



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]

Stephen Geiger

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

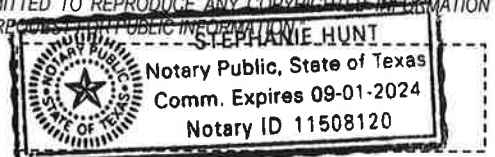
"I HEREBY CERTIFY THAT I AM THE OWNER FOR THE PURPOSE OF THIS APPLICATION; ALL INFORMATION SUBMITTED HEREIN IS TRUE AND CORRECT; AND THE APPLICATION FEE OF \$ 2,246.98 TO COVER THE COST OF THIS APPLICATION, HAS BEEN PAID TO THE CITY OF ROCKWALL ON THIS THE 14th DAY OF October, 2022. BY SIGNING THIS APPLICATION, 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

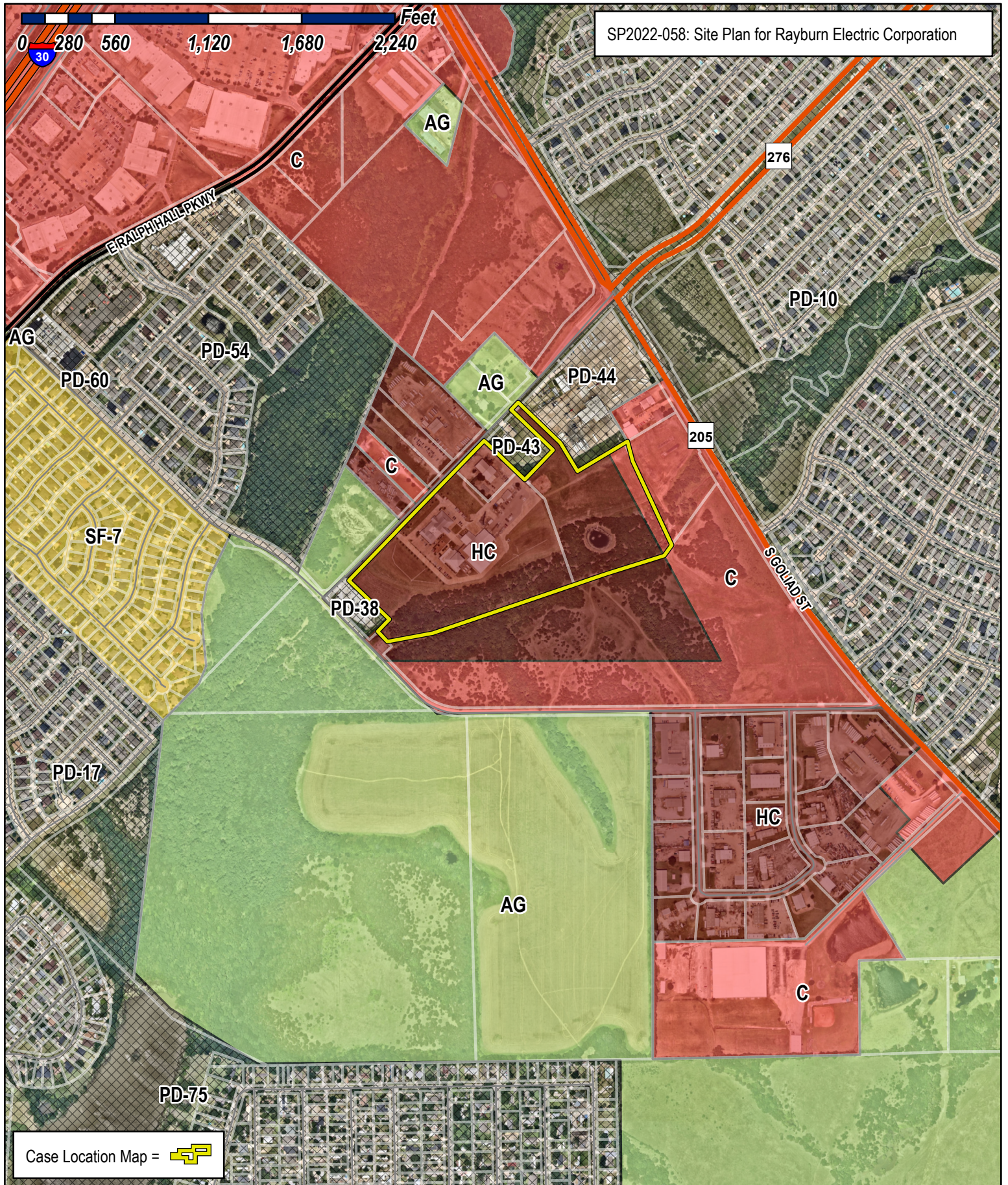
OWNER'S SIGNATURE

Stephane Hunt

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS



MY COMMISSION EXPIRES



SP2022-058: Site Plan for Rayburn Electric Corporation

Case Location Map = 



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.





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

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

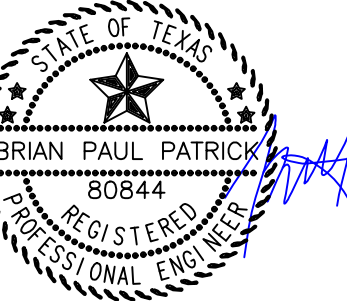
SYSKA HENNESSY GROUP
4825 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER/APPLICANT

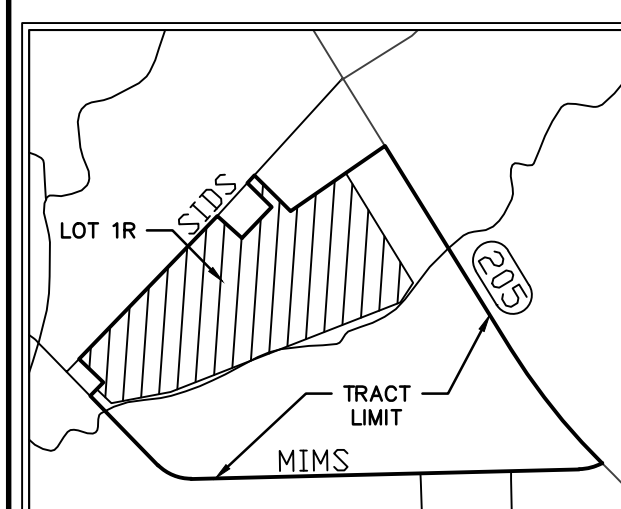
RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087
469-402-2100

CIVIL ENGINEER

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



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VICINITY MAP

REVISION NO.	DESCRIPTION	DATE

PROJECT NUMBER

3036.21

DATE

10/14/2022

ISSUE

CITY SITE PLAN

SUBMITTAL

SHEET TITLE

SITE PLAN

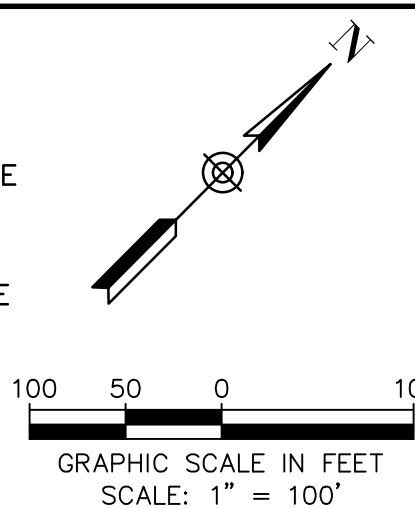
CASE# SP2022-041

SHEET NO.

SP (1 OF 2)

LEGEND

- EM EX. ELECTRIC METER
- 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
- 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
- CROSS-SECTION LOCATION-CITY OF ROCKWALL MASTER DRAINAGE STUDY
- PROPOSED CONCRETE PAVEMENT
- PROPOSED GRAVEL SURFACING



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

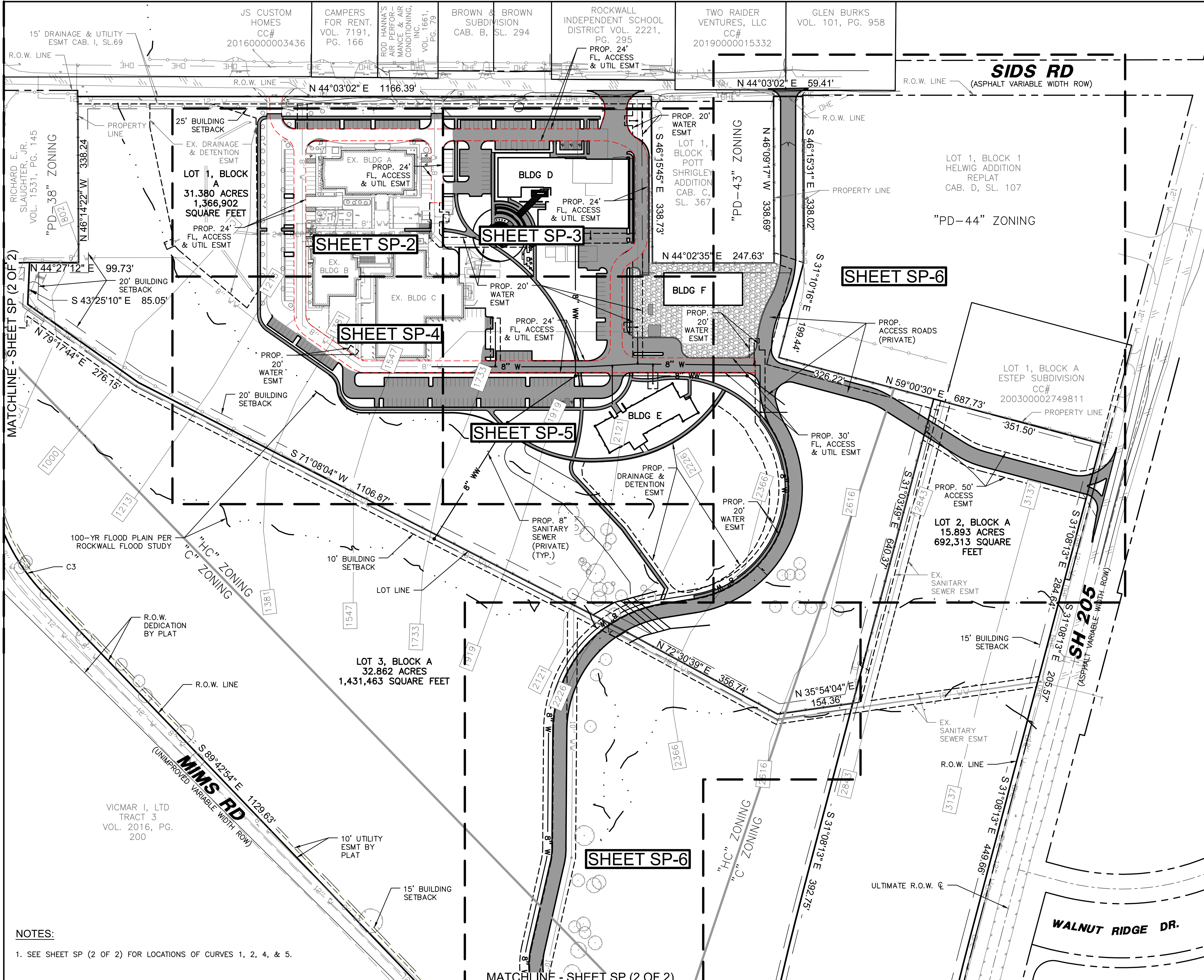
TOTAL REQUIRED PARKING = 271 SPACES
TOTAL PROVIDED PARKING = 271 SPACES

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



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

BOUNDARY CURVE DATA

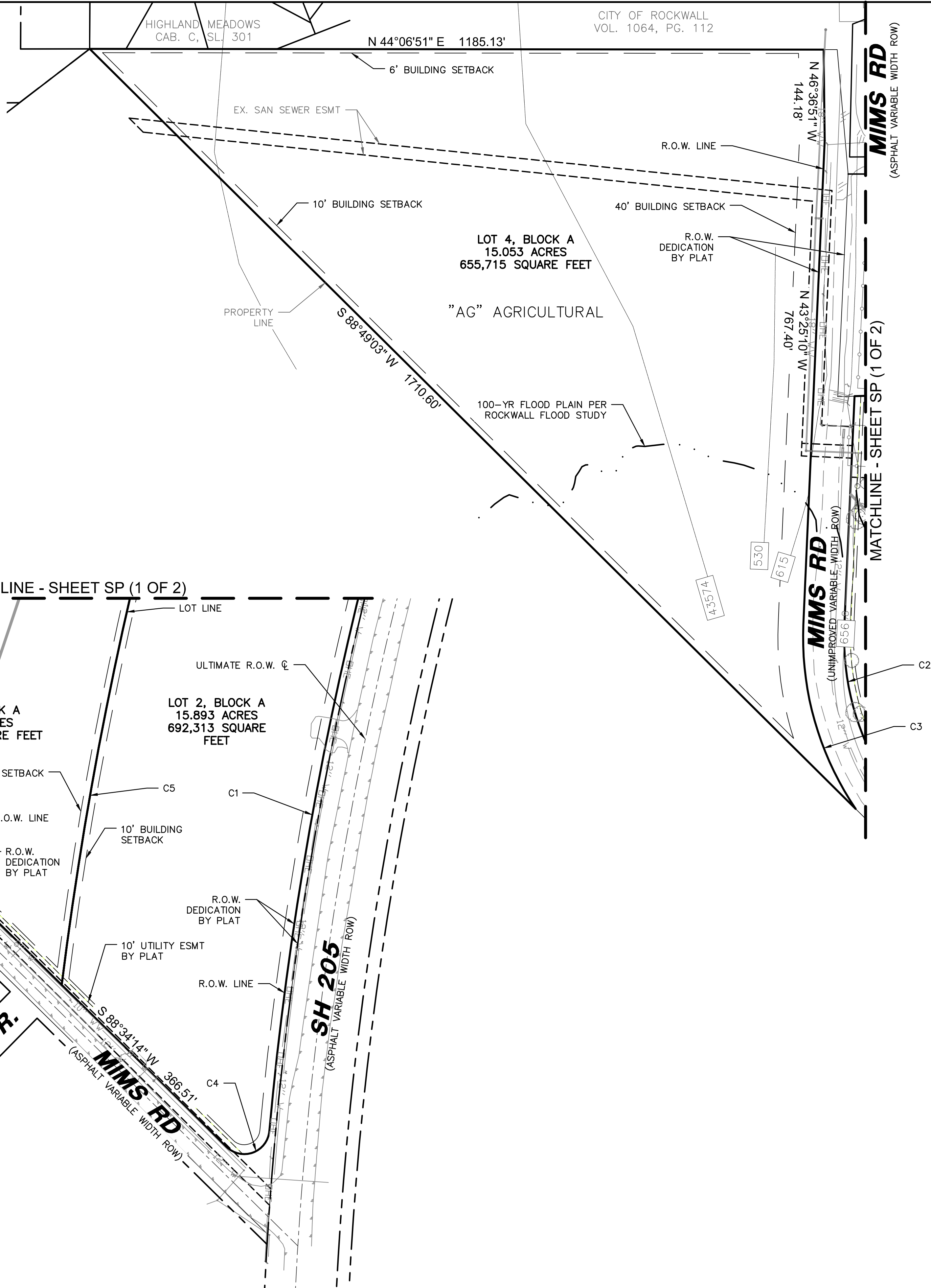
CURVE	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	111°11'01"	5,779.71'	1,128.15'	S 36°43'43" E	1,126.36'
C2	46°17'44"	450.00'	363.60'	N 66°34'02" W	353.79'
C3	36°44'03"	482.50'	309.35'	S 61°47'11" E	304.08'
C4	129°16'42"	40.00'	90.25'	S 23°55'53" W	72.29'
C5	7°41'42"	6,142.03'	824.89'	N 34°59'04" W	824.27'

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__.

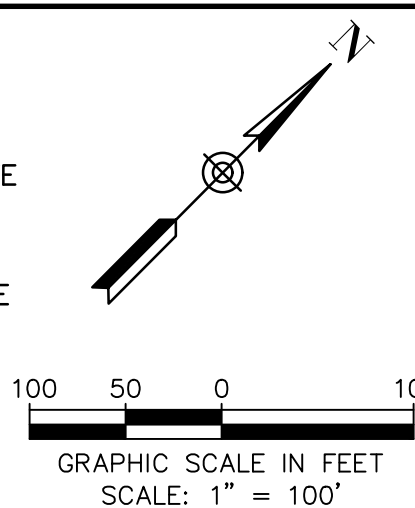
Planning & Zoning Commission, Chairman

Director of Planning and Zoning



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



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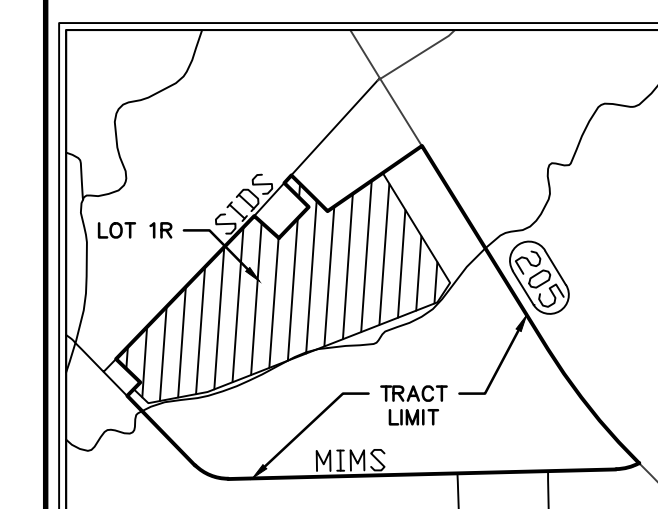
MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

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



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VICINITY MAP

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)

