4	12	72	0	518
12:15 PM	10	193	2	0	38	141	7	0	5	20	18	0	4	26	70	0	534
12:30 PM	11	139	3	0	38	156	5	0	4	25	15	0	8	26	72	1	503
12:45 PM	10	140	6	0	40	140	10	0	8	30	17	0	2	23	53	0	479
1:00 PM	12	146	2	0	43	148	8	0	4	20	9	0	5	15	73	0	485
1:15 PM	10	128	2	0	47	179	10	0	8	23	16	0	3	15	55	0	496
1:30 PM	4	166	5	0	47	147	12	0	4	24	21	0	11	27	56	1	525
1:45 PM	6	144	4	0	39	171	15	0	0	16	16	0	7	24	54	0	496
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	124	2531	57	0	574	2275	109	0	79	302	208	0	79	311	968	2	7619
APPROACH %'s :	4.57%	93.33%	2.10%	0.00%	19.41%	76.91%	3.68%	0.00%	13.41%	51.27%	35.31%	0.00%	5.81%	22.87%	71.18%	0.15%	
PEAK HR :	11:45 AM - 12:45 PM																TOTAL
PEAK HR VOL :	29	645	17	0	149	623	25	0	28	76	54	0	21	89	282	1	2039
PEAK HR FACTOR :	0.659	0.835	0.607	0.000	0.980	0.828	0.625	0.000	0.636	0.760	0.750	0.000	0.656	0.856	0.979	0.250	0.955
	0.843				0.851				0.898				0.918				

PM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:00 PM	10	130	11	0	46	171	7	1	6	27	12	0	3	31	48	0	503
2:15 PM	5	147	8	0	39	159	3	0	7	35	27	0	3	17	52	0	502
2:30 PM	10	127	5	0	49	164	1	0	4	34	18	0	4	18	60	0	494
2:45 PM	13	165	5	0	56	179	2	0	5	24	16	0	7	17	62	0	551
3:00 PM	11	188	5	0	52	166	3	0	2	19	9	0	6	31	47	0	539
3:15 PM	11	136	4	0	65	161	2	0	2	28	17	0	7	22	46	0	501
3:30 PM	6	150	5	0	33	186	4	0	3	21	17	0	6	23	46	0	500
3:45 PM	9	163	9	0	52	156	9	0	4	23	18	0	12	29	53	0	537
4:00 PM	10	142	7	0	58	193	3	0	5	38	21	0	12	25	37	0	551
4:15 PM	13	145	14	0	55	185	3	0	3	21	24	0	8	20	51	0	542
4:30 PM	10	152	12	0	52	191	4	0	2	40	23	0	18	26	49	0	579
4:45 PM	22	178	6	0	53	176	3	0	7	31	29	0	6	40	48	0	599
5:00 PM	13	199	15	0	63	182	6	0	9	43	23	0	6	34	47	0	640
5:15 PM	7	183	8	0	61	141	3	1	9	55	16	0	9	27	52	0	572
5:30 PM	3	176	7	0	65	207	6	0	4	37	21	0	9	28	69	0	632
5:45 PM	9	148	9	0	60	181	2	0	5	29	19	0	26	27	58	0	573
6:00 PM	7	176	10	0	59	206	2	0	5	29	26	0	10	26	50	1	607
6:15 PM	6	156	4	0	48	201	3	0	1	24	22	0	13	23	52	0	553
6:30 PM	9	166	10	0	52	204	1	0	4	31	21	0	9	20	51	0	578
6:45 PM	3	151	13	0	54	221	1	0	3	23	14	0	11	22	35	0	551
7:00 PM	7	136	9	0	48	218	2	0	4	16	17	0	10	15	27	0	509
7:15 PM	9	128	4	0	37	178	1	0	0	15	22	0	11	12	33	0	450
7:30 PM	5	112	6	0	39	209	0	0	1	18	25	0	11	7	32	0	465
7:45 PM	4	103	4	0	35	175	2	0	0	12	11	0	7	9	34	1	397
8:00 PM	5	102	8	0	48	165	2	0	0	12	13	0	5	8	30	0	398
8:15 PM	1	111	5	0	36	162	0	0	0	18	15	0	5	7	23	0	383
8:30 PM	5	108	5	0	37	176	0	0	2	16	12	0	5	6	21	0	393
8:45 PM	2	85	4	0	44	144	0	0	2	12	18	0	5	4	8	0	328
9:00 PM	0	67	3	0	36	114	0	0	1	4	5	0	2	3	11	0	246
9:15 PM	0	41	2	0	30	91	0	0	2	5	10	0	2	6	14	1	204
9:30 PM	2	67	4	0	21	90	1	0	0	5	3	0	2	0	13	0	208
9:45 PM	0	37	0	0	15	70	1	0	0	5	1	0	1	8	7	0	145
10:00 PM	2	39	0	0	10	65	0	0	0	4	3	0	3	1	9	0	136
10:15 PM	2	31	1	0	16	66	1	1	1	3	1	0	2	2	8	0	135
10:30 PM	2	34	7	0	12	41	1	0	2	5	1	0	4	2	7	0	118
10:45 PM	0	21	1	0	14	26	0	0	0	1	5	0	1	1	6	0	76
11:00 PM	0	15	2	0	8	25	0	0	0	1	1	0	3	1	7	0	63
11:15 PM	0	10	0	0	7	25	0	1	0	2	1	0	0	1	2	0	49
11:30 PM	0	8	1	0	7	19	0	0	0	0	0	0	0	0	2	0	37
11:45 PM	0	6	0	0	6	8	0	0	0	0	0	0	0	0	2	0	22
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	233	4439	233	0	1578	5697	79	4	105	766	557	0	264	599	1309	3	15866
APPROACH %'s :	4.75%	90.50%	4.75%	0.00%	21.45%	77.43%	1.07%	0.05%	7.35%	53.64%	39.01%	0.00%	12.14%	27.54%	60.18%	0.14%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	45	736	36	0	242	706	18	1	29	166	89	0	30	129	216	0	2443
PEAK HR FACTOR :	0.511	0.925	0.600	0.000	0.931	0.853	0.750	0.250	0.806	0.755	0.767	0.000	0.833	0.806	0.783	0.000	0.954
	0.900				0.870				0.888				0.884				

Kimley»Horn

Synchro™ Output - 2022 Existing Traffic

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	2	113	538	17	48	820	15	11	71	30	59	250
Future Volume (vph)	2	113	538	17	48	820	15	11	71	30	59	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.956			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1781	0	1770	1863
Flt Permitted		0.127			0.328			0.510			0.687	
Satd. Flow (perm)	0	237	3539	1583	611	3539	1583	950	1781	0	1280	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		18			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			908			822
Travel Time (s)			7.7			15.3			20.6			18.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	2	120	572	18	51	872	16	12	76	32	63	266
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	572	18	51	872	16	12	108	0	63	266
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