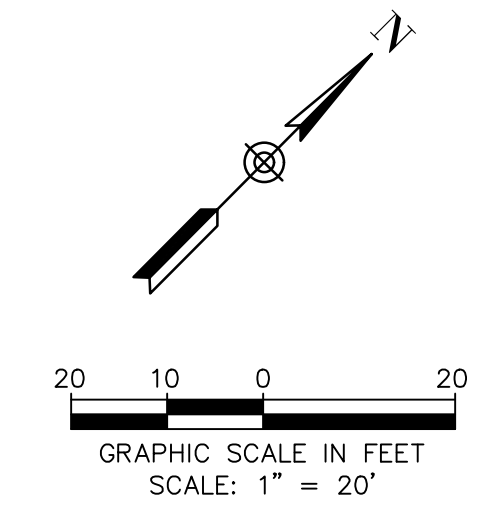
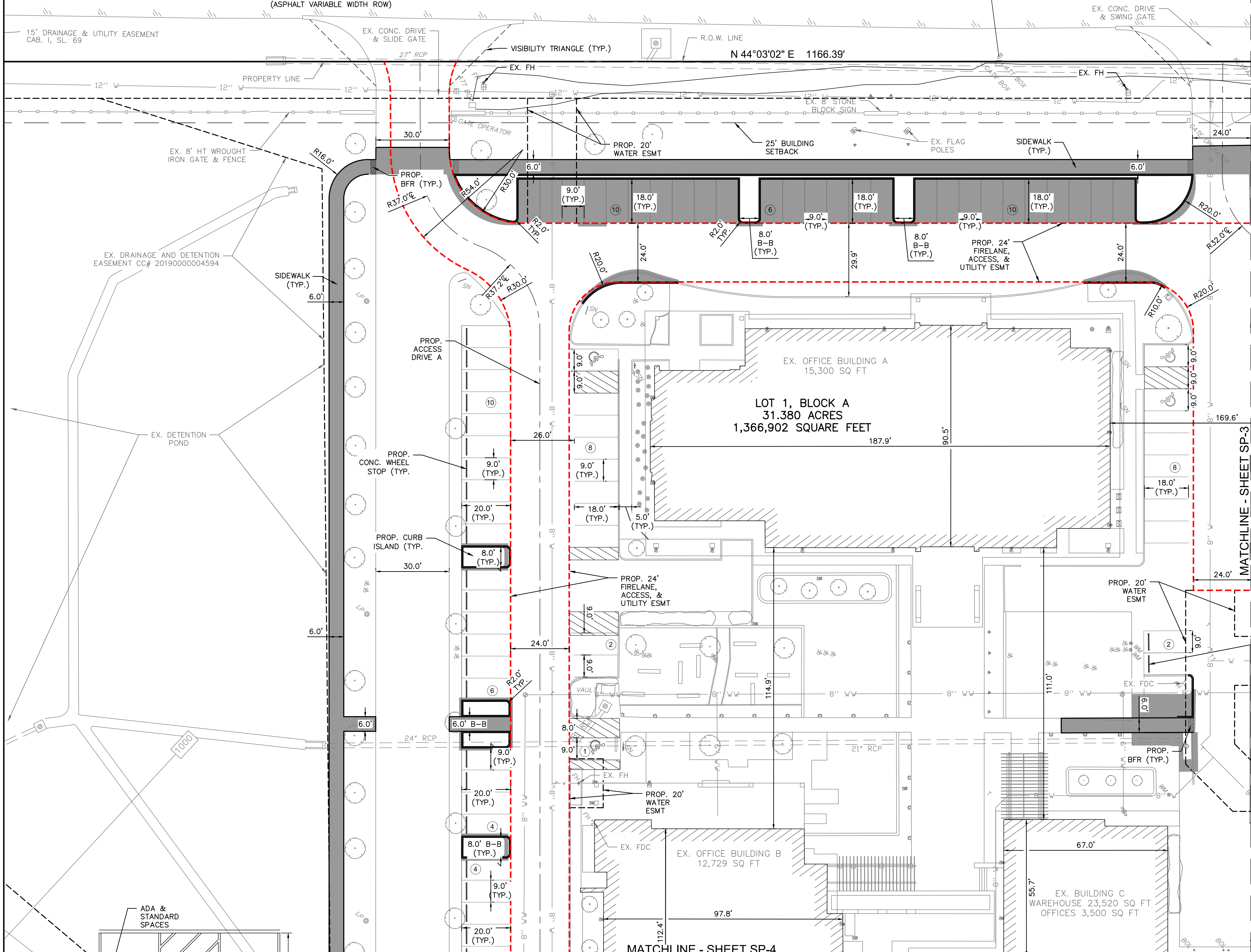
NOTES:
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REC CAMPUS EXPANSION
REC CAMPUS ADDITION
LOTS 1-4, BLOCK A
WILLIAM H. BARNES SURVEY, ABSTRACT NO. 26,
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

SITE INFORMATION:
SEE SP (1 OF 2)

PAVEMENT INFORMATION:
SEE SP (1 OF 2)

SIDS RD
(ASPHALT VARIABLE WIDTH ROW)

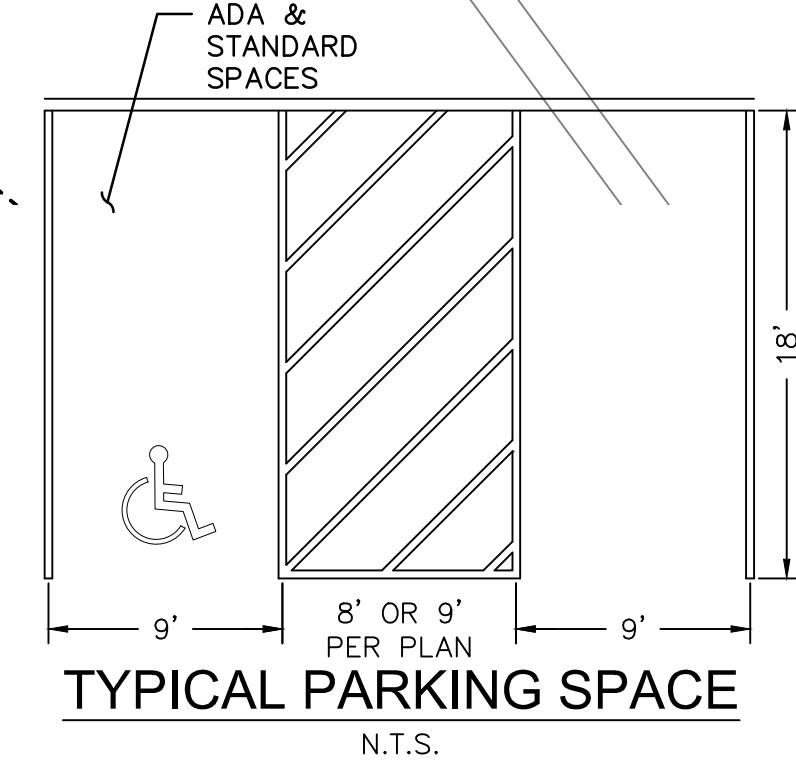


LEGEND

- | | |
|----------|-------------------------------------------------------------------------------------------------------------------------|
| EM | EX. ELECTRIC METER |
| ICV | EX. IRRIGATION CONTROL VALVE |
| B | EX. BOLLARD |
| WM | EX. WATER METER |
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| [Symbol] | CROSS-SECTION LOCATION-CITY OF ROCKWALL MASTER DRAINAGE STUDY |
| [Symbol] | PROPOSED CONCRETE PAVEMENT |

PROP. CONC. WHEEL STOP (TYP.)

- 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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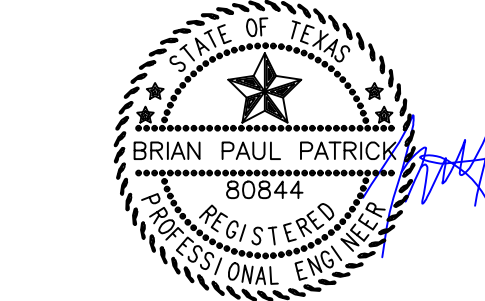
STRUCTURAL ENGINEER

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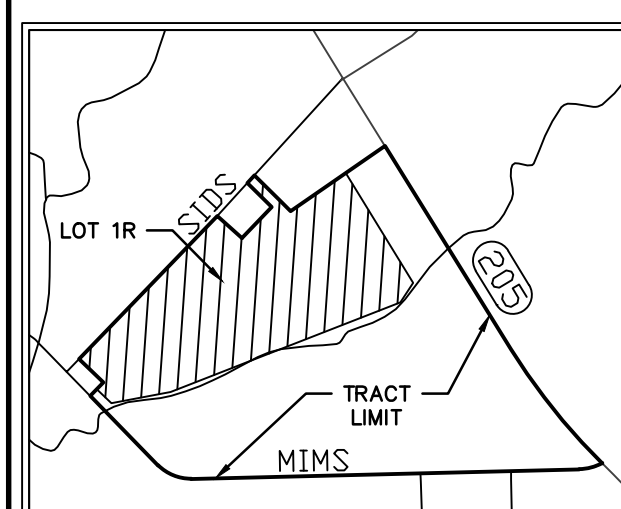
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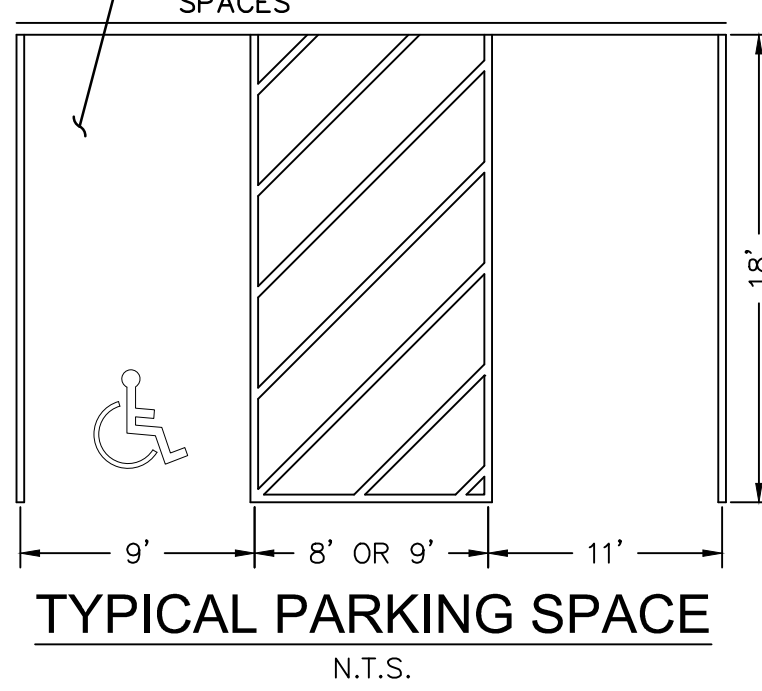
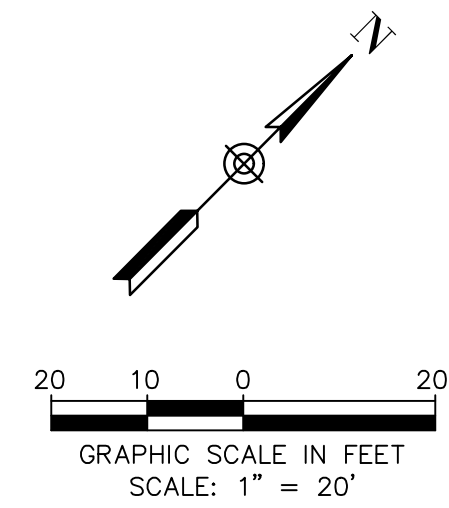
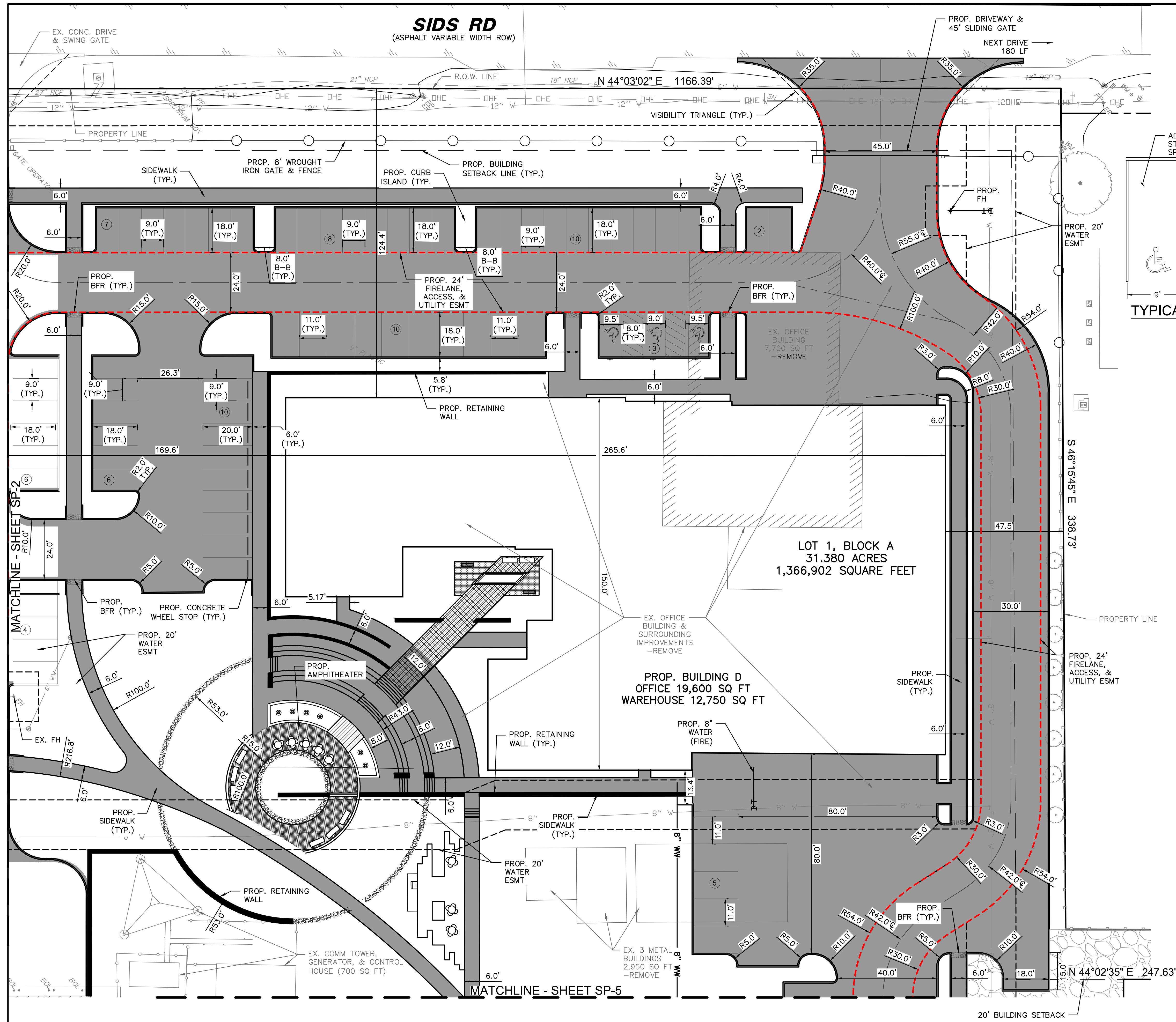
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DATE
10/14/2022
ISSUE
CITY SITE PLAN
SUBMITTAL
SHEET TITLE
SITE PLAN
CASE# SP2022-041

SHEET NO.
SP-2



LEGEND

- | | |
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| [Symbol] | PROPOSED CONCRETE PAVEMENT |
| [Symbol] | PROPOSED GRAVEL SURFACING |

NOTES:

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- ALL RADII ARE 2' UNLESS OTHERWISE INDICATED.
- ALL DIMENSIONS ARE TO THE FACE OF CURB OR EDGE OF PAVEMENT.
- 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

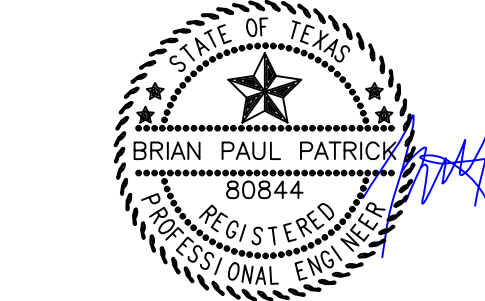
LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

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

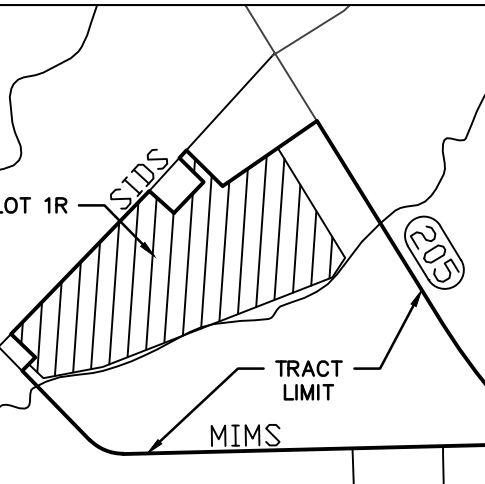
MEP ENGINEERS
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

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



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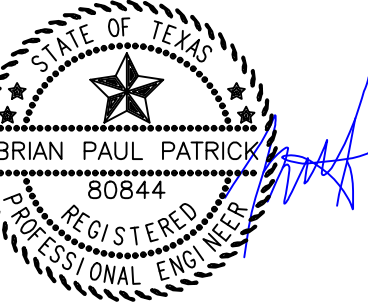


VICINITY MAP

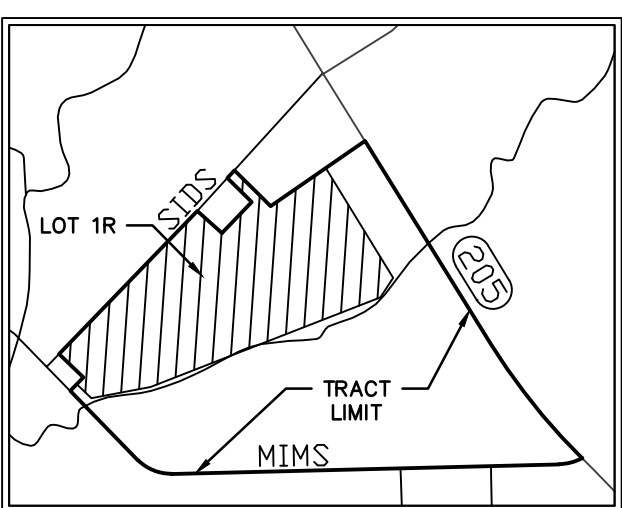
REVISION NO.	DESCRIPTION	DATE

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

THESEAL NO.
SP-3



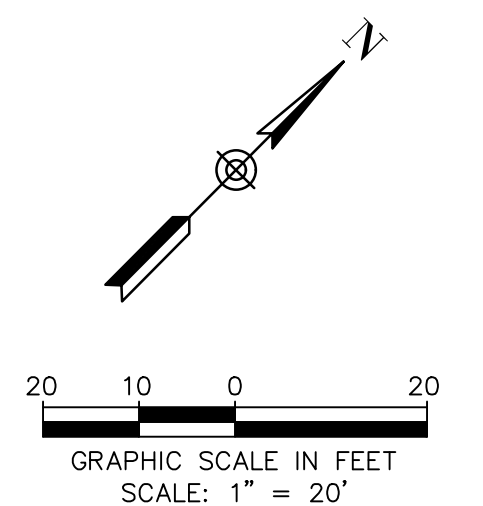
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VICINITY MAP

REVISION NO.	DESCRIPTION	DATE

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

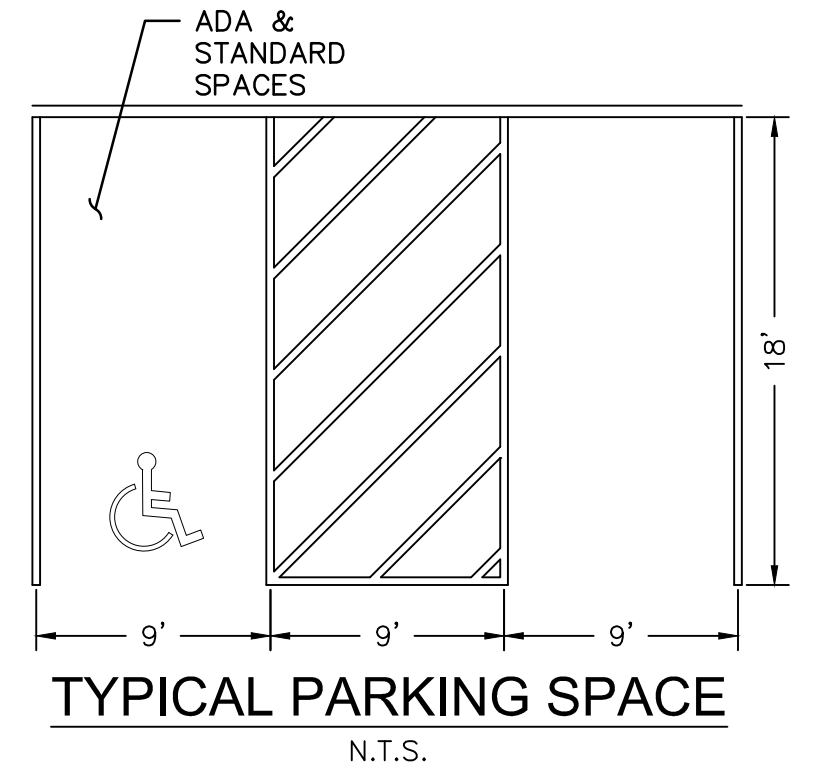


LEGEND

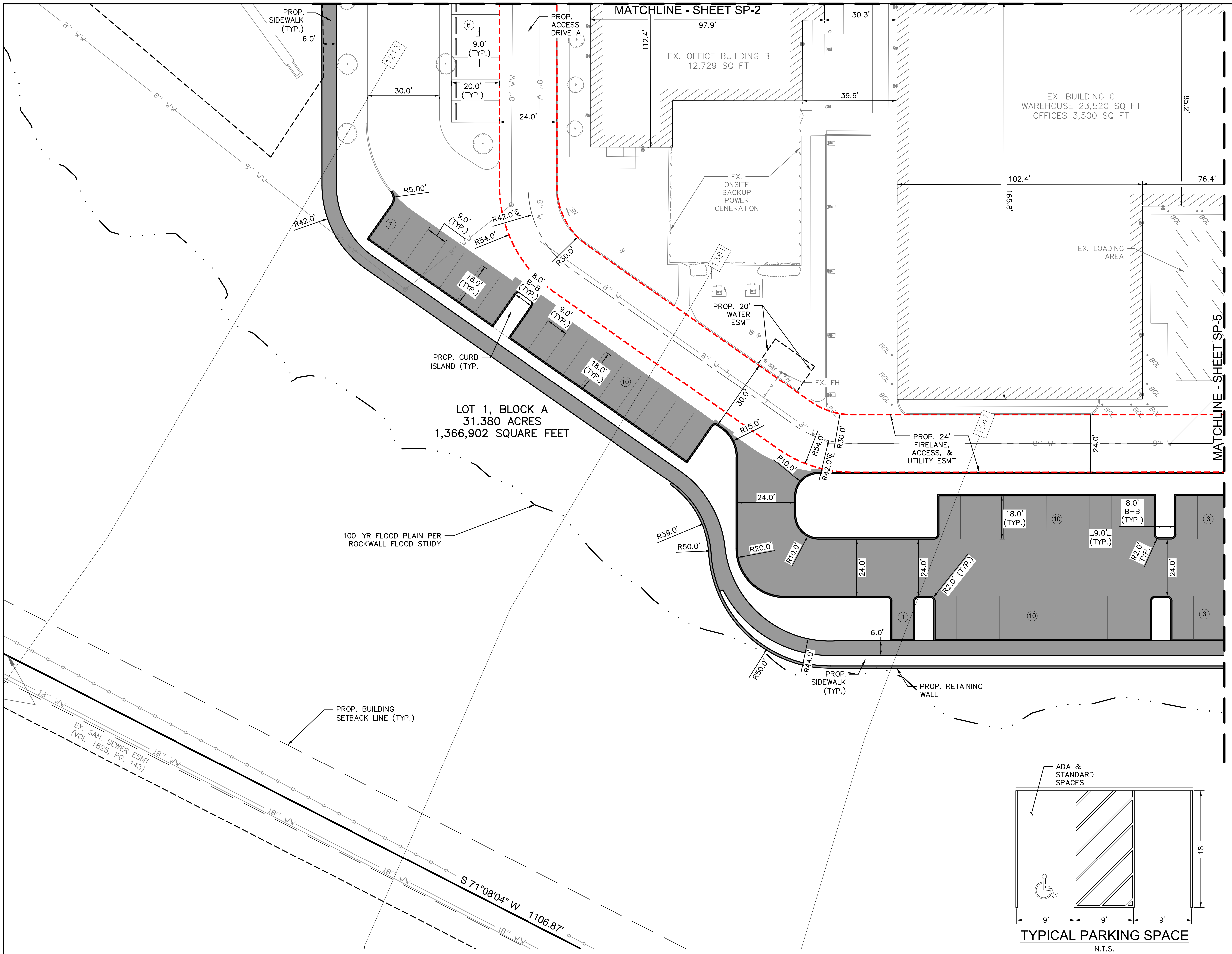
EM	EX. ELECTRIC METER
ICV	EX. IRRIGATION CONTROL VALVE
B	EX. BOLLARD
WM	EX. WATER METER
SSMH	EX. SANITARY SEWER MANHOLE
TPED	EX. TELEPHONE PEDESTAL
WV	EX. WATER VALVE
EB	EX. ELECTRIC BOX
FH	EX. FIRE HYDRANT
CMP	EX. CORRUGATED METAL PIPE
X" W	EX. WATER MAIN PIPE
X" WW	EX. WASTE WATER MAIN PIPE
XX" CMP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

NOTES:

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- SEE SHEET SP (1 OF 2) FOR SITE INFORMATION AND PARKING INFORMATION.



TYPICAL PARKING SPACE
N.T.S.



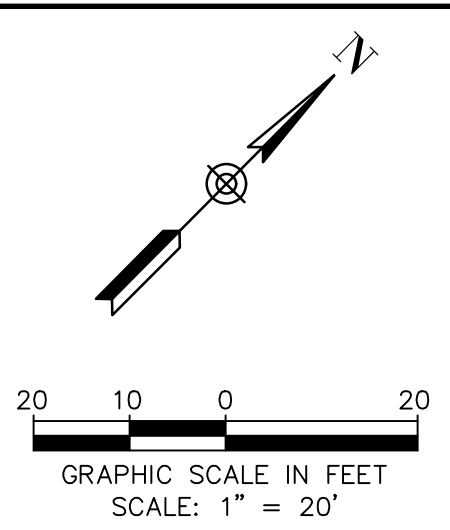
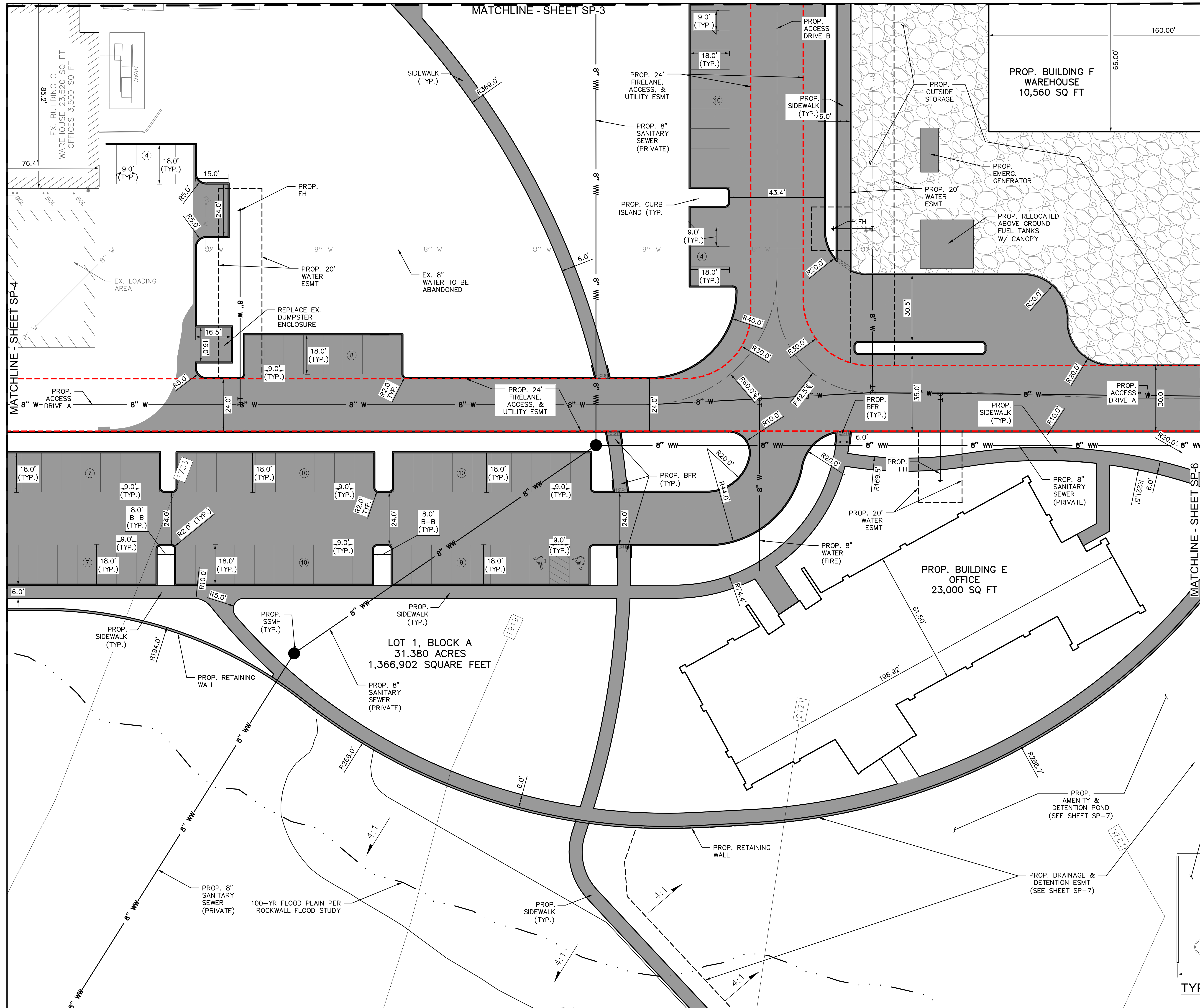
LOT 1, BLOCK A
31.380 ACRES
1,366,902 SQUARE FEET

100-YR FLOOD PLAIN PER ROCKWALL FLOOD STUDY

PROP. BUILDING SETBACK LINE (TYP.)

EX. SAN. SEWER ESMT (VOL. 1825, PG. 145)

S 71°08'04" W 1106.87'

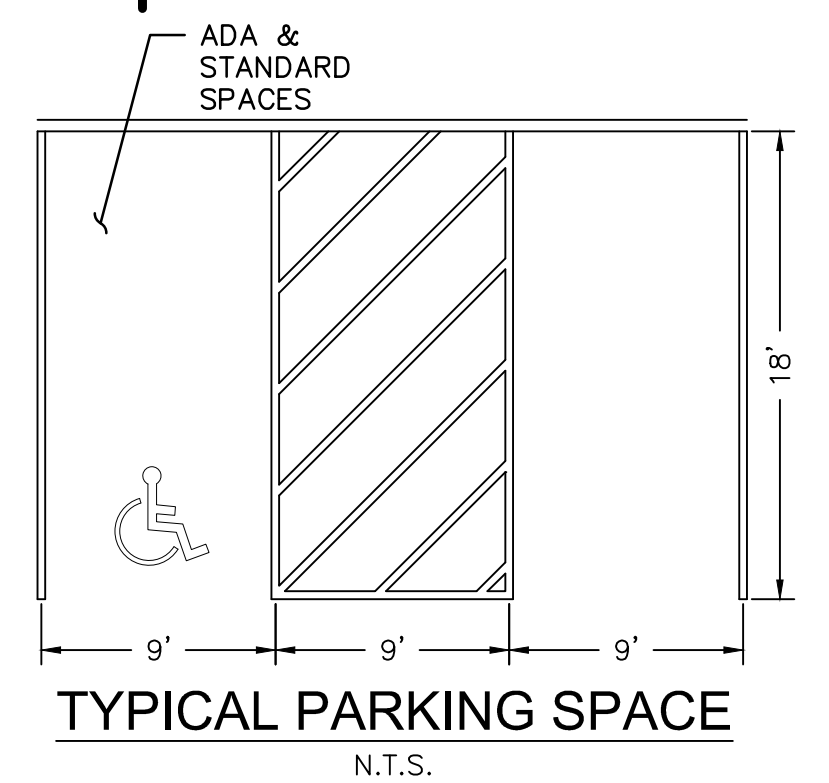


LEGEND

- | | |
|---------|-------------------------------------------------------------------------------------------------------------------------|
| 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 |
| ○ | EX. POWER POLE |
| —O— | 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 |
| ■ | PROPOSED GRAVEL SURFACING |

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 DALLAS, TX 75201

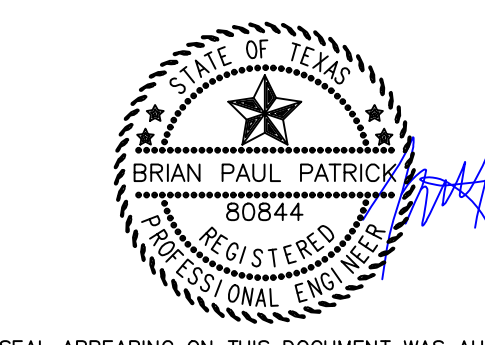
LANDSCAPE ARCHITECT
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 260 EAST DAVIS STREET, SUITE 100
 MCKINNEY, TX 75069

STRUCTURAL ENGINEER
 HKS, INC.
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 DALLAS, TX 75201-4240

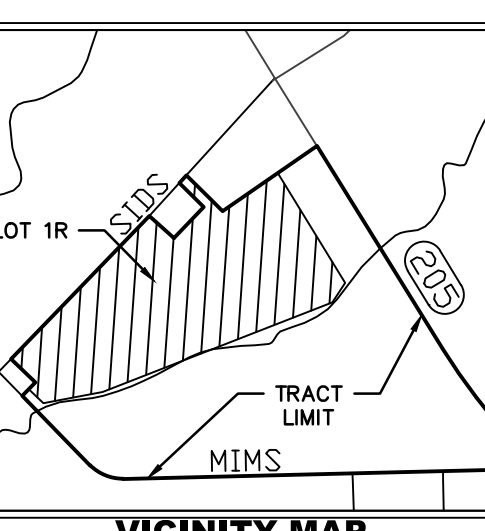
MEP ENGINEERS
 SYSKA HENNESSY GROUP
 4925 GREENVILLE AVENUE, SUITE 415
 DALLAS, TX 75206

OWNER/APPLICANT
 RAYBURN ELECTRIC COOPERATIVE
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 TBPE No. F-1515



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REVISION

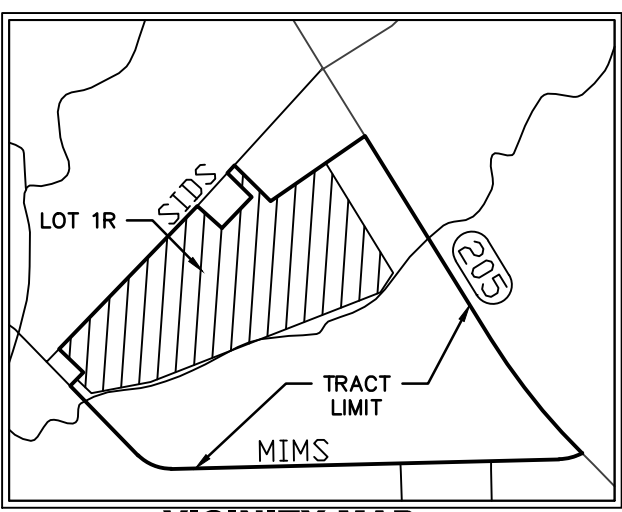
NO.	DESCRIPTION	DATE

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

SHEET NO.
SP-5



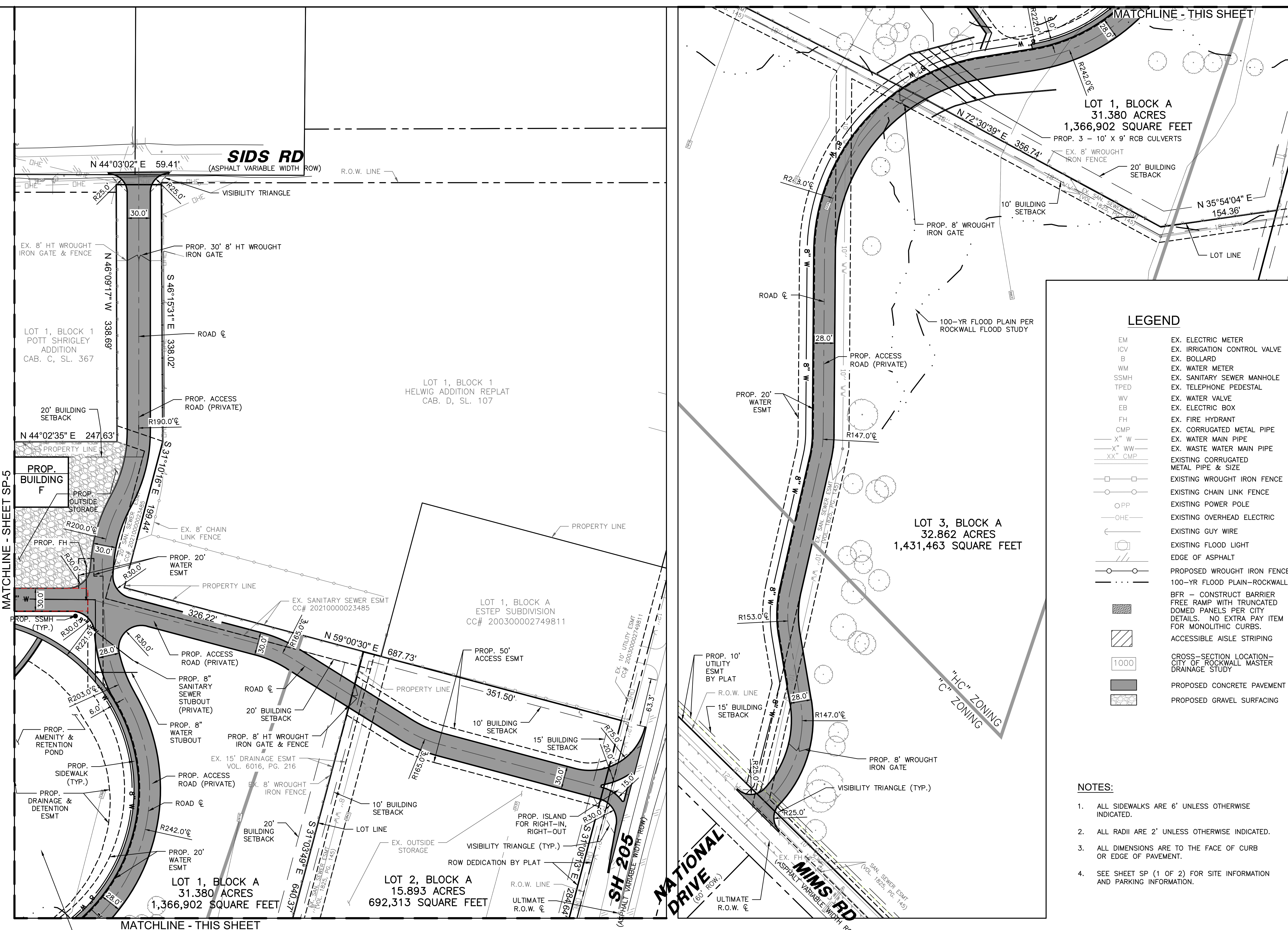
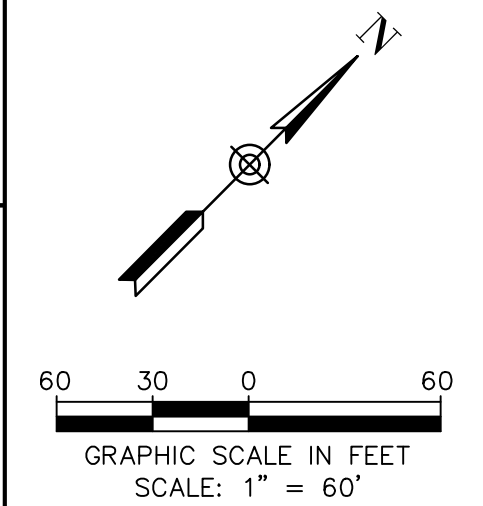
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VICINITY MAP