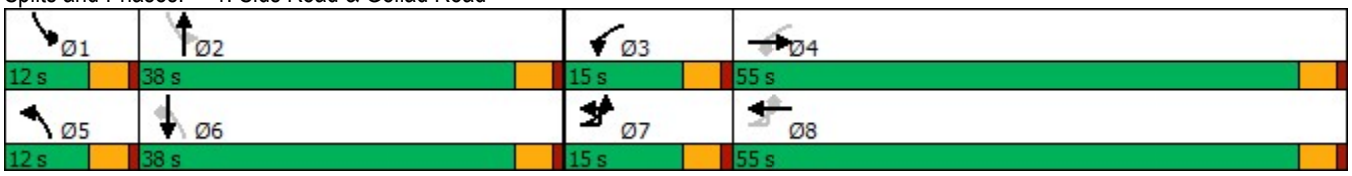
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	549
Future Volume (vph)	549
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	326
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.94
Adj. Flow (vph)	584
Shared Lane Traffic (%)	
Lane Group Flow (vph)	584
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	CI+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		39.3	34.9	34.9	40.5	30.3	30.3	42.3	34.2		39.7	41.1
Actuated g/C Ratio		0.41	0.36	0.36	0.42	0.31	0.31	0.44	0.36		0.41	0.43
v/c Ratio		0.51	0.45	0.03	0.15	0.78	0.03	0.03	0.17		0.11	0.33
Control Delay		23.3	25.7	0.1	15.8	35.7	0.1	17.9	22.2		18.2	22.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		23.3	25.7	0.1	15.8	35.7	0.1	17.9	22.2		18.2	22.8
LOS		C	C	A	B	D	A	B	C		B	C
Approach Delay			24.6			34.0			21.8			17.9
Approach LOS			C			C			C			B
Queue Length 50th (ft)		44	150	0	18	264	0	4	39		22	103
Queue Length 95th (ft)		77	203	0	38	338	0	17	91		55	231
Internal Link Dist (ft)			425			933			828			742
Turn Bay Length (ft)		285			185		265	285			330	
Base Capacity (vph)		272	1897	892	400	1897	892	484	644		569	796
Starvation Cap Reductn		0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio		0.45	0.30	0.02	0.13	0.46	0.02	0.02	0.17		0.11	0.33

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 96.2			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 25.5		Intersection LOS: C	
Intersection Capacity Utilization 82.2%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	41.1
Actuated g/C Ratio	0.43
v/c Ratio	0.68
Control Delay	15.7
Queue Delay	0.0
Total Delay	15.7
LOS	B
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	114
Queue Length 95th (ft)	#379
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	863
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.68

Intersection Summary

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	120	12	8	0	0	284
Future Vol, veh/h	120	12	8	0	0	284
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	136	14	9	0	0	323

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	9	0	-	0	295	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	286	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1611	-	-	-	696	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	763	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1611	-	-	-	637	1073
Mov Cap-2 Maneuver	-	-	-	-	637	-
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	763	-

Approach	EB	WB	SB
HCM Control Delay, s	6.8	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1611	-	-	-	1073
HCM Lane V/C Ratio	0.085	-	-	-	0.301
HCM Control Delay (s)	7.4	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	1.3

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	9	115	3	0	189
Future Vol, veh/h	0	9	115	3	0	189
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	131	3	0	215

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	348	133	0	0	134	0
Stage 1	133	-	-	-	-	-
Stage 2	215	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	649	916	-	-	1451	-
Stage 1	893	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	649	916	-	-	1451	-
Mov Cap-2 Maneuver	649	-	-	-	-	-
Stage 1	893	-	-	-	-	-
Stage 2	821	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	916	1451	-
HCM Lane V/C Ratio	-	-	0.011	-	-
HCM Control Delay (s)	-	-	9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	1	0	2	0	118	0	1	187	0
Future Vol, veh/h	0	0	0	1	0	2	0	118	0	1	187	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	1	0	2	0	136	0	1	215	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	354	353	215	353	353	136	215	0	0	136	0	0
Stage 1	217	217	-	136	136	-	-	-	-	-	-	-
Stage 2	137	136	-	217	217	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	601	572	825	602	572	913	1355	-	-	1448	-	-
Stage 1	785	723	-	867	784	-	-	-	-	-	-	-
Stage 2	866	784	-	785	723	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	599	571	825	601	571	913	1355	-	-	1448	-	-
Mov Cap-2 Maneuver	599	571	-	601	571	-	-	-	-	-	-	-
Stage 1	785	722	-	867	784	-	-	-	-	-	-	-
Stage 2	864	784	-	784	722	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.6	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1355	-	-	-	778	1448	-	-
HCM Lane V/C Ratio	-	-	-	-	0.004	0.001	-	-
HCM Control Delay (s)	0	-	-	0	9.6	7.5	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	1	9	110	2	5	294	6
Future Vol, veh/h	0	0	0	0	0	1	9	110	2	5	294	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	1	10	125	2	6	334	7

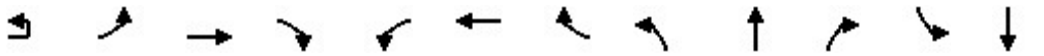
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	497	497	338	496	499	126	341	0	0	127	0	0
Stage 1	350	350	-	146	146	-	-	-	-	-	-	-
Stage 2	147	147	-	350	353	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	483	475	704	484	473	924	1218	-	-	1459	-	-
Stage 1	666	633	-	857	776	-	-	-	-	-	-	-
Stage 2	856	775	-	666	631	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	477	468	704	479	466	924	1218	-	-	1459	-	-
Mov Cap-2 Maneuver	477	468	-	479	466	-	-	-	-	-	-	-
Stage 1	660	630	-	849	769	-	-	-	-	-	-	-
Stage 2	847	768	-	663	628	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.9	0.6	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1218	-	-	-	924	1459	-	-
HCM Lane V/C Ratio	0.008	-	-	-	0.001	0.004	-	-
HCM Control Delay (s)	8	0	-	0	8.9	7.5	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Future Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.948			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1766	0	1770	1863
Flt Permitted		0.155			0.223			0.646			0.458	
Satd. Flow (perm)	0	289	3539	1583	415	3539	1583	1203	1766	0	853	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		22			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			908			822
Travel Time (s)			7.7			15.3			20.6			18.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1	272	792	20	51	825	40	33	186	100	34	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	273	792	20	51	825	40	33	286	0	34	144
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	230
Future Volume (vph)	230
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	242
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Adj. Flow (vph)	242
Shared Lane Traffic (%)	
Lane Group Flow (vph)	242
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