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



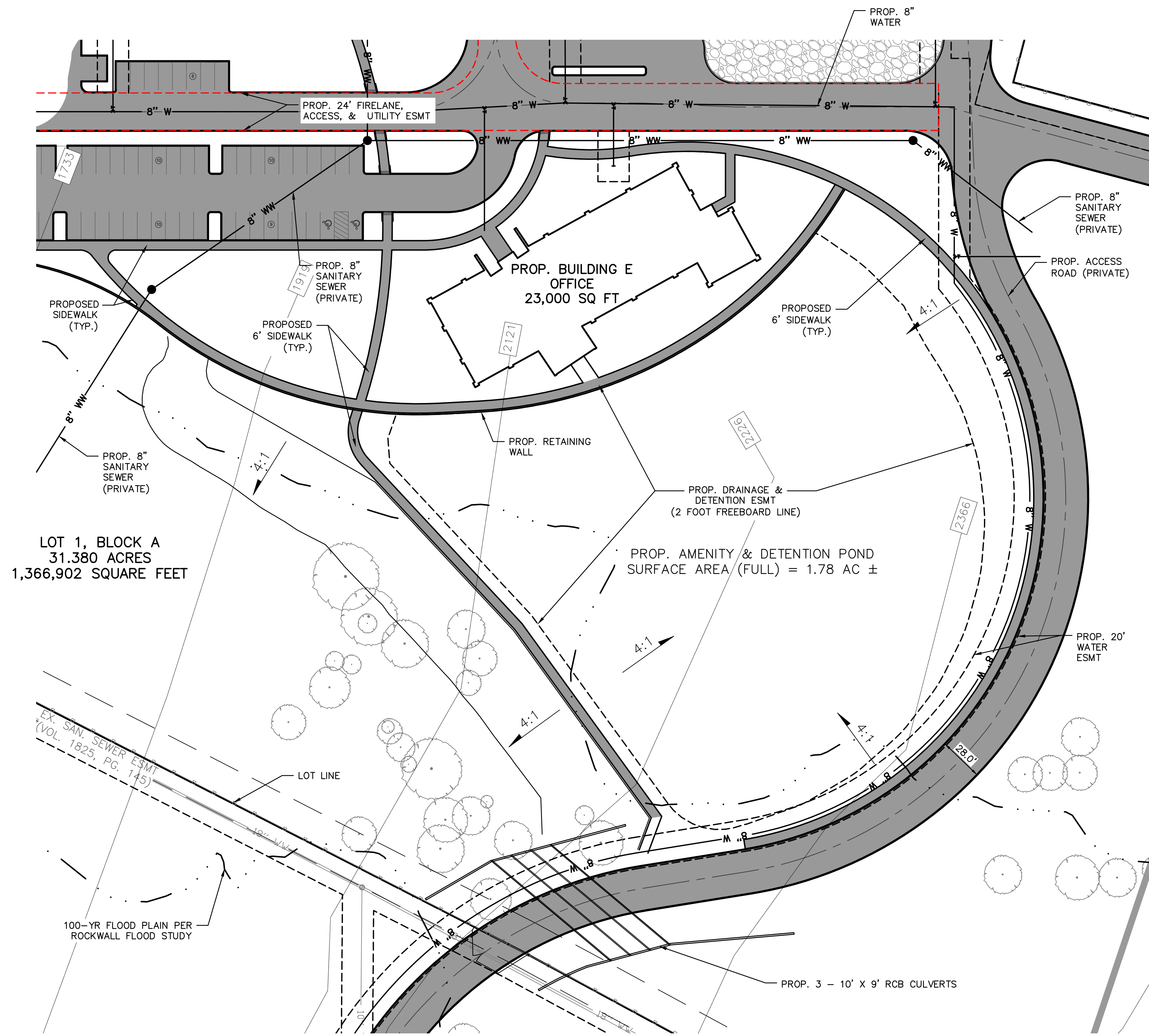
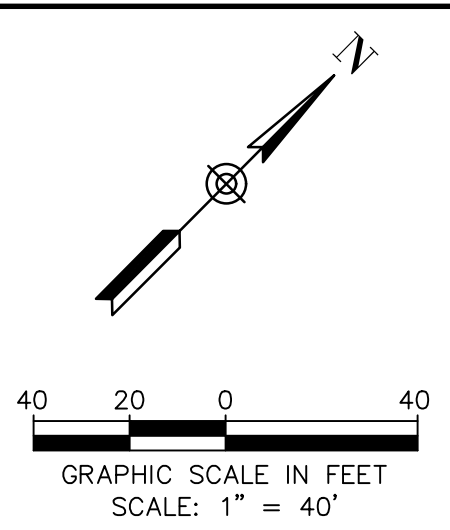
LEGEND

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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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
—○—○—	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

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SEE SHEET SP-7 FOR AMENITY & RETENTION POND LIMITS



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

PROP. AMENITY & DETENTION POND
SURFACE AREA (FULL) = 1.78 AC ±

EX. SAN. SEWER ESMT
(VOL. 1825, PG. 145)

100-YR FLOOD PLAIN PER
ROCKWALL FLOOD STUDY

PROP. 3 - 10' X 9' RCB CULVERTS

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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| XX" CMP | EX. CORRUGATED METAL PIPE & SIZE |
| [Symbol] | EX. WROUGHT IRON FENCE |
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| [Symbol] | PROPOSED CONCRETE PAVEMENT |

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HKS

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

LANDSCAPE ARCHITECT
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260 EAST DAVIS STREET, SUITE 100
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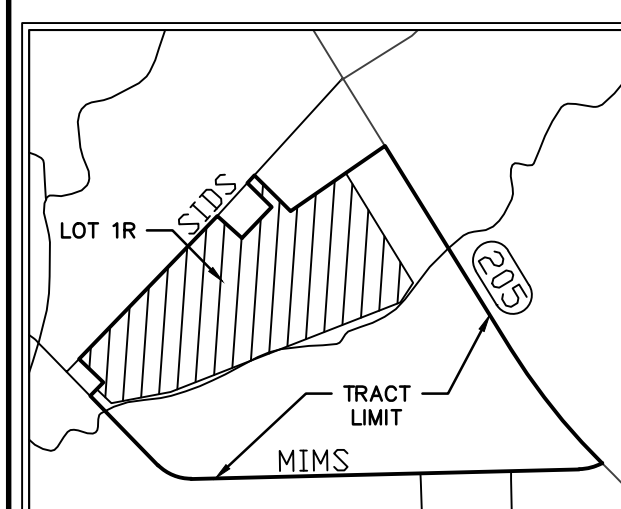
MEP ENGINEERS
SYSKA HENNESSY GROUP
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CIVIL ENGINEER
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618 MAIN STREET
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TBPE No. F-1515



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VICINITY MAP

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		
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 PNEUMATHERED 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

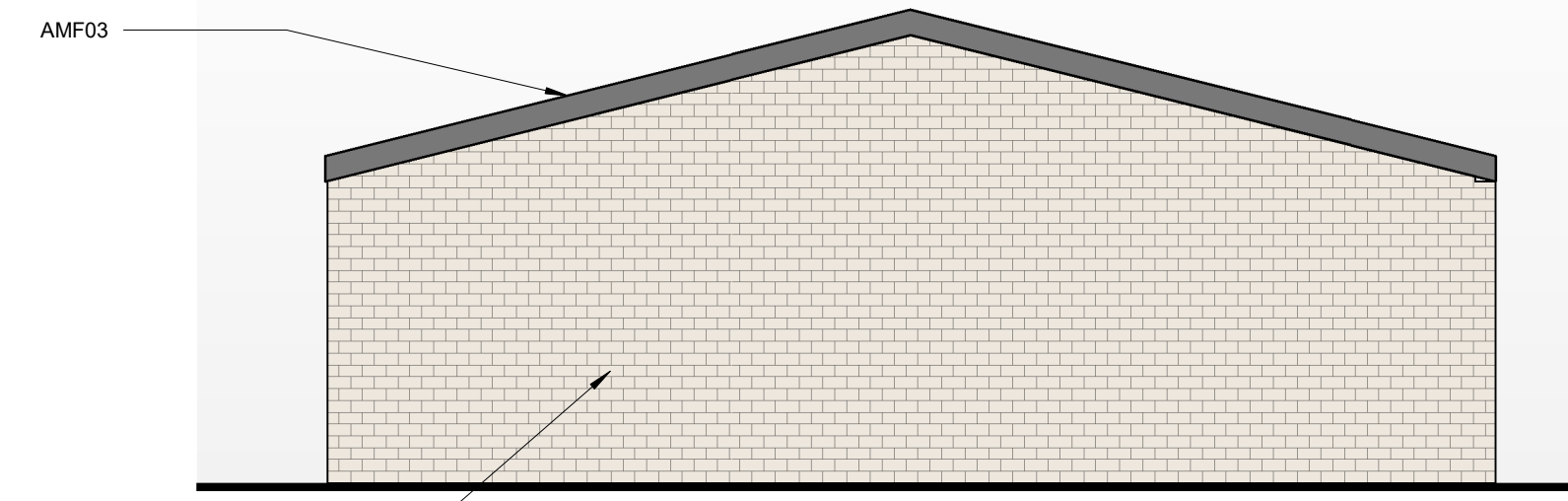
PT01:
a. MANUFACTURER: SHERWIN WILLIAMS
b. NUMBER: SW9111
c. COLOR: ANTLER VELVET
d. SHEEN: SEMI-GLOSS
e. LOCATION: GUTTERS AND DOWNSPOUTS

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

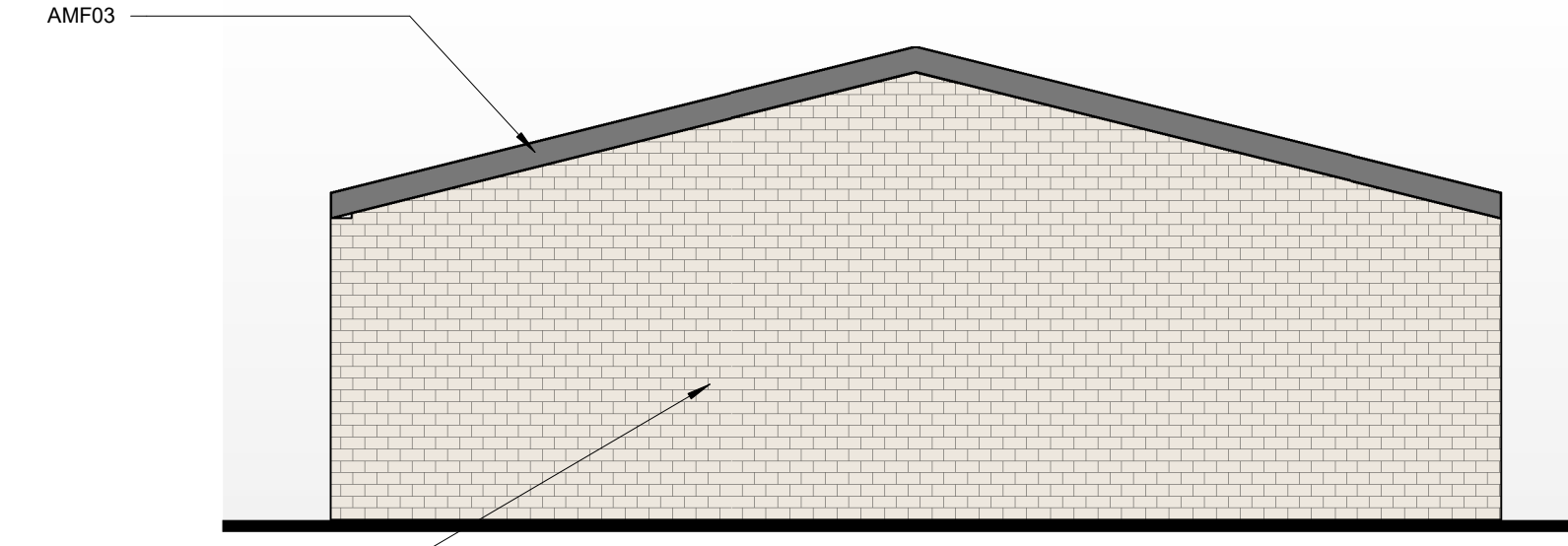
GL01: INSULATING COATED GLASS - VISION
1) OVERALL THICKNESS: 1 IN NOMINAL
2) OUTBOARD LITE: CLEAR HS. 1/4" THICK GLASS WITH COATING ON NO 2 SURFACE
3) AIR SPACE: 1/2" ALUMINIUM BLACK, ARGON
4) INBOARD LITE: CLEAR HS. 1/4" THICK GLASS
5) BASIS OF DESIGN MANUFACTURER AND PRODUCT: VIRACON 1" INSULATED LOW-E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

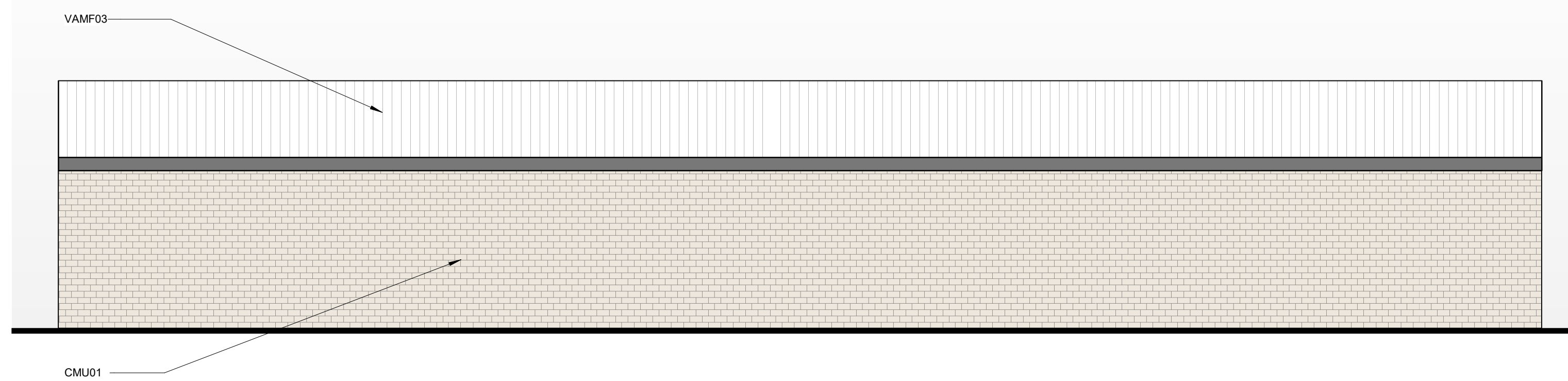
CMU01:
a. MANUFACTURER: FEATHERLITE
b. SPLIT FACE MASONRY BLOCK
c. COLOR: CREAM



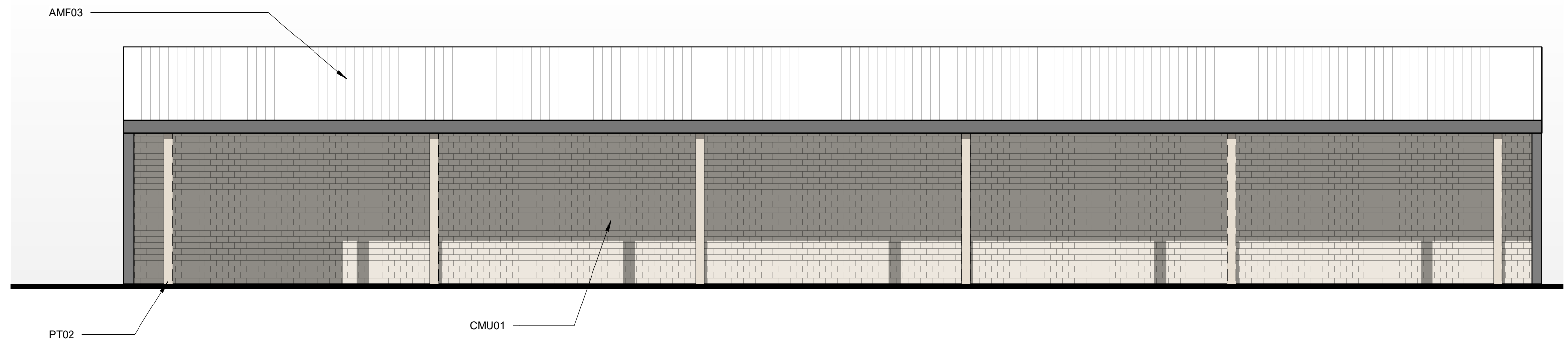
04 EXTERIOR ELEVATION - BUILDING F EAST
3/32" = 1'-0"



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"



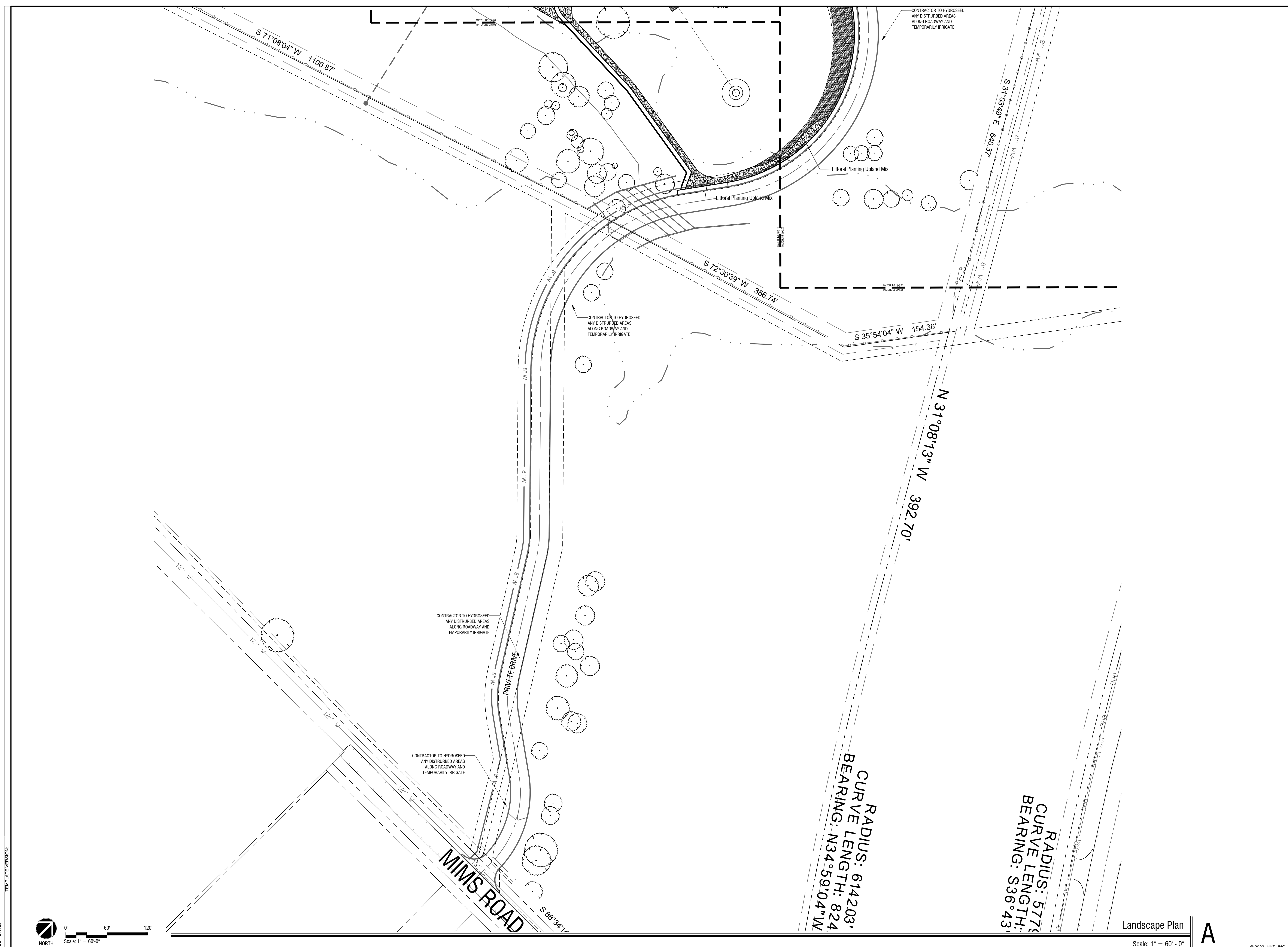
INTERIM REVIEW ONLY
These documents are incomplete, and are released for interim review only and are not intended for regulatory approval, permit, or construction purposes.
Architect: _____
Arch. Reg. No.: _____
Date: _____

KEY PLAN

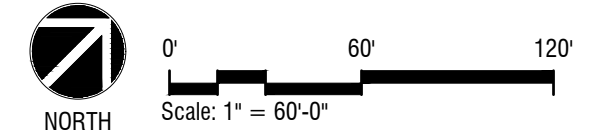
REVISION NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
25370.000
DATE
10/14/2022
ISSUE

SHEET TITLE
EXTERIOR ELEVATIONS - BUILDING F
SHEET NO.