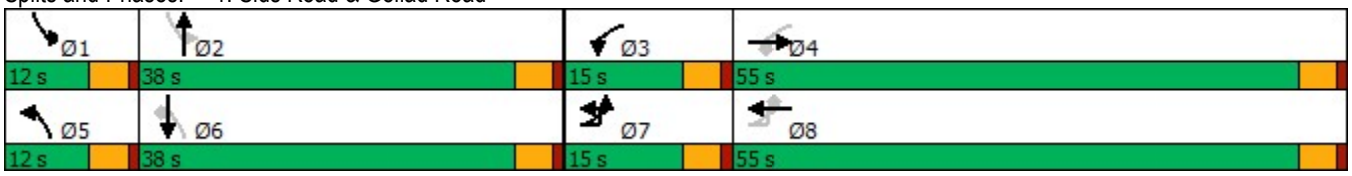


Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		39.1	37.0	37.0	41.3	28.4	28.4	38.0	34.1		38.0	34.1
Actuated g/C Ratio		0.42	0.40	0.40	0.44	0.30	0.30	0.41	0.37		0.41	0.37
v/c Ratio		0.94	0.56	0.03	0.18	0.77	0.07	0.06	0.43		0.08	0.21
Control Delay		62.5	25.7	0.1	15.9	34.8	0.3	17.4	25.8		17.6	24.7
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		62.5	25.7	0.1	15.9	34.8	0.3	17.4	25.8		17.6	24.7
LOS		E	C	A	B	C	A	B	C		B	C
Approach Delay			34.4			32.2			24.9			12.7
Approach LOS			C			C			C			B
Queue Length 50th (ft)		112	220	0	17	245	0	11	126		11	63
Queue Length 95th (ft)		#287	294	0	38	317	0	32	234		33	127
Internal Link Dist (ft)			425			933			828			742
Turn Bay Length (ft)		285			185		265	285			330	
Base Capacity (vph)		291	1951	915	345	1951	915	539	659		424	681
Starvation Cap Reductn		0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio		0.94	0.41	0.02	0.15	0.42	0.04	0.06	0.43		0.08	0.21

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 93.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 29.3		Intersection LOS: C	
Intersection Capacity Utilization 70.3%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	34.1
Actuated g/C Ratio	0.37
v/c Ratio	0.33
Control Delay	4.9
Queue Delay	0.0
Total Delay	4.9
LOS	A
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	56
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	732
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.33

Intersection Summary

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	231	6	7	3	2	205
Future Vol, veh/h	231	6	7	3	2	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	248	6	8	3	2	220

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	11	0	-	0	512	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	502	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1608	-	-	-	522	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	608	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1608	-	-	-	441	1071
Mov Cap-2 Maneuver	-	-	-	-	441	-
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	608	-

Approach	EB	WB	SB
HCM Control Delay, s	7.5	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1608	-	-	-	1056
HCM Lane V/C Ratio	0.154	-	-	-	0.211
HCM Control Delay (s)	7.6	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.5	-	-	-	0.8

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	238	0	10	302
Future Vol, veh/h	2	2	238	0	10	302
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	259	0	11	328

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	609	259	0	0	259	0
Stage 1	259	-	-	-	-	-
Stage 2	350	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	458	780	-	-	1306	-
Stage 1	784	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	453	780	-	-	1306	-
Mov Cap-2 Maneuver	453	-	-	-	-	-
Stage 1	784	-	-	-	-	-
Stage 2	706	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	573	1306	-
HCM Lane V/C Ratio	-	-	0.008	0.008	-
HCM Control Delay (s)	-	-	11.3	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	0	3	0	4	0	248	0	4	310	5
Future Vol, veh/h	2	0	0	3	0	4	0	248	0	4	310	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	3	0	4	0	258	0	4	323	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	594	592	326	592	594	258	328	0	0	258	0	0
Stage 1	334	334	-	258	258	-	-	-	-	-	-	-
Stage 2	260	258	-	334	336	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	417	419	715	418	418	781	1232	-	-	1307	-	-
Stage 1	680	643	-	747	694	-	-	-	-	-	-	-
Stage 2	745	694	-	680	642	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	414	417	715	417	416	781	1232	-	-	1307	-	-
Mov Cap-2 Maneuver	414	417	-	417	416	-	-	-	-	-	-	-
Stage 1	680	640	-	747	694	-	-	-	-	-	-	-
Stage 2	741	694	-	677	639	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	11.4	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1232	-	-	414	568	1307	-	-
HCM Lane V/C Ratio	-	-	-	0.005	0.013	0.003	-	-
HCM Control Delay (s)	0	-	-	13.7	11.4	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	1	4	0	3	9	296	1	3	178	31
Future Vol, veh/h	5	0	1	4	0	3	9	296	1	3	178	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	1	4	0	3	10	322	1	3	193	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	560	559	210	560	576	323	227	0	0	323	0	0
Stage 1	216	216	-	343	343	-	-	-	-	-	-	-
Stage 2	344	343	-	217	233	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	439	438	830	439	428	718	1341	-	-	1237	-	-
Stage 1	786	724	-	672	637	-	-	-	-	-	-	-
Stage 2	671	637	-	785	712	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	433	433	830	435	423	718	1341	-	-	1237	-	-
Mov Cap-2 Maneuver	433	433	-	435	423	-	-	-	-	-	-	-
Stage 1	779	722	-	666	631	-	-	-	-	-	-	-
Stage 2	662	631	-	782	710	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	12	0.2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1341	-	-	471	523	1237	-	-
HCM Lane V/C Ratio	0.007	-	-	0.014	0.015	0.003	-	-
HCM Control Delay (s)	7.7	0	-	12.8	12	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Synchro™ Output - 2024 Background Traffic

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	2	120	573	18	51	874	16	12	76	32	63	266
Future Volume (vph)	2	120	573	18	51	874	16	12	76	32	63	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.956			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1781	0	1770	1863
Flt Permitted		0.119			0.310			0.485			0.682	
Satd. Flow (perm)	0	222	3539	1583	577	3539	1583	903	1781	0	1270	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		17			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			908			822
Travel Time (s)			7.7			15.3			20.6			18.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	2	128	610	19	54	930	17	13	81	34	67	283
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	130	610	19	54	930	17	13	115	0	67	283
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

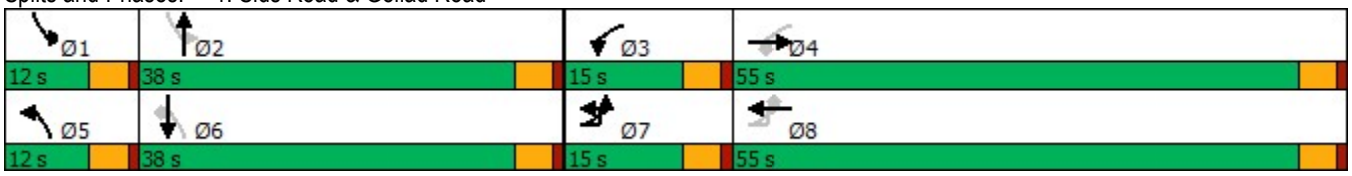
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	585
Future Volume (vph)	585
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	316
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.94
Adj. Flow (vph)	622
Shared Lane Traffic (%)	
Lane Group Flow (vph)	622
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		41.8	37.2	37.2	43.0	32.6	32.6	42.4	34.2		39.7	41.2
Actuated g/C Ratio		0.42	0.38	0.38	0.44	0.33	0.33	0.43	0.35		0.40	0.42
v/c Ratio		0.55	0.46	0.03	0.16	0.80	0.03	0.03	0.18		0.12	0.36
Control Delay		25.0	25.4	0.1	15.6	35.9	0.1	19.2	23.7		19.4	24.5
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		25.0	25.4	0.1	15.6	35.9	0.1	19.2	23.7		19.4	24.5
LOS		C	C	A	B	D	A	B	C		B	C
Approach Delay			24.7			34.2			23.3			20.9
Approach LOS			C			C			C			C
Queue Length 50th (ft)		47	162	0	19	290	0	5	45		25	119
Queue Length 95th (ft)		85	217	0	40	366	0	18	100		60	255
Internal Link Dist (ft)			425			933			828			742
Turn Bay Length (ft)		285			185		265	285			330	
Base Capacity (vph)		265	1850	872	393	1850	872	455	628		552	776
Starvation Cap Reductn		0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio		0.49	0.33	0.02	0.14	0.50	0.02	0.03	0.18		0.12	0.36

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 98.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 26.7		Intersection LOS: C	
Intersection Capacity Utilization 86.3%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	41.2
Actuated g/C Ratio	0.42
v/c Ratio	0.74
Control Delay	19.5
Queue Delay	0.0
Total Delay	19.5
LOS	B
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	158
Queue Length 95th (ft)	#465
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	844
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.74

Intersection Summary

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	128	13	9	0	0	303
Future Vol, veh/h	128	13	9	0	0	303
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	145	15	10	0	0	344

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	10	0	-	0	315	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	305	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1610	-	-	-	678	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	748	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1610	-	-	-	616	1071
Mov Cap-2 Maneuver	-	-	-	-	616	-
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	748	-

Approach	EB	WB	SB
HCM Control Delay, s	6.8	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1610	-	-	-	1071
HCM Lane V/C Ratio	0.09	-	-	-	0.321
HCM Control Delay (s)	7.5	0	-	-	9.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	1.4

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	123	3	0	201
Future Vol, veh/h	0	10	123	3	0	201
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	140	3	0	228

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	370	142	0	0	143	0
Stage 1	142	-	-	-	-	-
Stage 2	228	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	630	906	-	-	1440	-
Stage 1	885	-	-	-	-	-
Stage 2	810	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	630	906	-	-	1440	-
Mov Cap-2 Maneuver	630	-	-	-	-	-
Stage 1	885	-	-	-	-	-
Stage 2	810	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	906	1440	-
HCM Lane V/C Ratio	-	-	0.013	-	-
HCM Control Delay (s)	-	-	9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	1	0	2	0	126	0	1	199	0
Future Vol, veh/h	0	0	0	1	0	2	0	126	0	1	199	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	1	0	2	0	145	0	1	229	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	377	376	229	376	376	145	229	0	0	145	0	0
Stage 1	231	231	-	145	145	-	-	-	-	-	-	-
Stage 2	146	145	-	231	231	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	580	555	810	581	555	902	1339	-	-	1437	-	-
Stage 1	772	713	-	858	777	-	-	-	-	-	-	-
Stage 2	857	777	-	772	713	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	578	554	810	580	554	902	1339	-	-	1437	-	-
Mov Cap-2 Maneuver	578	554	-	580	554	-	-	-	-	-	-	-
Stage 1	772	712	-	858	777	-	-	-	-	-	-	-
Stage 2	855	777	-	771	712	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.8	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1339	-	-	-	761	1437	-	-
HCM Lane V/C Ratio	-	-	-	-	0.005	0.001	-	-
HCM Control Delay (s)	0	-	-	0	9.8	7.5	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	0	0	0	1	10	117	2	5	313	6
Future Vol, veh/h	0	0	0	0	0	1	10	117	2	5	313	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	1	11	133	2	6	356	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	529	529	360	528	531	134	363	0	0	135	0	0
Stage 1	372	372	-	156	156	-	-	-	-	-	-	-
Stage 2	157	157	-	372	375	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	460	455	684	461	454	915	1196	-	-	1449	-	-
Stage 1	648	619	-	846	769	-	-	-	-	-	-	-
Stage 2	845	768	-	648	617	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	454	448	684	456	447	915	1196	-	-	1449	-	-
Mov Cap-2 Maneuver	454	448	-	456	447	-	-	-	-	-	-	-
Stage 1	642	616	-	838	761	-	-	-	-	-	-	-
Stage 2	836	760	-	645	614	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.9	0.6	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1196	-	-	-	915	1449	-	-
HCM Lane V/C Ratio	0.01	-	-	-	0.001	0.004	-	-
HCM Control Delay (s)	8	0	-	0	8.9	7.5	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Future Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.948			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1766	0	1770	1863
Flt Permitted		0.155			0.223			0.646			0.458	
Satd. Flow (perm)	0	289	3539	1583	415	3539	1583	1203	1766	0	853	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		22			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			908			822
Travel Time (s)			7.7			15.3			20.6			18.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1	272	792	20	51	825	40	33	186	100	34	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	273	792	20	51	825	40	33	286	0	34	144
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

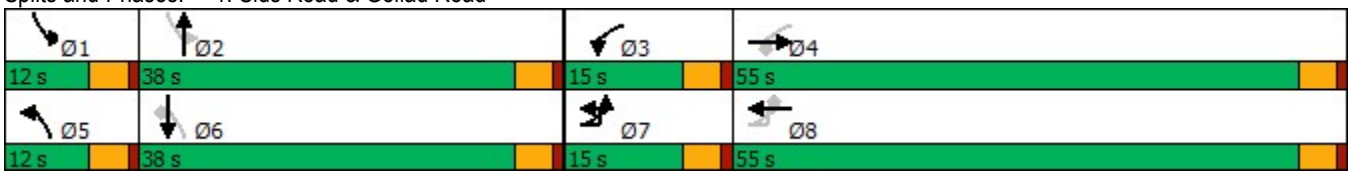
Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	230
Future Volume (vph)	230
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	242
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Adj. Flow (vph)	242
Shared Lane Traffic (%)	
Lane Group Flow (vph)	242
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		39.1	37.0	37.0	41.3	28.4	28.4	38.0	34.1		38.0	34.1
Actuated g/C Ratio		0.42	0.40	0.40	0.44	0.30	0.30	0.41	0.37		0.41	0.37
v/c Ratio		0.94	0.56	0.03	0.18	0.77	0.07	0.06	0.43		0.08	0.21
Control Delay		62.5	25.7	0.1	15.9	34.8	0.3	17.4	25.8		17.6	24.7
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		62.5	25.7	0.1	15.9	34.8	0.3	17.4	25.8		17.6	24.7
LOS		E	C	A	B	C	A	B	C		B	C
Approach Delay			34.4			32.2			24.9			12.7
Approach LOS			C			C			C			B
Queue Length 50th (ft)		112	220	0	17	245	0	11	126		11	63
Queue Length 95th (ft)		#287	294	0	38	317	0	32	234		33	127
Internal Link Dist (ft)			425			933			828			742
Turn Bay Length (ft)		285			185		265	285			330	
Base Capacity (vph)		291	1951	915	345	1951	915	539	659		424	681
Starvation Cap Reductn		0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio		0.94	0.41	0.02	0.15	0.42	0.04	0.06	0.43		0.08	0.21

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 93.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 29.3		Intersection LOS: C	
Intersection Capacity Utilization 70.3%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	34.1
Actuated g/C Ratio	0.37
v/c Ratio	0.33
Control Delay	4.9
Queue Delay	0.0
Total Delay	4.9
LOS	A
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	56
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	732
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.33