PLOT DATE: TEMPLATE VERSION:



Landscape Plan
Scale: 1" = 60' - 0"

A

© 2022 HKS, INC.

HKS

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

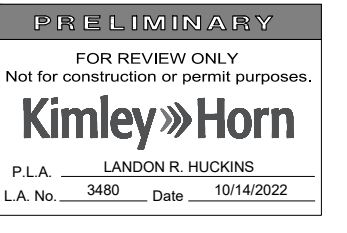
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CIVIL ENGINEER
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GARLAND, TEXAS 75040



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.
L5.06

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

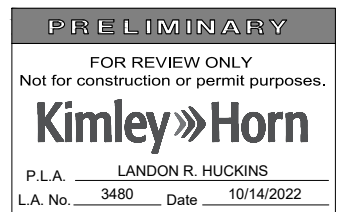
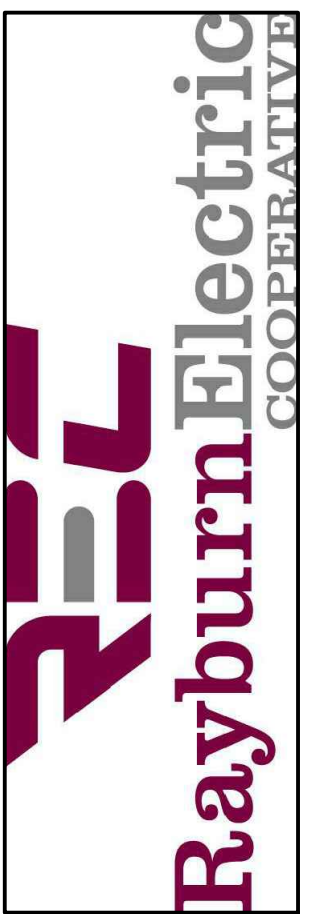
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER

RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER

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



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

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 virginiana	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	
	Brakeights Red Yucca / Hesperaloe parviflora 'Brakeights' 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	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	REMARKS	
	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.

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
<i>Sids Road - 832 LF (773 LF Frontage + 59.41 LF of Drive connection)</i>		
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
<i>SH 205 - Drive connection 200LF</i>		
1 Canopy Tree/ 50 LF (Min. 4" Cal.)	N/A	N/A
<i>Mims Road - Drive connection 78 LF</i>		
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%

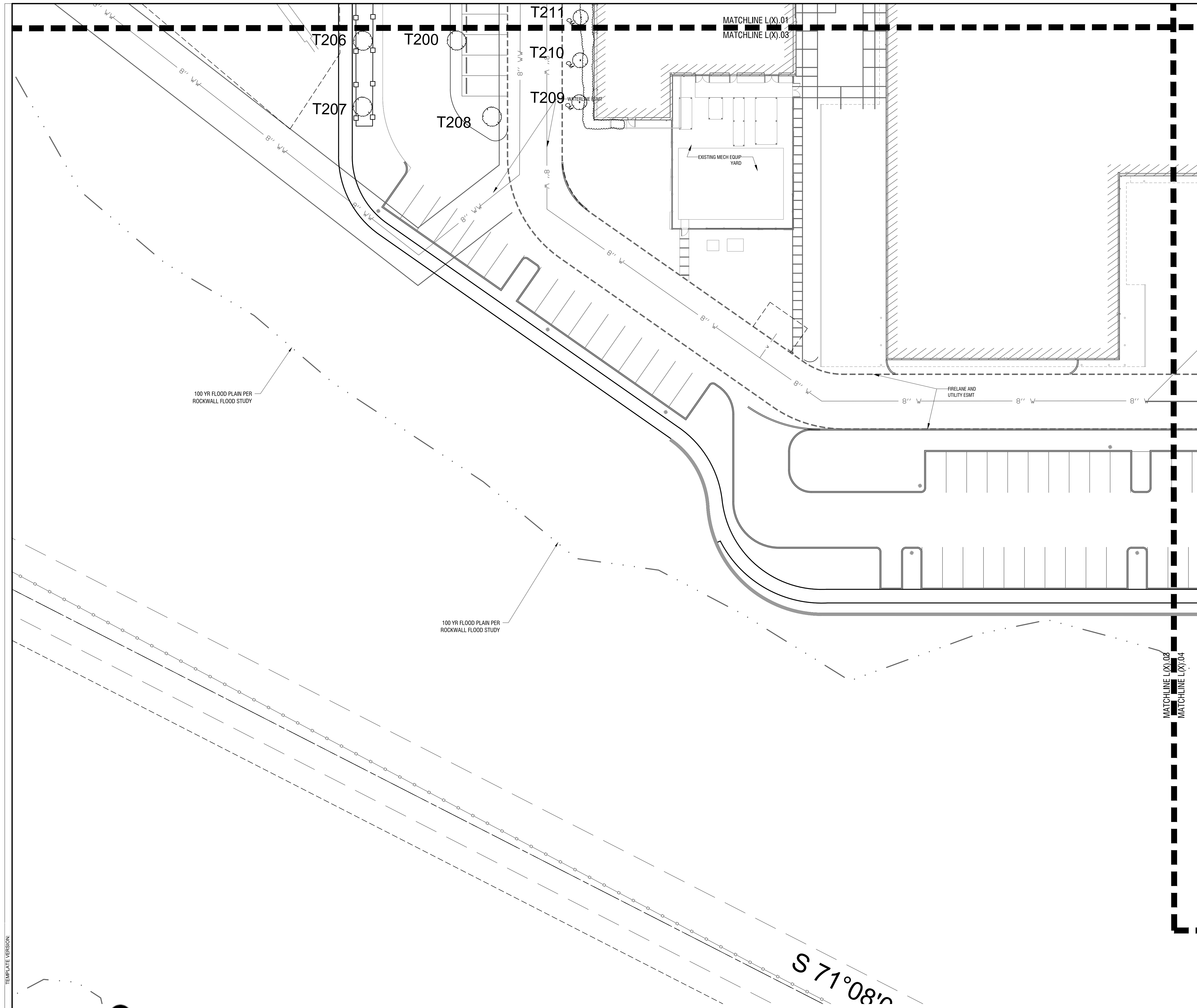
PROPOSED MAX. BUILDING HEIGHT: 40 FT (BUILDING D)
PROPOSED LOT COVERAGE: 106,281/1,366,902 = 7.8%
PROPOSED FLOOR AREA RATIO: 113,260/1,366,902 = 0.08:1
PROPOSED IMPERVIOUS PARKING: 67,476/1,366,902 = 4.9%

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



- 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

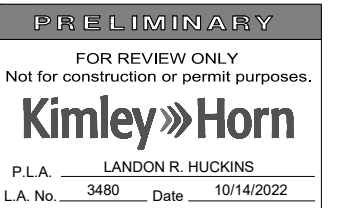
LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
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KEY PLAN

REVISION NO.	DESCRIPTION	DATE

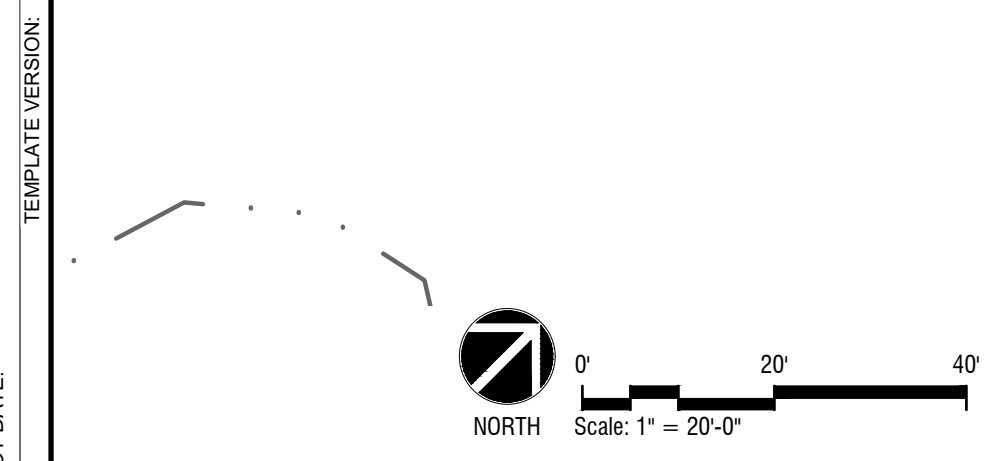
HKS PROJECT NUMBER
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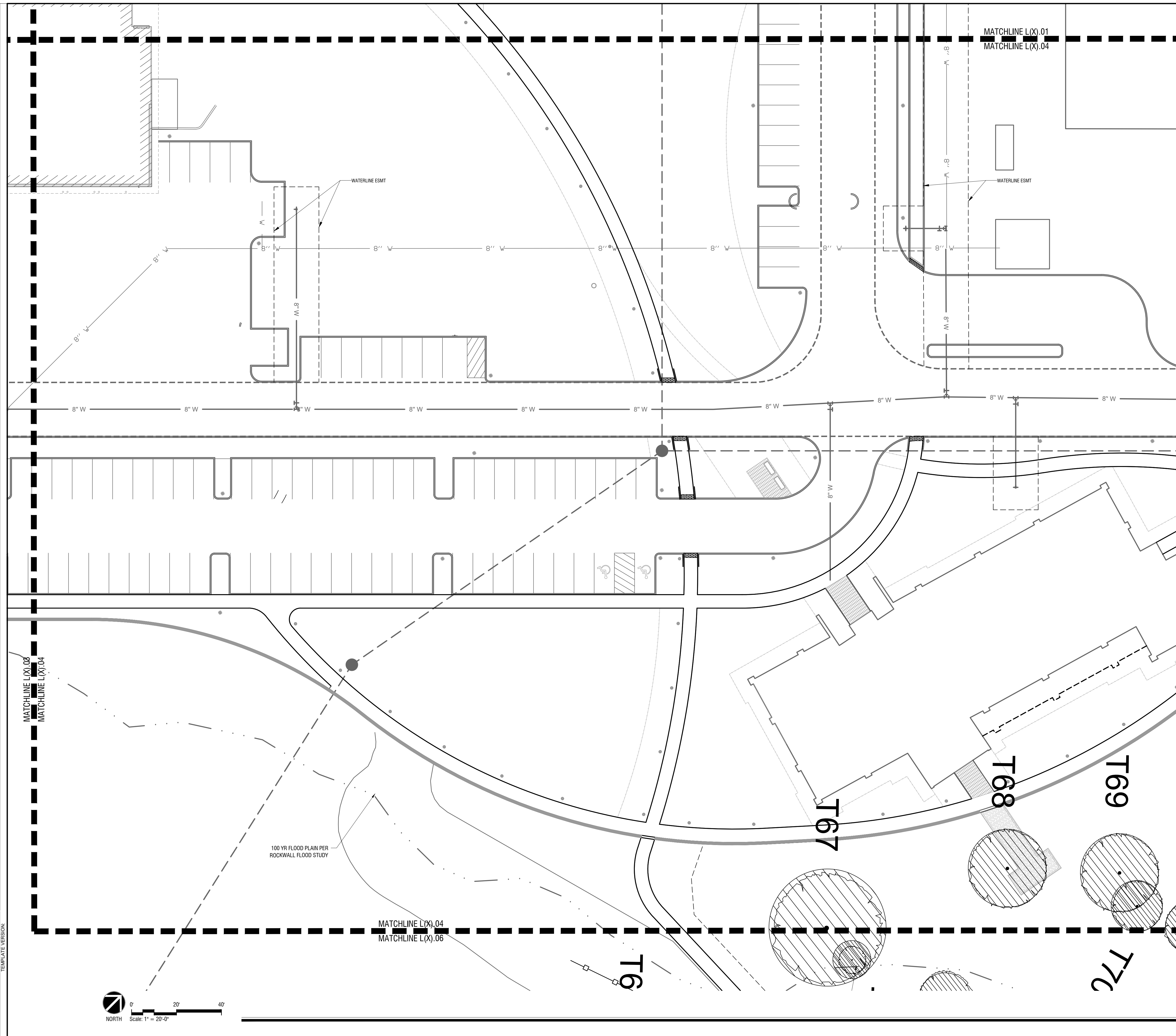
ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
TREESCAPE PLAN

SHEET NO.
L7.03



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



- 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

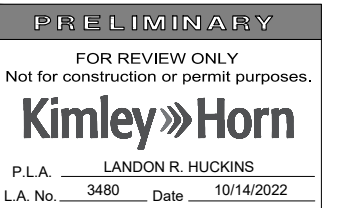
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 GARLAND, TEXAS 75040



KEY PLAN

REVISION NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER
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DATE
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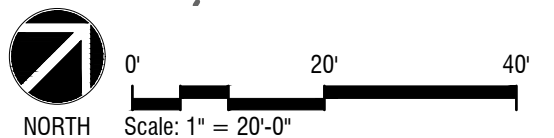
ISSUE
CITY SITE PLAN SUBMITTAL

SHEET TITLE
TREESCAPE PLAN

Scale: 1" = 20'-0"

L7.04

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Treescape Plan **A**

TEMPLATE VERSION
PLOT DATE:

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 Above		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 Wiltd.		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.	'Nakhez' Crape Myrtle			X				
T81A	18		Live Oak			X		Removed	18	
T82	7	M.T.	'Nakhez' Crape Myrtle			X				
T83	6	M.T.	'Nakhez' Crape Myrtle			X				
T84	11	M.T.	'Nakhez' Crape Myrtle			X				
T85	16	M.T.	'Nakhez' Crape Myrtle			X				
T86	18	M.T.	'Nakhez' Crape Myrtle			X				
T87	15	M.T.	'Nakhez' Crape Myrtle			X				
T88	11	M.T.	'Nakhez' Crape Myrtle			X				
T89	15		Bradford Pear			X		Removed	15	
T90	11	M.T.	'Nakhez' Crape Myrtle			X		Removed		
T90A	20	M.T.	'Nakhez' Crape Myrtle			X		Removed		
T90B	9	M.T.	Wilmerlon Red Crape Myrtle			X		Removed		
T91	11	M.T.	'Nakhez' Crape Myrtle			X		Removed		
T92	11	M.T.	'Nakhez' Crape Myrtle			X		Removed		
T93	15	M.T.	'Nakhez' Crape Myrtle			X		Removed		
T94	9	M.T.	'Nakhez' Crape Myrtle			X		Removed		
T95	19	M.T.	'Nakhez' Crape Myrtle			X		Removed		
T96	7	M.T.	Wilmerlon Red Crape Myrtle			X		Removed		

Location Key	Size DBH (Inches)	Description	Common Name	Comments	Tree Designation				Removal Status	Replacement Caliper Inches
					Feature	Primary	Secondary	Non-Protected		
T96	7	M.T.	Wilmerlon Red Crape Myrtle					X	Removed	
T97	19	M.T.	'Nakhez' Crape Myrtle					X	Removed	
T98	9	M.T.	Wilmerlon Red Crape Myrtle					X	Removed	
T99	13	M.T.	'Nakhez' Crape Myrtle					X	Removed	
T100	8	M.T.	'Nakhez' Crape Myrtle					X	Removed	
T101	11	M.T.	'Nakhez' Crape Myrtle					X	Removed	
T102	7	M.T.	'Nakhez' Crape Myrtle					X	Removed	
T103	10	M.T.	'Nakhez' Crape Myrtle					X	Removed	
T104	7	M.T.	'Nakhez' Crape Myrtle					X	Removed	
T105	11	M.T.	'Nakhez' Crape Myrtle					X	Removed	
T106	6	M.T.	'Nakhez' 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			
T159	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.	'Nakhez' 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.	'Nakhez' Crape Myrtle				X			
T183	7.5	M.T.	'Nakhez' Crape Myrtle				X			
T184	7	M.T.	'Nakhez' 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									

RAYBURN ELECTRIC COOPERATIVE

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

HARDSCAPE, LANDSCAPE, IRRIGATION

Sheet Number	Sheet Title	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)																
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	●	●	●																



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

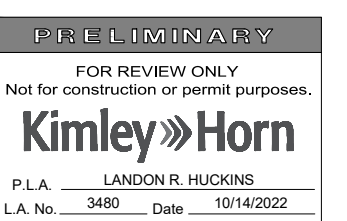
LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATE, INC.
260 EAST DAVIS STREET, SUITE 100
MCKINNEY, TX 75069

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



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

ARCHITECT

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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

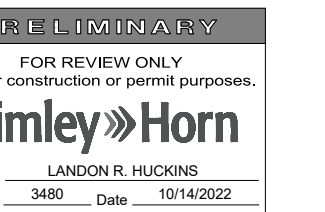
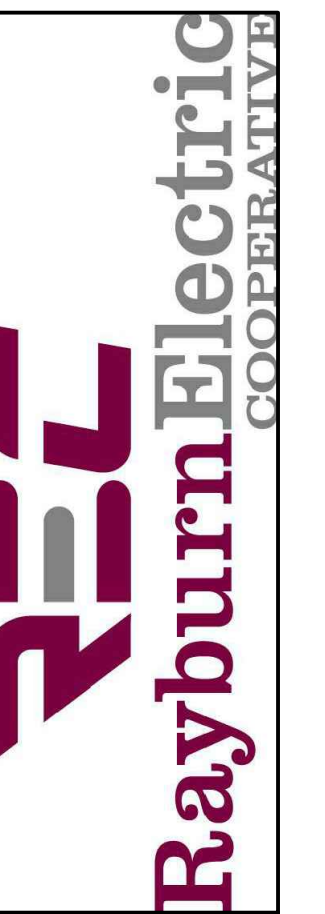
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER

RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER

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



KEY PLAN

REVISION NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER

25370.000

DATE

10/14/22

ISSUE

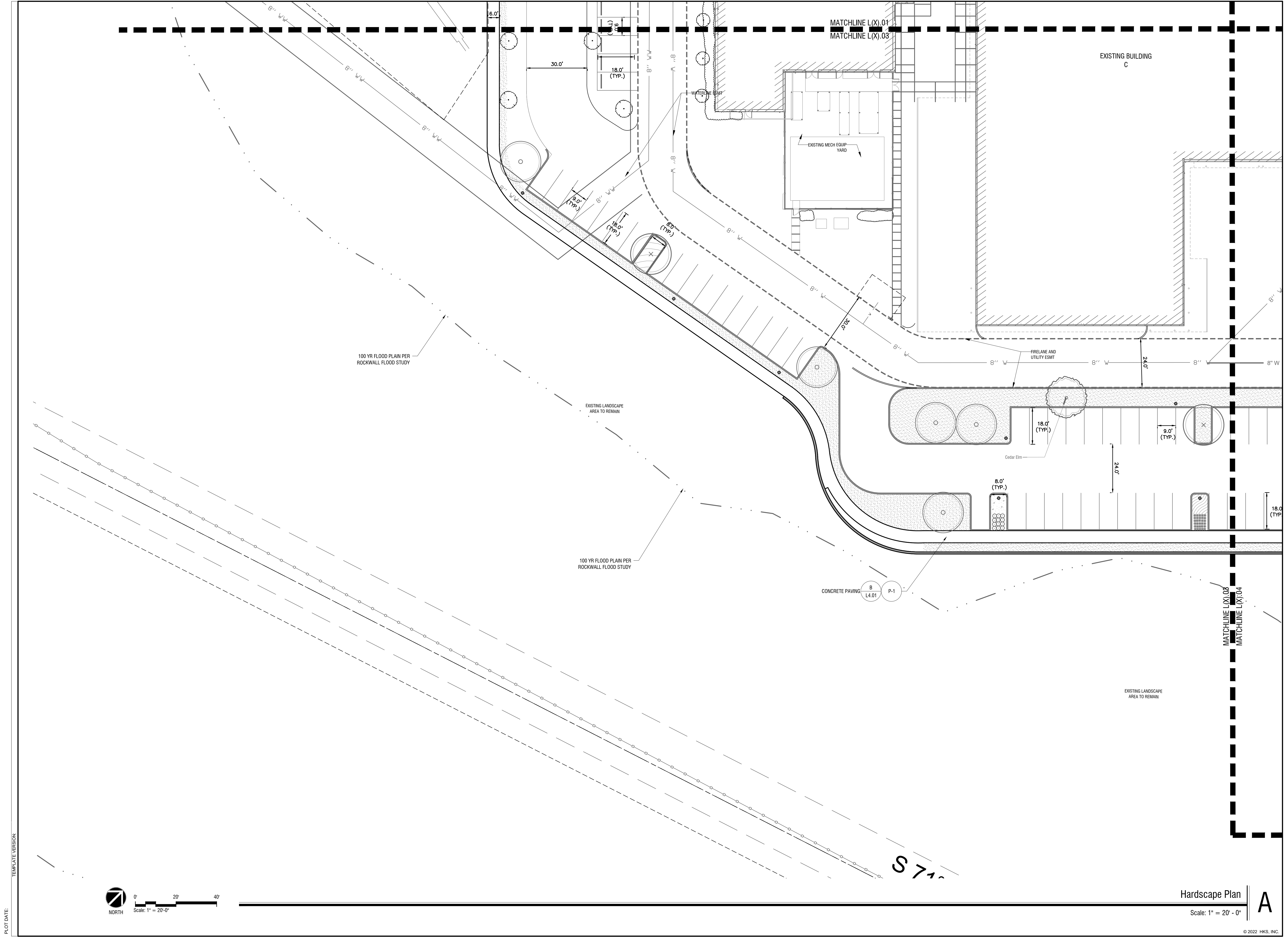
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SHEET TITLE

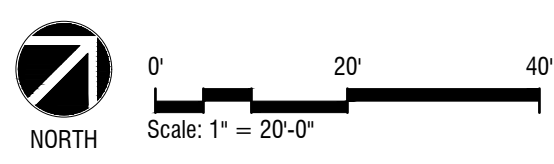
HARDSCAPE PLAN

SHEET NO.

L2.03



TEMPLATE VERSION



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

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

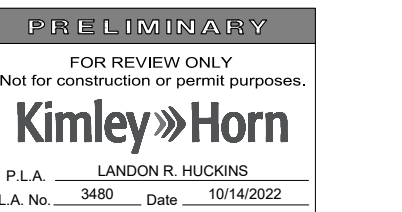
SYSKA HENNESSY GROUP
4925 GREENVILLE AVENUE, SUITE 415
DALLAS, TX 75206

OWNER

RAYBURN ELECTRIC COOPERATIVE
950 SIDS ROAD
ROCKWALL, TX 75087

CIVIL ENGINEER

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



KEY PLAN

REVISION NO.	DESCRIPTION	DATE

HKS PROJECT NUMBER

25370.000

DATE

10/14/22

ISSUE

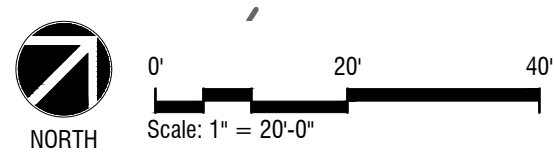
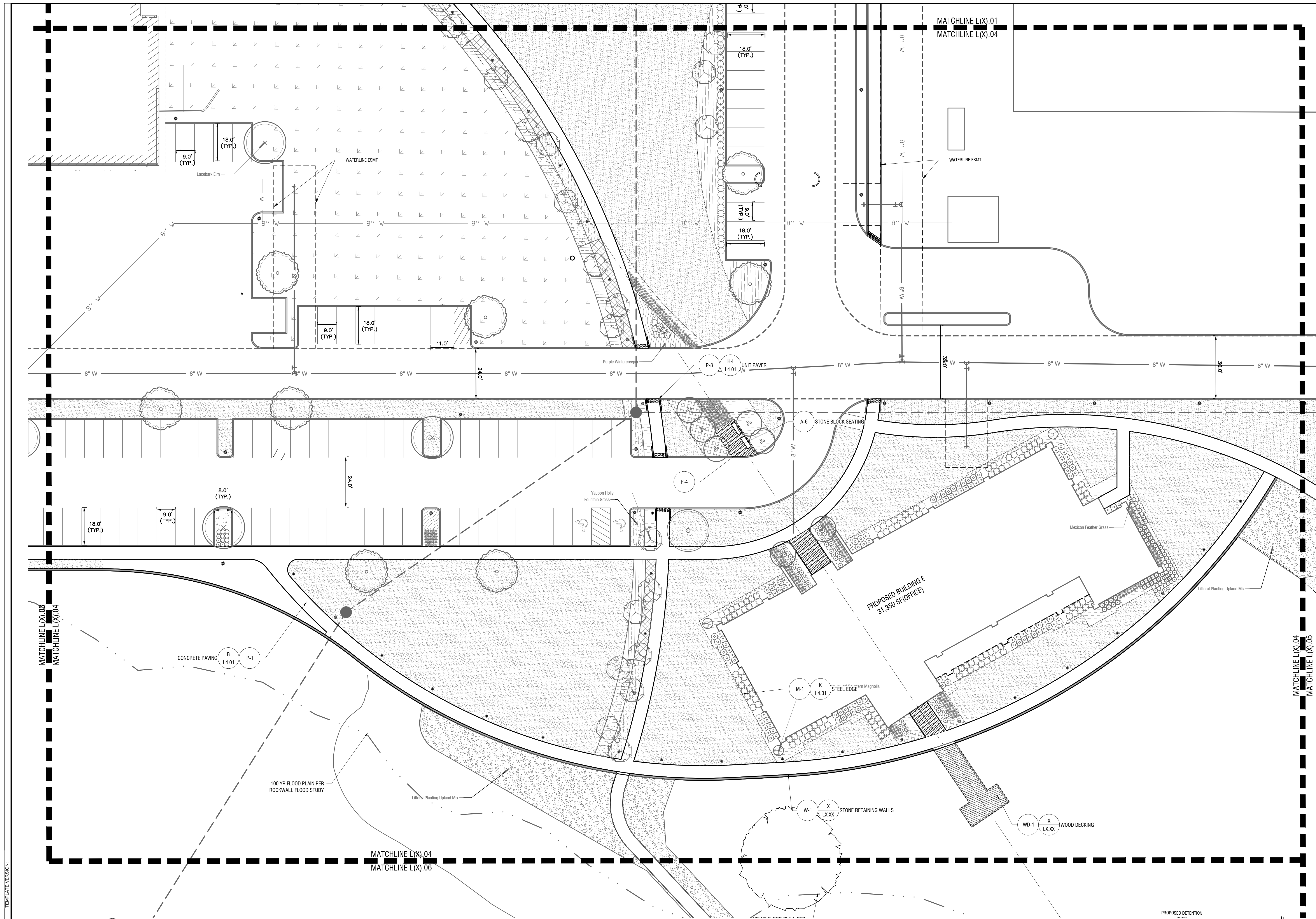
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SHEET TITLE

HARDSCAPE PLAN

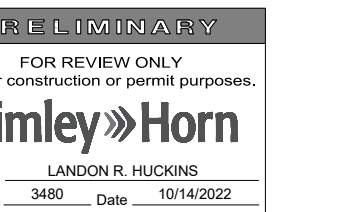
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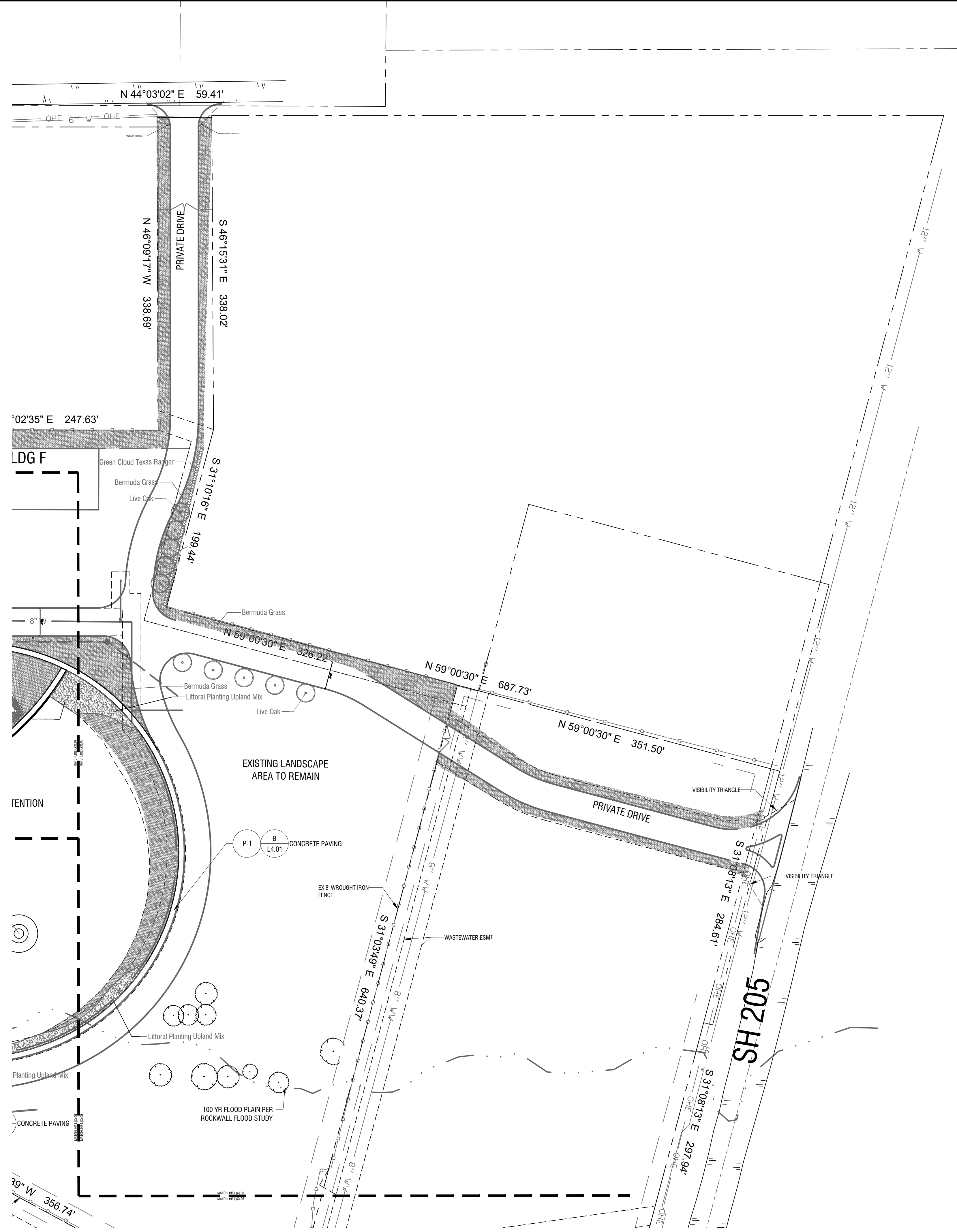


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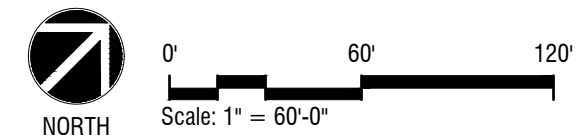
REVISION NO.	DESCRIPTION	DATE

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

SHEET NO.
L2.05

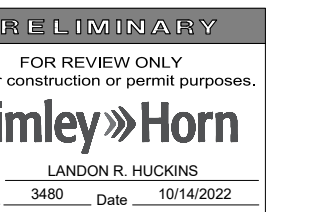
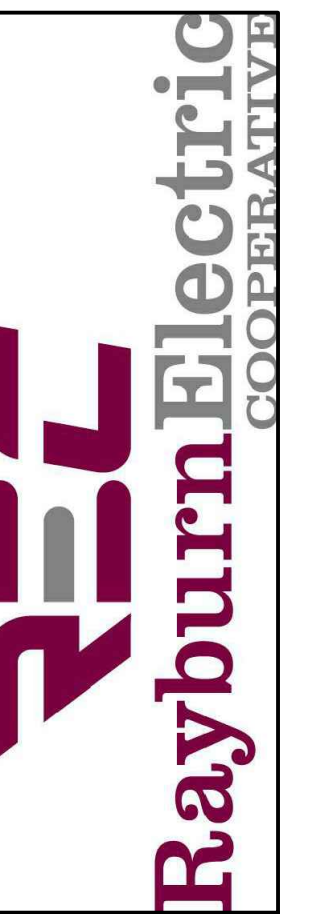


PLOT DATE: TEMPLATE VERSION:



Hardscape Plan
Scale: 1" = 60' - 0"