Intersection Summary

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	231	6	7	3	2	205
Future Vol, veh/h	231	6	7	3	2	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	248	6	8	3	2	220

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	11	0	-	0	512	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	502	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1608	-	-	-	522	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	608	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1608	-	-	-	441	1071
Mov Cap-2 Maneuver	-	-	-	-	441	-
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	608	-

Approach	EB	WB	SB
HCM Control Delay, s	7.5	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1608	-	-	-	1056
HCM Lane V/C Ratio	0.154	-	-	-	0.211
HCM Control Delay (s)	7.6	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.5	-	-	-	0.8

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	238	0	10	302
Future Vol, veh/h	2	2	238	0	10	302
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	259	0	11	328

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	609	259	0	0	259	0
Stage 1	259	-	-	-	-	-
Stage 2	350	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	458	780	-	-	1306	-
Stage 1	784	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	453	780	-	-	1306	-
Mov Cap-2 Maneuver	453	-	-	-	-	-
Stage 1	784	-	-	-	-	-
Stage 2	706	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	573	1306	-
HCM Lane V/C Ratio	-	-	0.008	0.008	-
HCM Control Delay (s)	-	-	11.3	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	0	3	0	4	0	248	0	4	310	5
Future Vol, veh/h	2	0	0	3	0	4	0	248	0	4	310	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	3	0	4	0	258	0	4	323	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	594	592	326	592	594	258	328	0	0	258	0	0
Stage 1	334	334	-	258	258	-	-	-	-	-	-	-
Stage 2	260	258	-	334	336	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	417	419	715	418	418	781	1232	-	-	1307	-	-
Stage 1	680	643	-	747	694	-	-	-	-	-	-	-
Stage 2	745	694	-	680	642	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	414	417	715	417	416	781	1232	-	-	1307	-	-
Mov Cap-2 Maneuver	414	417	-	417	416	-	-	-	-	-	-	-
Stage 1	680	640	-	747	694	-	-	-	-	-	-	-
Stage 2	741	694	-	677	639	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	11.4	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1232	-	-	414	568	1307	-	-
HCM Lane V/C Ratio	-	-	-	0.005	0.013	0.003	-	-
HCM Control Delay (s)	0	-	-	13.7	11.4	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	1	4	0	3	9	296	1	3	178	31
Future Vol, veh/h	5	0	1	4	0	3	9	296	1	3	178	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	1	4	0	3	10	322	1	3	193	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	560	559	210	560	576	323	227	0	0	323	0	0
Stage 1	216	216	-	343	343	-	-	-	-	-	-	-
Stage 2	344	343	-	217	233	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	439	438	830	439	428	718	1341	-	-	1237	-	-
Stage 1	786	724	-	672	637	-	-	-	-	-	-	-
Stage 2	671	637	-	785	712	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	433	433	830	435	423	718	1341	-	-	1237	-	-
Mov Cap-2 Maneuver	433	433	-	435	423	-	-	-	-	-	-	-
Stage 1	779	722	-	666	631	-	-	-	-	-	-	-
Stage 2	662	631	-	782	710	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	12	0.2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1341	-	-	471	523	1237	-	-
HCM Lane V/C Ratio	0.007	-	-	0.014	0.015	0.003	-	-
HCM Control Delay (s)	7.7	0	-	12.8	12	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Synchro™ Output - 2024 Background Plus Site Traffic

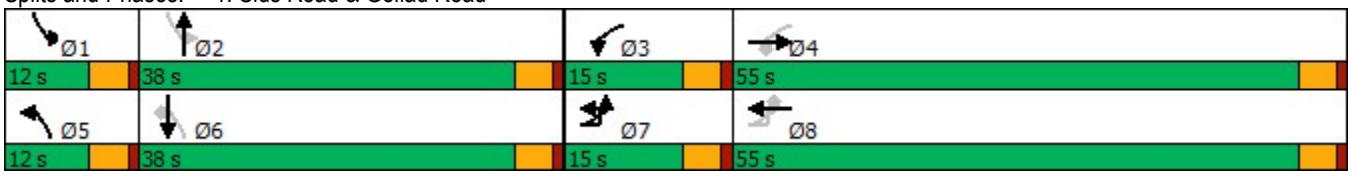
Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	2	120	574	21	53	874	16	17	79	32	63	269
Future Volume (vph)	2	120	574	21	53	874	16	17	79	32	63	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.957			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1783	0	1770	1863
Flt Permitted		0.118			0.311			0.472			0.678	
Satd. Flow (perm)	0	220	3539	1583	579	3539	1583	879	1783	0	1263	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		17			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			919			822
Travel Time (s)			7.7			15.3			20.9			18.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	2	128	611	22	56	930	17	18	84	34	67	286
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	130	611	22	56	930	17	18	118	0	67	286
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	585
Future Volume (vph)	585
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	313
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.94
Adj. Flow (vph)	622
Shared Lane Traffic (%)	
Lane Group Flow (vph)	622
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	CI+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		41.8	37.2	37.2	43.0	32.6	32.6	41.5	34.2		39.7	39.1
Actuated g/C Ratio		0.42	0.38	0.38	0.44	0.33	0.33	0.42	0.35		0.40	0.40
v/c Ratio		0.55	0.46	0.03	0.17	0.80	0.03	0.04	0.19		0.12	0.39
Control Delay		25.2	25.5	0.1	15.6	35.9	0.1	19.1	23.8		19.4	26.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		25.2	25.5	0.1	15.6	35.9	0.1	19.1	23.8		19.4	26.8
LOS		C	C	A	B	D	A	B	C		B	C
Approach Delay			24.7			34.1			23.2			23.2
Approach LOS			C			C			C			C

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 98.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 27.4		Intersection LOS: C	
Intersection Capacity Utilization 86.3%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	39.1
Actuated g/C Ratio	0.40
v/c Ratio	0.76
Control Delay	21.9
Queue Delay	0.0
Total Delay	21.9
LOS	C
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	130	611	22	56	930	17	18	118	67	286	622
v/c Ratio	0.55	0.46	0.03	0.17	0.80	0.03	0.04	0.19	0.12	0.39	0.76
Control Delay	25.2	25.5	0.1	15.6	35.9	0.1	19.1	23.8	19.4	26.8	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.2	25.5	0.1	15.6	35.9	0.1	19.1	23.8	19.4	26.8	21.9
Queue Length 50th (ft)	47	162	0	19	290	0	7	47	25	120	160
Queue Length 95th (ft)	86	217	0	41	366	0	23	103	60	260	#471
Internal Link Dist (ft)		425			933			839		742	
Turn Bay Length (ft)	285			185		265	285		330		
Base Capacity (vph)	265	1850	872	394	1850	872	440	629	549	737	815
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.33	0.03	0.14	0.50	0.02	0.04	0.19	0.12	0.39	0.76

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	8.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	131	13	9	0	0	306
Future Vol, veh/h	131	13	9	0	0	306
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	15	10	0	0	348

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	10	0	-	0	323	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	313	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1610	-	-	-	671	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	741	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1610	-	-	-	609	1071
Mov Cap-2 Maneuver	-	-	-	-	609	-
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	741	-

Approach	EB	WB	SB
HCM Control Delay, s	6.8	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1610	-	-	-	1071
HCM Lane V/C Ratio	0.092	-	-	-	0.325
HCM Control Delay (s)	7.5	0	-	-	10
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1.4

Intersection	
Int Delay, s/veh	8.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	58	22	0	0	0
Future Vol, veh/h	0	58	22	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	400	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	64	24	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	49	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	48	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	960	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	974	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	946	1084	1622	-	-	-
Mov Cap-2 Maneuver	946	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	974	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	7.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.015	-	0.059	-	-
HCM Control Delay (s)	7.3	-	8.5	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	124	4	1	201
Future Vol, veh/h	0	11	124	4	1	201
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	13	141	5	1	228

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	374	144	0	0	146	0
Stage 1	144	-	-	-	-	-
Stage 2	230	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	627	903	-	-	1436	-
Stage 1	883	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	626	903	-	-	1436	-
Mov Cap-2 Maneuver	626	-	-	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	807	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	903	1436	-
HCM Lane V/C Ratio	-	-	0.014	0.001	-
HCM Control Delay (s)	-	-	9	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	1	0	4	0	128	1	2	200	0
Future Vol, veh/h	0	0	0	1	0	4	0	128	1	2	200	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	1	0	5	0	147	1	2	230	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	384	382	230	382	382	148	230	0	0	148	0	0
Stage 1	234	234	-	148	148	-	-	-	-	-	-	-
Stage 2	150	148	-	234	234	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	574	551	809	576	551	899	1338	-	-	1434	-	-
Stage 1	769	711	-	855	775	-	-	-	-	-	-	-
Stage 2	853	775	-	769	711	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	570	550	809	575	550	899	1338	-	-	1434	-	-
Mov Cap-2 Maneuver	570	550	-	575	550	-	-	-	-	-	-	-
Stage 1	769	710	-	855	775	-	-	-	-	-	-	-
Stage 2	849	775	-	767	710	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.5	0	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1338	-	-	-	808	1434	-	-
HCM Lane V/C Ratio	-	-	-	-	0.007	0.002	-	-
HCM Control Delay (s)	0	-	-	0	9.5	7.5	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	0	0	0	4	10	120	3	8	316	6
Future Vol, veh/h	0	0	0	0	0	4	10	120	3	8	316	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	5	11	136	3	9	359	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	543	542	363	541	544	138	366	0	0	139	0	0
Stage 1	381	381	-	160	160	-	-	-	-	-	-	-
Stage 2	162	161	-	381	384	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	451	447	682	452	446	910	1193	-	-	1445	-	-
Stage 1	641	613	-	842	766	-	-	-	-	-	-	-
Stage 2	840	765	-	641	611	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	442	439	682	446	438	910	1193	-	-	1445	-	-
Mov Cap-2 Maneuver	442	439	-	446	438	-	-	-	-	-	-	-
Stage 1	635	608	-	834	758	-	-	-	-	-	-	-
Stage 2	827	757	-	636	606	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9	0.6	0.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1193	-	-	-	910	1445	-	-
HCM Lane V/C Ratio	0.01	-	-	-	0.005	0.006	-	-
HCM Control Delay (s)	8	0	-	0	9	7.5	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	668	1	0	943	0	3
Future Vol, veh/h	668	1	0	943	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	726	1	0	1025	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	727
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	424
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	424
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	424	-	-	-
HCM Lane V/C Ratio	0.008	-	-	-
HCM Control Delay (s)	13.6	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕				↕			↕			↕	
Traffic Vol, veh/h	0	3	3	1	49	16	2	2	0	9	3	0	0
Future Vol, veh/h	0	3	3	1	49	16	2	2	0	9	3	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	65	65	65	65	65	65	65	65	65	65	65	65	65
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	5	2	75	25	3	3	0	14	5	0	0

Major/Minor	Major1			Major2				Minor1			Minor2		
Conflicting Flow All	28	0	0	-	10	0	0	185	190	8	192	191	27
Stage 1	-	-	-	-	-	-	-	8	8	-	177	181	-
Stage 2	-	-	-	-	-	-	-	177	182	-	15	10	-
Critical Hdwy	4.12	-	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1585	-	-	-	1610	-	-	776	705	1074	768	704	1048
Stage 1	-	-	-	-	-	-	-	1013	889	-	825	750	-
Stage 2	-	-	-	-	-	-	-	825	749	-	1005	887	-
Platoon blocked, %		-	-			-	-						
Mov Cap-1 Maneuver	1585	-	-	~ -52	~ -52	-	-	776	705	1074	758	704	1048
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	776	705	-	758	704	-
Stage 1	-	-	-	-	-	-	-	1013	889	-	825	750	-
Stage 2	-	-	-	-	-	-	-	825	749	-	992	887	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0		8.6	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1004	1585	-	-	+	-	-	758
HCM Lane V/C Ratio	0.017	-	-	-	-	-	-	0.006
HCM Control Delay (s)	8.6	0	-	-	-	-	-	9.8
HCM Lane LOS	A	A	-	-	-	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	-	-	-	0

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	124	0	2	331
Future Vol, veh/h	0	3	124	0	2	331
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	182	0	3	487

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	675	182	0	0	182	0
Stage 1	182	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	419	861	-	-	1393	-
Stage 1	849	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	418	861	-	-	1393	-
Mov Cap-2 Maneuver	418	-	-	-	-	-
Stage 1	849	-	-	-	-	-
Stage 2	612	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	861	1393	-
HCM Lane V/C Ratio	-	-	0.005	0.002	-
HCM Control Delay (s)	-	-	9.2	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

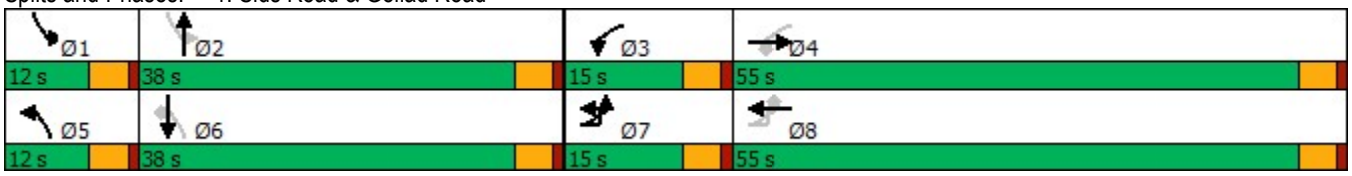
Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	258	754	23	51	784	38	38	182	95	32	141
Future Volume (vph)	1	258	754	23	51	784	38	38	182	95	32	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		285		0	185		265	285		0	330	
Storage Lanes		1		1	1		2	1		0	1	
Taper Length (ft)		25			25			25			25	
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850			0.850		0.949			
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1768	0	1770	1863
Flt Permitted		0.152			0.209			0.641			0.451	
Satd. Flow (perm)	0	283	3539	1583	389	3539	1583	1194	1768	0	840	1863
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				95			95		22			
Link Speed (mph)			45			45			30			30
Link Distance (ft)			505			1013			919			822
Travel Time (s)			7.7			15.3			20.9			18.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1	272	794	24	54	825	40	40	192	100	34	148
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	273	794	24	54	825	40	40	292	0	34	148
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)			12			12			12			12
Link Offset(ft)			0			0			0			0
Crosswalk Width(ft)			16			16			16			16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Number of Detectors	1	1	2	1	1	2	1	1	2		1	2
Detector Template	Left	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru
Leading Detector (ft)	20	20	100	20	20	100	20	20	100		20	100
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0		0	0
Detector 1 Size(ft)	20	20	6	20	20	6	20	20	6		20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)			94			94			94			94
Detector 2 Size(ft)			6			6			6			6
Detector 2 Type			Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0			0.0			0.0
Turn Type	D.P+P	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA		D.P+P	NA
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases	8	8		4	4		8	6			2	