A



KEY PLAN

REVISION NO. DESCRIPTION DATE

HKS PROJECT NUMBER
25370.000

DATE
10/14/22

ISSUE

CITY SITE PLAN SUBMITTAL

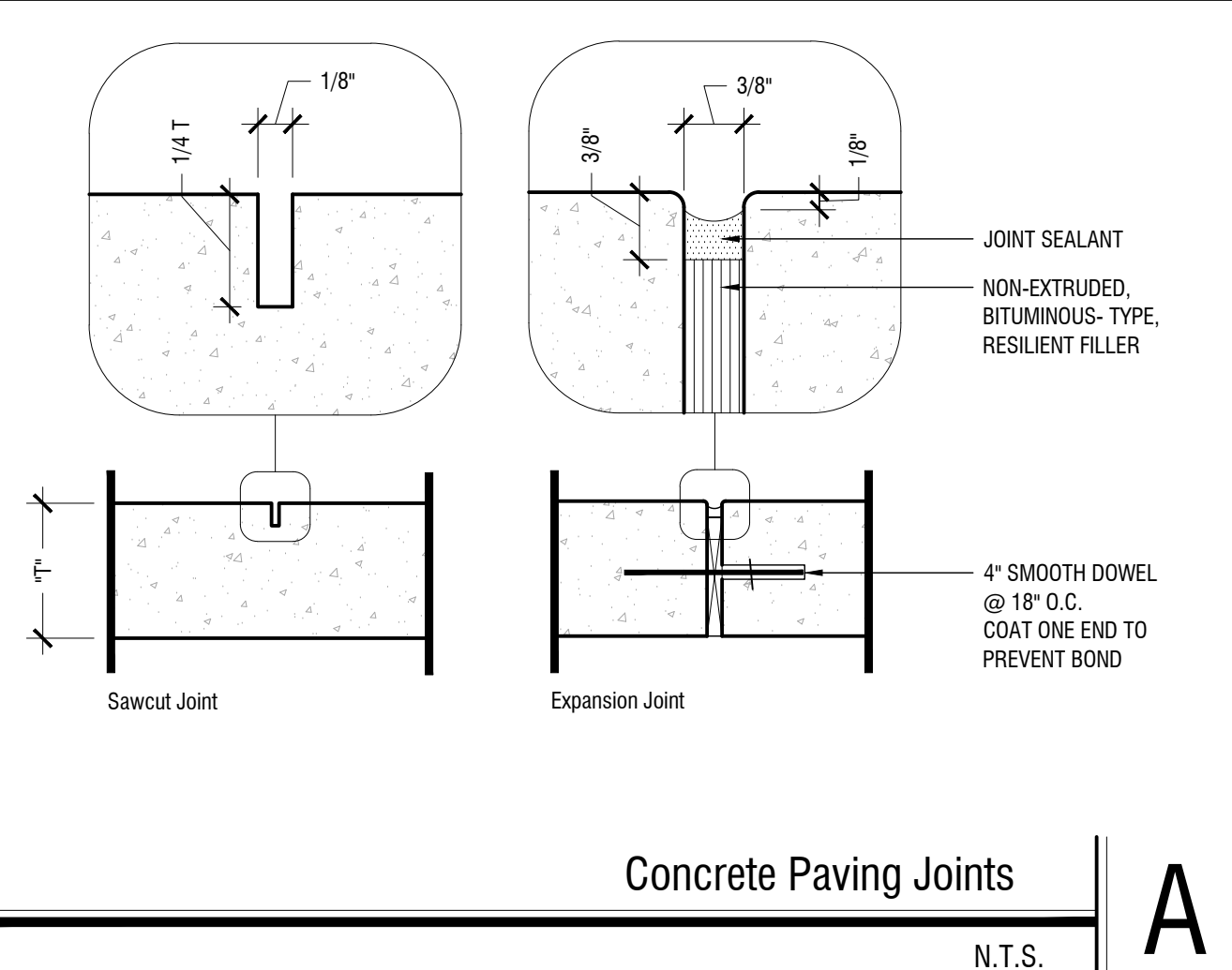
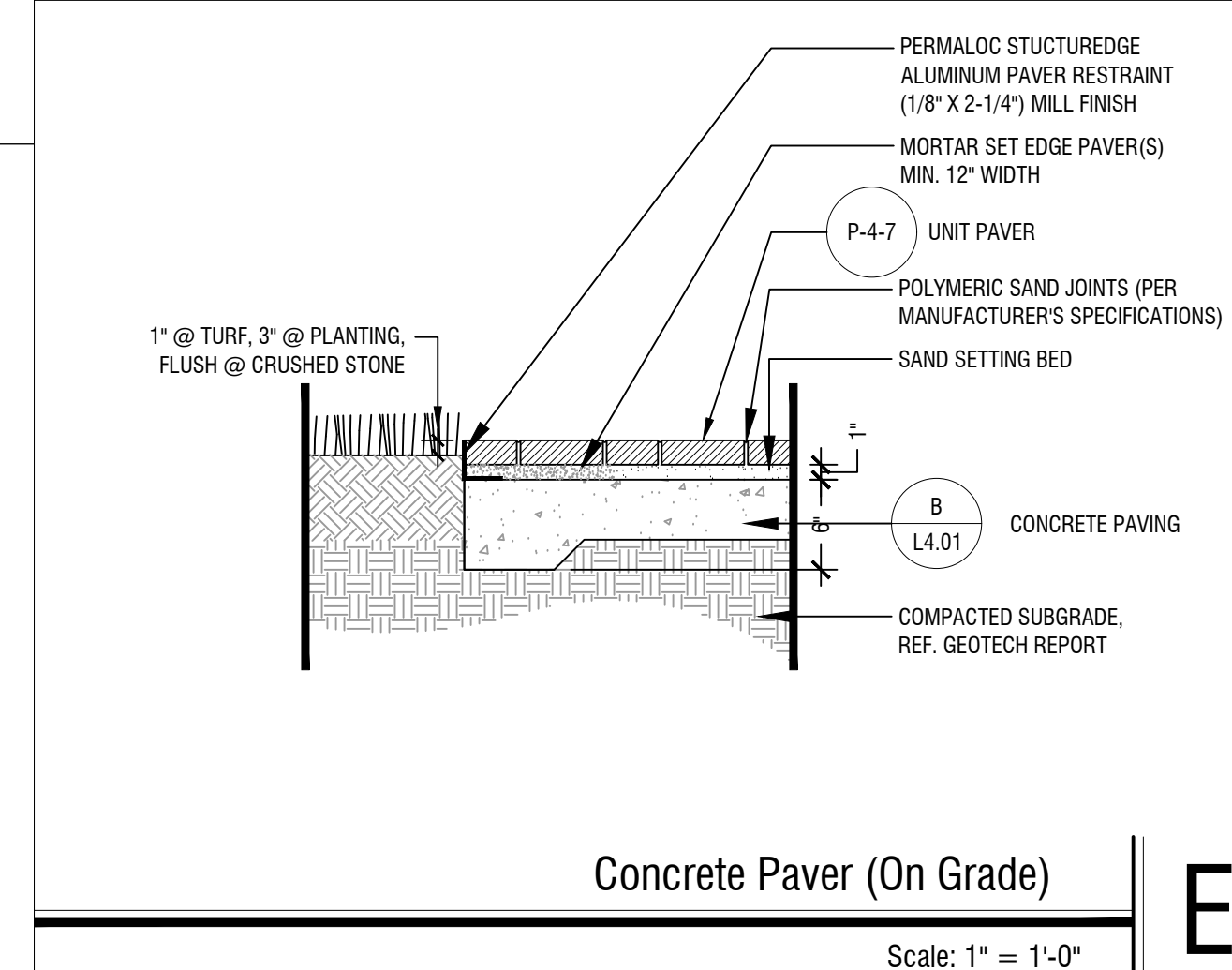
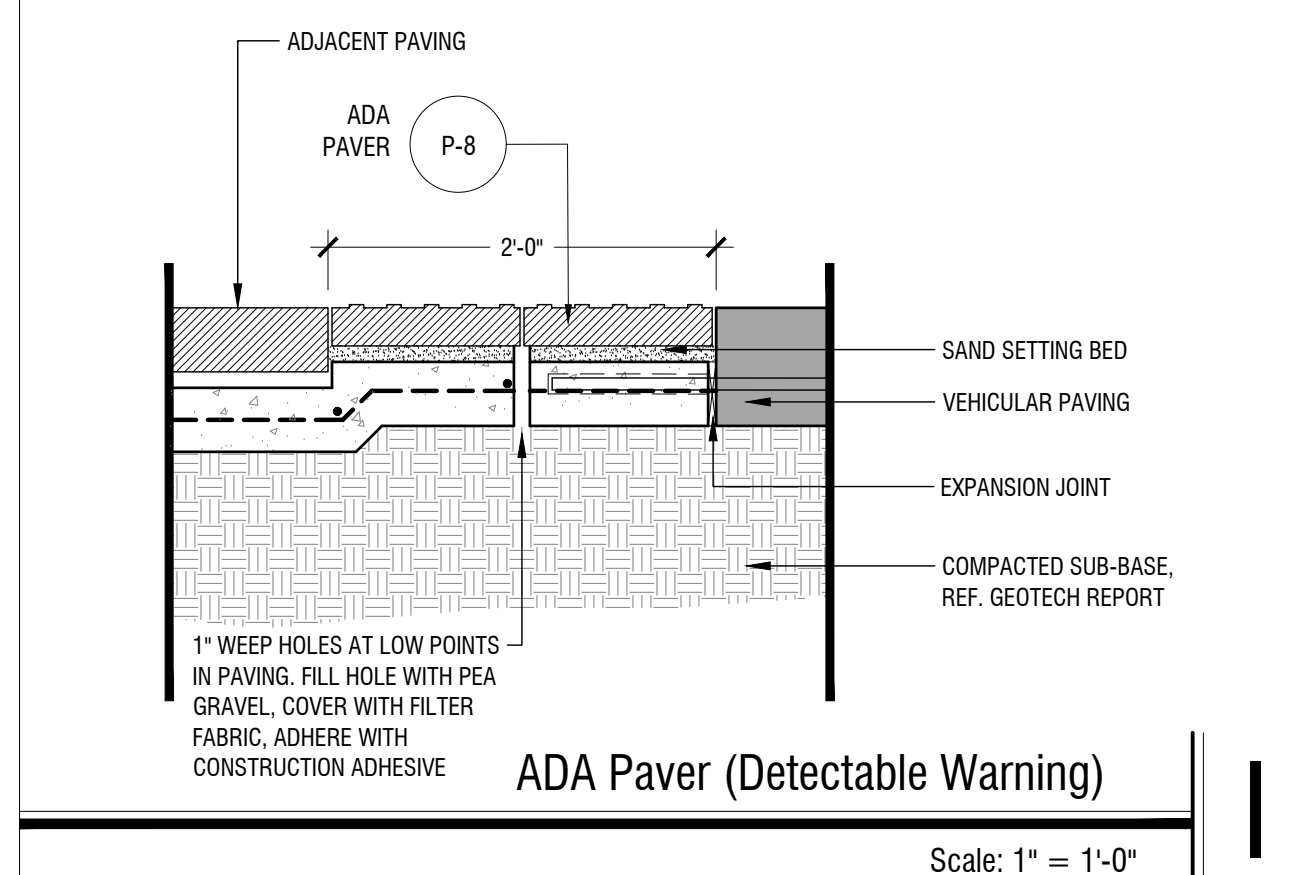
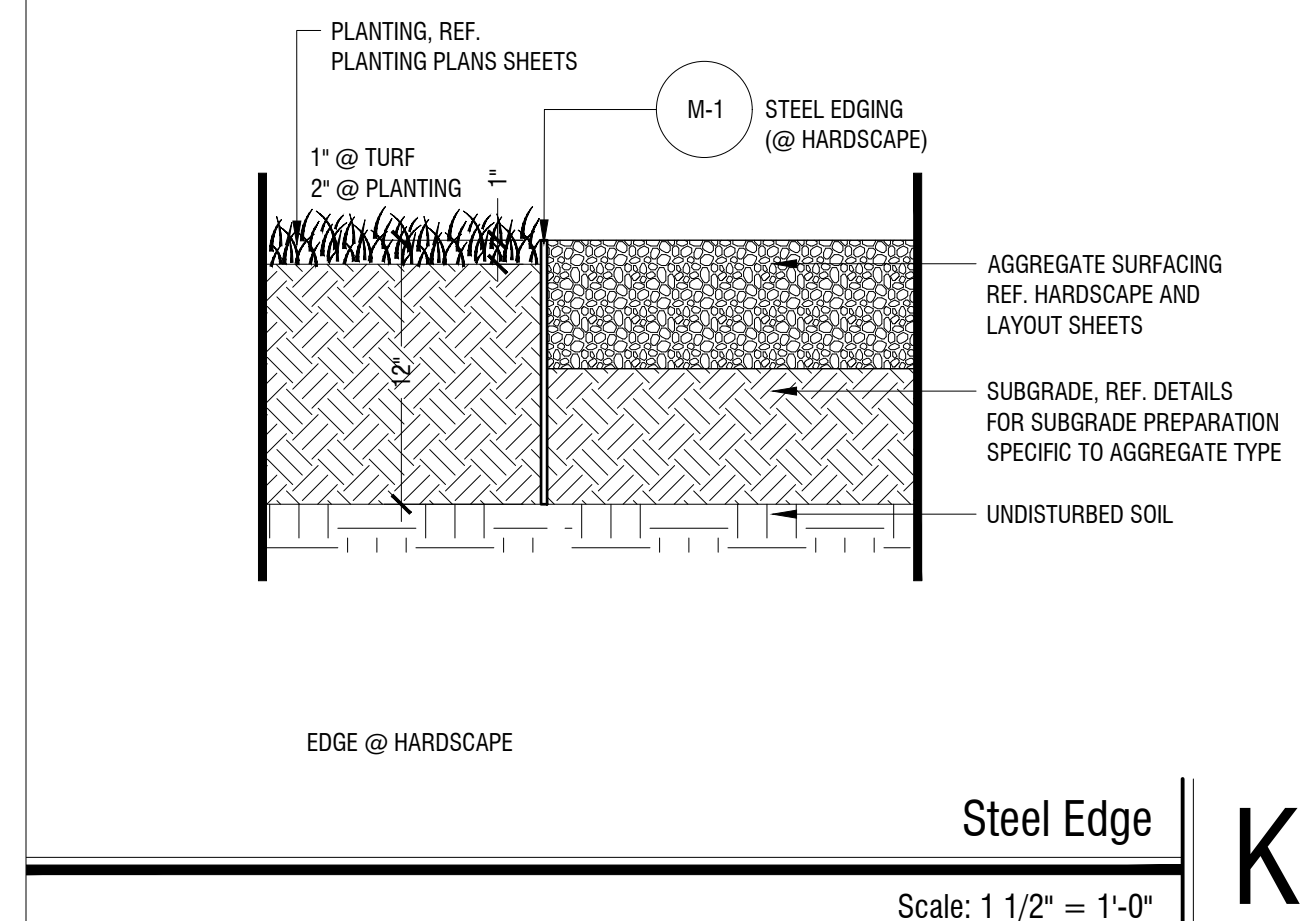
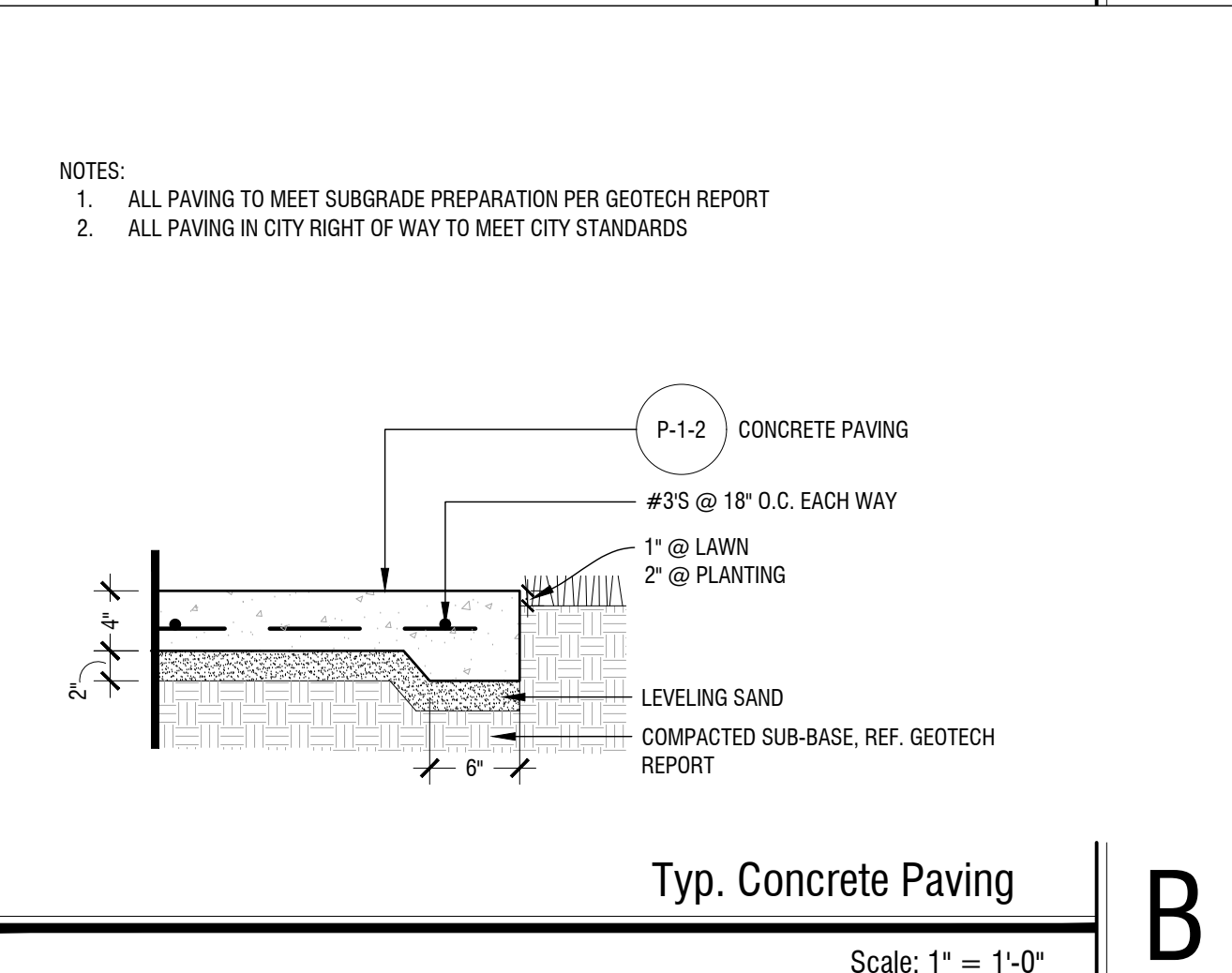
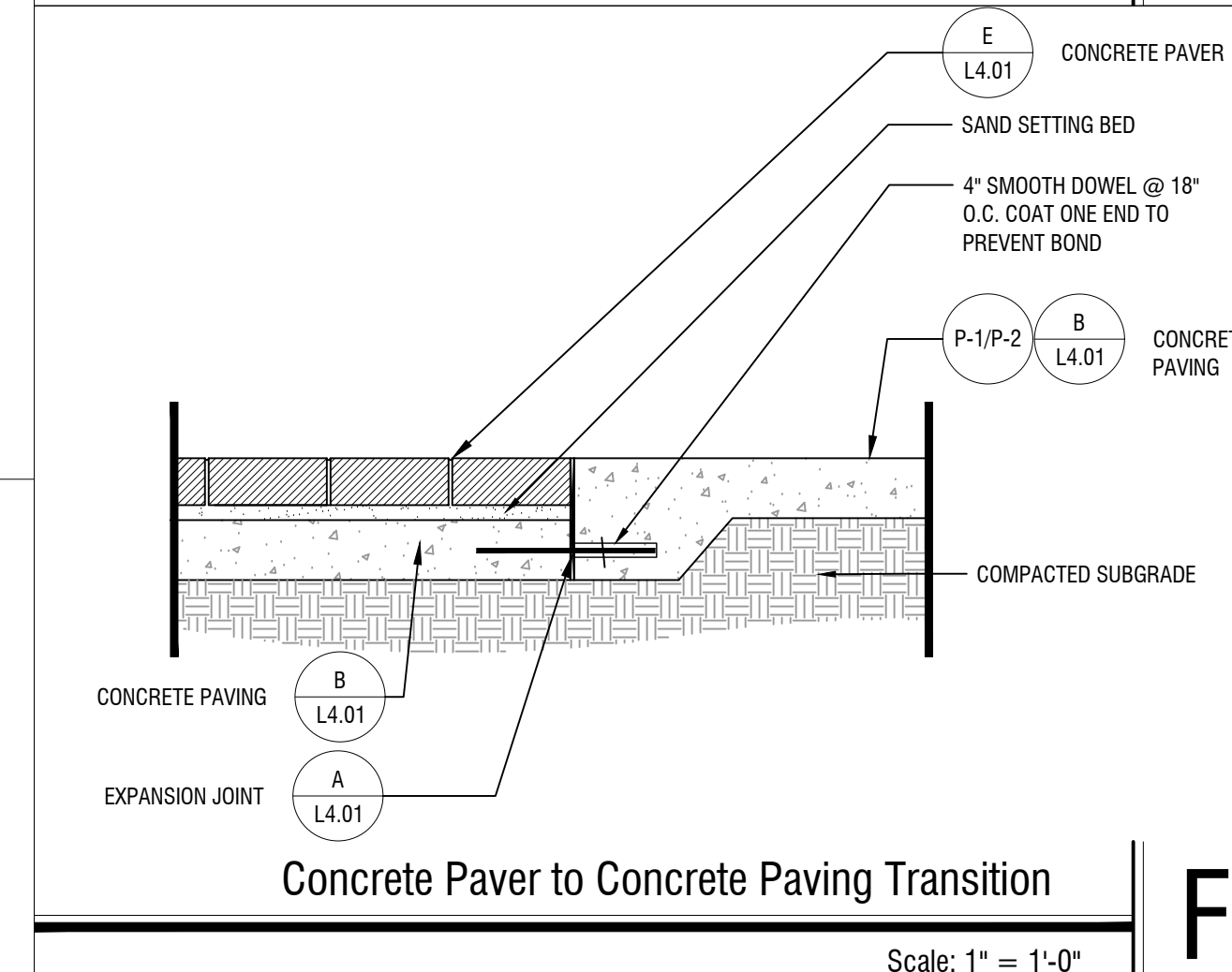
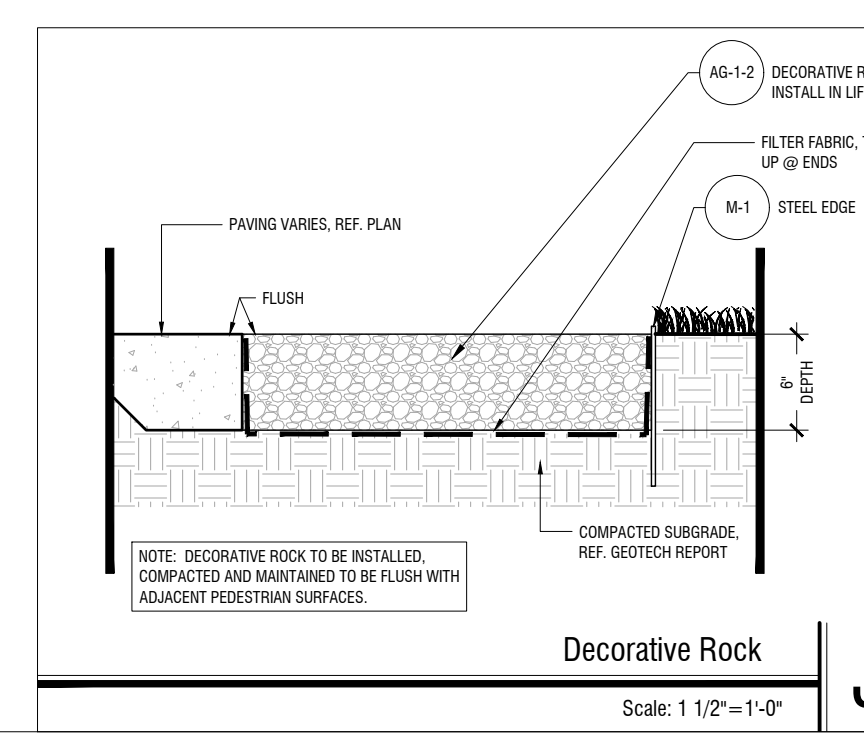
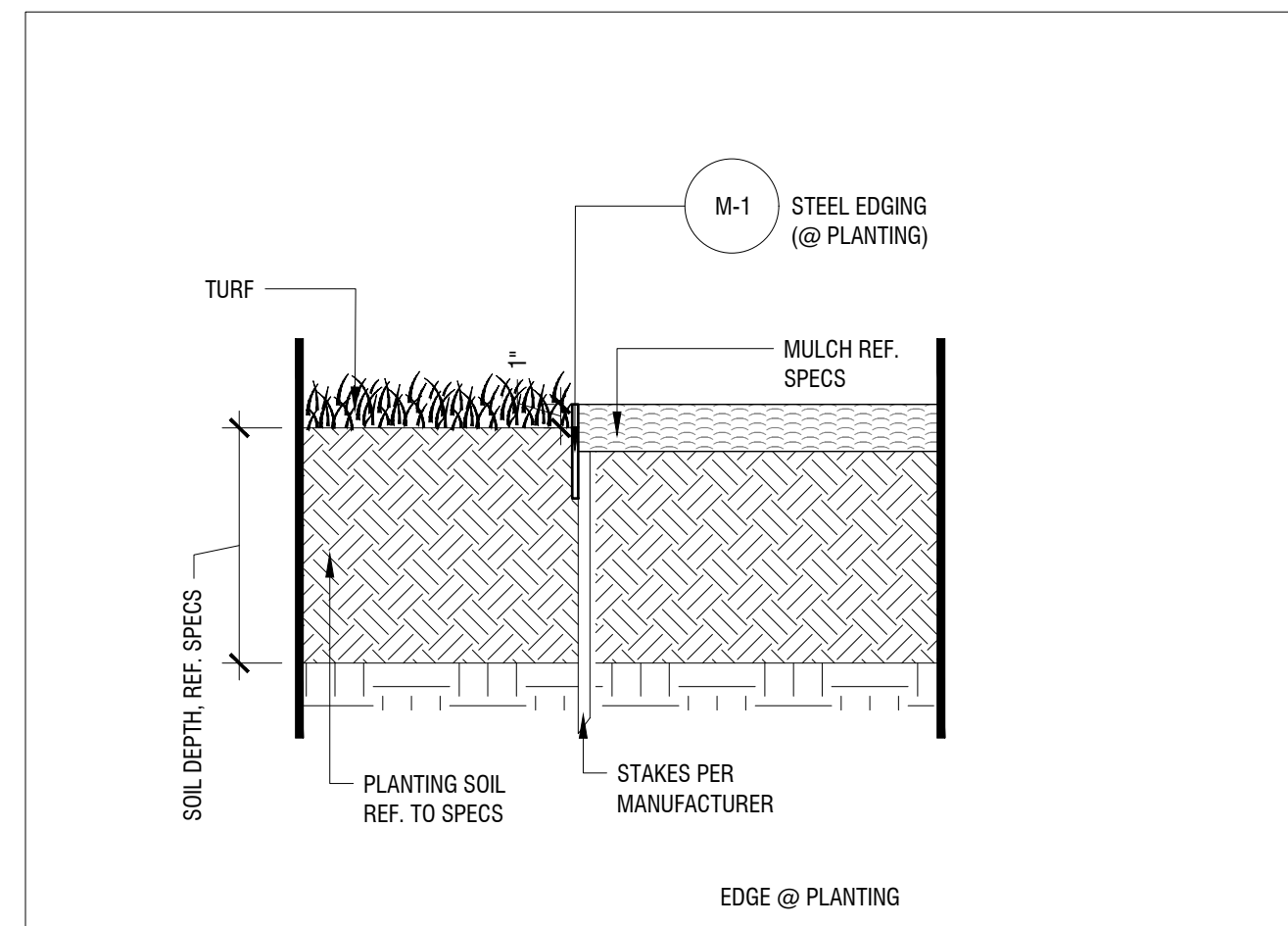
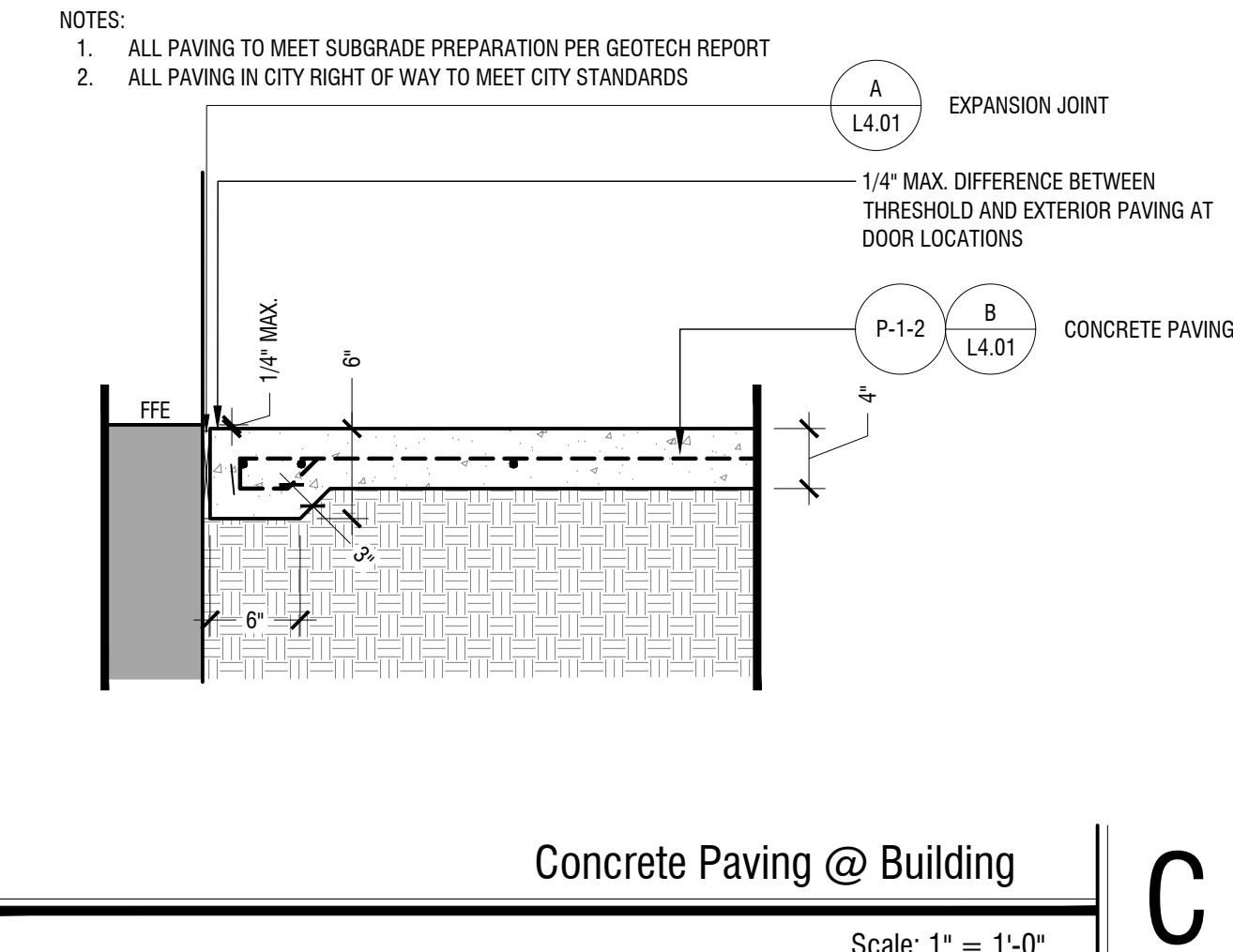
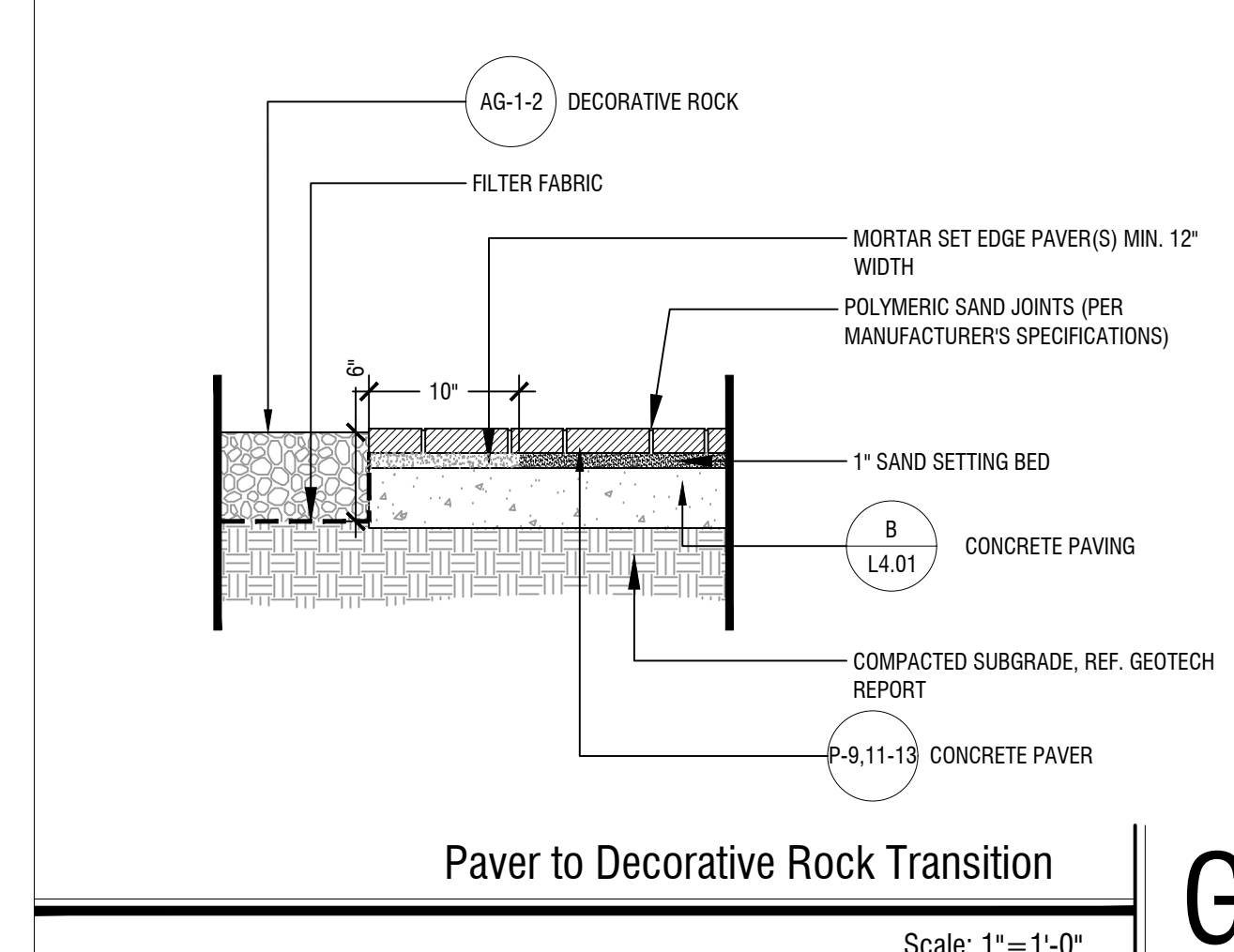
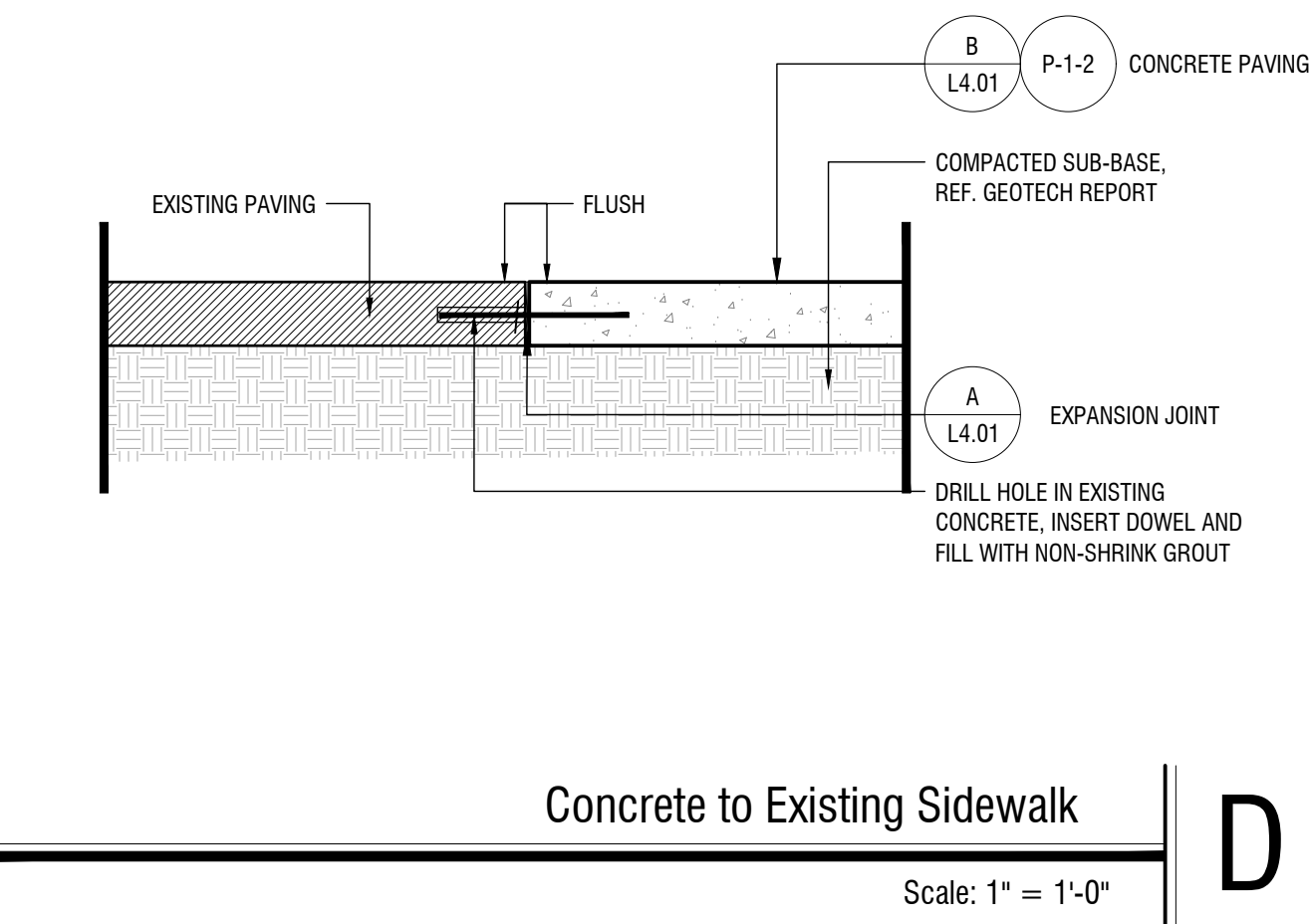
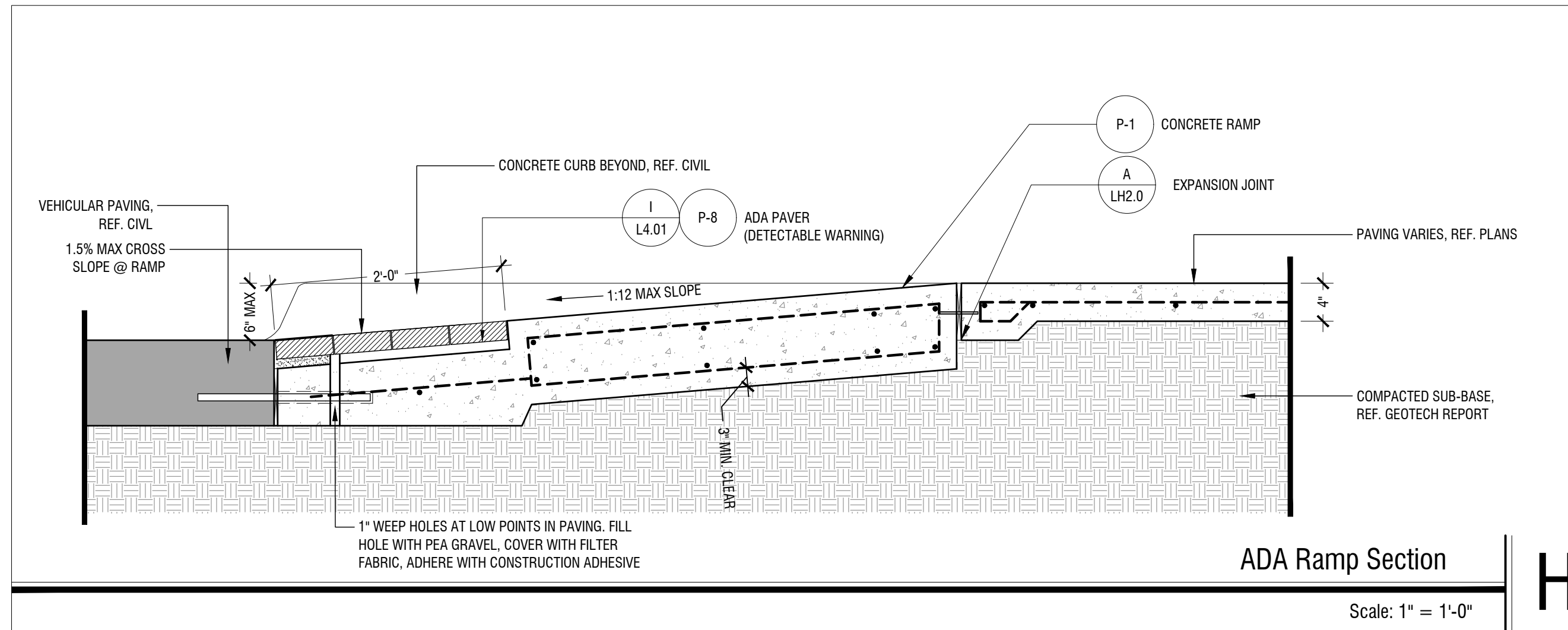
SHEET TITLE