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	230
Future Volume (vph)	230
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	242
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Adj. Flow (vph)	242
Shared Lane Traffic (%)	
Lane Group Flow (vph)	242
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6

Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	55.0	12.0	38.0		12.0	38.0
Total Split (%)	12.5%	12.5%	45.8%	45.8%	12.5%	45.8%	45.8%	10.0%	31.7%		10.0%	31.7%
Maximum Green (s)	10.5	10.5	50.5	50.5	10.5	50.5	50.5	7.5	33.5		7.5	33.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	Max		None	Max
Walk Time (s)	7.0	7.0	7.0	7.0		7.0	7.0		7.0			7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0	0	0	0		0	0		0			0
Act Effct Green (s)		39.7	35.1	35.1	40.8	29.0	29.0	38.0	34.1		38.0	34.1
Actuated g/C Ratio		0.42	0.37	0.37	0.43	0.31	0.31	0.40	0.36		0.40	0.36
v/c Ratio		0.95	0.60	0.04	0.20	0.75	0.07	0.08	0.45		0.08	0.22
Control Delay		64.4	27.5	0.1	16.2	34.3	0.3	17.6	26.2		17.7	25.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay		64.4	27.5	0.1	16.2	34.3	0.3	17.6	26.2		17.7	25.1
LOS		E	C	A	B	C	A	B	C		B	C
Approach Delay			36.1			31.8			25.2			13.0
Approach LOS			D			C			C			B

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 93.9			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 29.8		Intersection LOS: C	
Intersection Capacity Utilization 70.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Sids Road & Goliad Road



Lane Group	SBR
Detector Phase	6
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	38.0
Total Split (%)	31.7%
Maximum Green (s)	33.5
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	4.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	34.1
Actuated g/C Ratio	0.36
v/c Ratio	0.33
Control Delay	5.0
Queue Delay	0.0
Total Delay	5.0
LOS	A
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	273	794	24	54	825	40	40	292	34	148	242
v/c Ratio	0.95	0.60	0.04	0.20	0.75	0.07	0.08	0.45	0.08	0.22	0.33
Control Delay	64.4	27.5	0.1	16.2	34.3	0.3	17.6	26.2	17.7	25.1	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.4	27.5	0.1	16.2	34.3	0.3	17.6	26.2	17.7	25.1	5.0
Queue Length 50th (ft)	114	222	0	18	246	0	13	130	11	65	0
Queue Length 95th (ft)	#290	295	0	40	317	0	37	240	33	130	56
Internal Link Dist (ft)		425			933			839		742	
Turn Bay Length (ft)	285			185		265	285		330		
Base Capacity (vph)	288	1934	908	335	1934	908	532	656	417	675	728
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.41	0.03	0.16	0.43	0.04	0.08	0.45	0.08	0.22	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	235	6	7	3	2	210
Future Vol, veh/h	235	6	7	3	2	210
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	253	6	8	3	2	226

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	11	0	-	0	522	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	512	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1608	-	-	-	515	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	602	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1608	-	-	-	434	1071
Mov Cap-2 Maneuver	-	-	-	-	434	-
Stage 1	-	-	-	-	853	-
Stage 2	-	-	-	-	602	-

Approach	EB	WB	SB
HCM Control Delay, s	7.5	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1608	-	-	-	1056
HCM Lane V/C Ratio	0.157	-	-	-	0.216
HCM Control Delay (s)	7.7	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.6	-	-	-	0.8

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	23	23	0	0	0
Future Vol, veh/h	0	23	23	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	400	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	24	24	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	49	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	48	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	960	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	974	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	946	1084	1622	-	-	-
Mov Cap-2 Maneuver	946	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	974	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	7.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	1084	-	-
HCM Lane V/C Ratio	0.015	-	0.022	-	-
HCM Control Delay (s)	7.3	-	8.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	3	240	2	12	302
Future Vol, veh/h	2	3	240	2	12	302
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	261	2	13	328

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	616	262	0	0	263	0
Stage 1	262	-	-	-	-	-
Stage 2	354	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	454	777	-	-	1301	-
Stage 1	782	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	449	777	-	-	1301	-
Mov Cap-2 Maneuver	449	-	-	-	-	-
Stage 1	782	-	-	-	-	-
Stage 2	701	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	601	1301	-
HCM Lane V/C Ratio	-	-	0.009	0.01	-
HCM Control Delay (s)	-	-	11	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	0	3	0	6	0	250	1	6	312	5
Future Vol, veh/h	2	0	0	3	0	6	0	250	1	6	312	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	3	0	6	0	260	1	6	325	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	604	601	328	601	603	261	330	0	0	261	0	0
Stage 1	340	340	-	261	261	-	-	-	-	-	-	-
Stage 2	264	261	-	340	342	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	410	414	713	412	413	778	1229	-	-	1303	-	-
Stage 1	675	639	-	744	692	-	-	-	-	-	-	-
Stage 2	741	692	-	675	638	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	405	412	713	410	411	778	1229	-	-	1303	-	-
Mov Cap-2 Maneuver	405	412	-	410	411	-	-	-	-	-	-	-
Stage 1	675	635	-	744	692	-	-	-	-	-	-	-
Stage 2	735	692	-	671	634	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.9	11.1	0	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1229	-	-	405	599	1303	-	-
HCM Lane V/C Ratio	-	-	-	0.005	0.016	0.005	-	-
HCM Control Delay (s)	0	-	-	13.9	11.1	7.8	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	1	4	0	8	9	299	2	7	182	31
Future Vol, veh/h	5	0	1	4	0	8	9	299	2	7	182	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	1	4	0	9	10	325	2	8	198	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	582	578	215	578	594	326	232	0	0	327	0	0
Stage 1	231	231	-	346	346	-	-	-	-	-	-	-
Stage 2	351	347	-	232	248	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	424	427	825	427	418	715	1336	-	-	1233	-	-
Stage 1	772	713	-	670	635	-	-	-	-	-	-	-
Stage 2	666	635	-	771	701	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	414	420	825	421	411	715	1336	-	-	1233	-	-
Mov Cap-2 Maneuver	414	420	-	421	411	-	-	-	-	-	-	-
Stage 1	765	708	-	664	629	-	-	-	-	-	-	-
Stage 2	652	629	-	765	696	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.1	11.4	0.2	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1336	-	-	451	580	1233	-	-
HCM Lane V/C Ratio	0.007	-	-	0.014	0.022	0.006	-	-
HCM Control Delay (s)	7.7	0	-	13.1	11.4	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	879	2	0	874	0	3
Future Vol, veh/h	879	2	0	874	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	955	2	0	950	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	956
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	313
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	313
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	16.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	313	-	-	-
HCM Lane V/C Ratio	0.01	-	-	-
HCM Control Delay (s)	16.6	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	13	7	17	9	3	4	0	55	3	0	0
Future Vol, veh/h	0	13	7	17	9	3	4	0	55	3	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	15	8	20	11	4	5	0	65	4	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	15	0	0	23	0	0	72	74	19	105	76	13
Stage 1	-	-	-	-	-	-	19	19	-	53	53	-
Stage 2	-	-	-	-	-	-	53	55	-	52	23	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1603	-	-	1592	-	-	919	816	1059	875	814	1067
Stage 1	-	-	-	-	-	-	1000	880	-	960	851	-
Stage 2	-	-	-	-	-	-	960	849	-	961	876	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1603	-	-	1592	-	-	910	805	1059	814	803	1067
Mov Cap-2 Maneuver	-	-	-	-	-	-	910	805	-	814	803	-
Stage 1	-	-	-	-	-	-	1000	880	-	960	840	-
Stage 2	-	-	-	-	-	-	948	838	-	902	876	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	4.3	8.7	9.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1047	1603	-	-	1592	-	-	814
HCM Lane V/C Ratio	0.066	-	-	-	0.013	-	-	0.004
HCM Control Delay (s)	8.7	0	-	-	7.3	0	-	9.4
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	313	0	3	220
Future Vol, veh/h	0	3	313	0	3	220
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	368	0	4	259

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	635	368	0	0	368	0
Stage 1	368	-	-	-	-	-
Stage 2	267	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	443	677	-	-	1191	-
Stage 1	700	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	441	677	-	-	1191	-
Mov Cap-2 Maneuver	441	-	-	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	775	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	677	1191	-
HCM Lane V/C Ratio	-	-	0.005	0.003	-
HCM Control Delay (s)	-	-	10.3	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Lee, Henry

From: Miller, Ryan
Sent: Thursday, October 20, 2022 4:04 PM
To: 'fapolma@rdelta.com'
Cc: Lee, Henry; 'sgeiger@rayburnelectric.com'
Subject: Project Comments: SP2022-058
Attachments: Project Comments (10.20.2022).pdf; Engineering Markups (10.20.2022).pdf

Mr. Polma,

Attached are the project comments and engineering markups for your case. The meeting schedule for this case is as follows:

Planning and Zoning Commission Work Session Meeting: October 25, 2022
Planning and Zoning Commission Meeting: November 15, 2022

Please note that all meetings will be held at 6:00 PM at 385 S. Goliad Street in the City Council Chambers. Please also note that a representative is ***REQUIRED*** to be at all meetings. Should you have any questions please let me know. Thanks.

RYAN C. MILLER, AICP
DIRECTOR OF PLANNING & ZONING • PLANNING & ZONING DIVISION • CITY OF ROCKWALL
972.772.6441 OFFICE
RMILLER@ROCKWALL.COM
385 S. GOLIAD STREET • ROCKWALL, TX 75087

HELPFUL LINKS | CITY OF ROCKWALL WEBSITE | PLANNING & ZONING DIVISION WEBSITE | MUNICIPAL CODE WEBSITE
GIS DIVISION WEBSITE | CITY OF ROCKWALL INTERACTIVE MAPS | UNIFIED DEVELOPMENT CODE

NOTES
1) *APPOINTED AND ELECTED OFFICIALS*: BY *REPLYING ALL* TO THIS EMAIL YOU MAY BE IN VIOLATION OF THE TEXAS OPEN MEETINGS ACT. PLEASE REPLY ONLY TO THE SENDER.
2) PLEASE NOTE THAT ANY CORRESPONDENCE SENT TO CITY STAFF MAY BECOME PUBLIC RECORD

Lee, Henry

From: Dropbox Transfer <no-reply@dropbox.com>
Sent: Tuesday, November 1, 2022 2:04 PM
To: Lee, Henry
Subject: Frank Polma sent you some files

Download them by 11/9/2022 at 11:59 PM GMT-05:00

Frank Polma sent you SP2022-058 Resubmittal 11012022

"Resubmittal for the REC Rockwall Campus Expansion Site Plan (Case No. SP2022-058). I will also bring a flash drive to City Hall this afternoon before 3:00 pm."

These files will be available until **11/9/2022 at 11:59 PM GMT-05:00**.
Questions? Ask Frank (fapolma@rdelta.com)

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SP2022-058 Resubmittal 11012022
44.69 MB

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Lee, Henry

From: Dropbox Transfer <no-reply@dropbox.com>
Sent: Friday, November 4, 2022 11:02 AM
To: Lee, Henry
Subject: Frank Polma sent you some files

Download them by 11/15/2022 at 11:59 PM GMT-05:00

Frank Polma sent you SP2022-058 Resubmittal 2 11042022

"Mr. Lee,

Attached is our resubmittal in response to the City's second round of Site Plan comments and our subsequent conversations. I've resubmitted the entire package rather than pieces. Please let me know if you require anything else at this time.

Best regards,

Frank A. Polma, P.E.
R-Delta Engineers, Inc.
214-354-9881 (Cell)
"

These files will be available until **11/15/2022 at 11:59 PM GMT-05:00**.
Questions? Ask Frank (fapolma@rdelta.com)

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1 item • 31 MB

SP2022-058 Resubmittal 2 11042022
30.67 MB

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CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

December 1, 2022

TO: Frank A. Polma, P.E.
R-Delta Engineers, Inc.
618 Main Street
Garland, TX 75040

FROM: Henry Lee, AICP
City of Rockwall Planning and Zoning Department
385 S. Goliad Street
Rockwall, TX 75087

SUBJECT: SP2022-058; *Site Plan for Rayburn Electric*

Frank A. Polma, P.E.**:**

This letter serves to notify you that the above referenced case (*i.e. Site Plan*) that you submitted for consideration by the City of Rockwall was approved by the Planning and Zoning Commission on November 15, 2022. The following is a record of all recommendations, voting records and conditions of approval:

Staff Recommendations

(1) All staff comments provided by the Planning, Engineering and Fire Department must be addressed prior to the submittal of engineering plans.

(2) Any construction resulting from the approval of this *Site Plan* shall conform to the requirements set forth by the Unified Development Code (UDC), the International Building Code (IBC), the Rockwall Municipal Code of Ordinances, city adopted engineering and fire codes and with all other applicable regulatory requirements administered and/or enforced by the state and federal government.

Planning and Zoning Commission
On November 15, 2022, the Planning and Zoning Commission approved a motion to approve the site plan by a vote of 5-0, with the condition that additional screening be provided from Sids Road and S. Goliad Street, with Commissioners Llewellyn and Conway absent.

Should you have any questions or concerns regarding your zoning case, please feel free to contact me a (972) 771-7745.

Sincerely,

Henry Lee, AICP, *Planner*
City of Rockwall Planning and Zoning Department