HARDSCAPE DETAILS

SHEET NO.

L4.01

- NOTES:
1. ALL PAVING TO MEET SUBGRADE PREPARATION PER GEOTECH REPORT
2. ALL PAVING IN CITY RIGHT OF WAY TO MEET CITY STANDARDS



PLOT DATE: TEMPLATE VERSION:



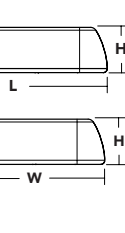
Luminaire Schedule		Qty	Manufacturer / Catalog Number	Total Lumen Output	Total Input Watts	Ballast Factor	Light Lost Factor	User Defined Factor
AA	51	LITHONIA CSX1 LED 60C 700 40K T4M HS	12377	134	1.000	0.900	1.000	
BB	40	LITHONIA KB8 LED 12C 350 40K ASY MVOLT	809	16	1.000	0.900	1.000	
CC	2	LITHONIA 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

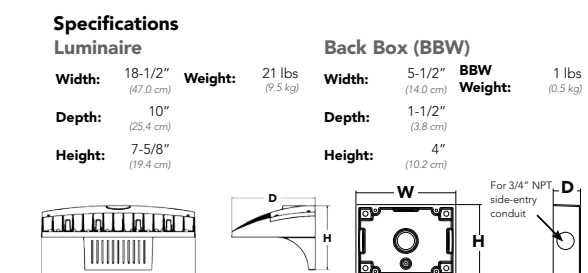


Specifications
EPA: 517 lumens
Length: 23 1/2" (603mm)
Width: 18 1/2" (467mm)
Height: 5.38" (137mm)
Weight: 20 lbs (9.1kg)

CC



D-Series Size 2
LED Wall Luminaire



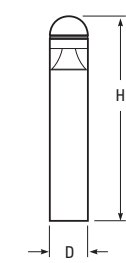
Specifications
Luminaire
Width: 18 1/2" (467mm)
Depth: 10" (254mm)
Height: 7.58" (193mm)

Back Box (BBW)
Width: 5 1/2" (140mm)
Depth: 1 1/2" (38mm)
Height: 4" (102mm)

BB

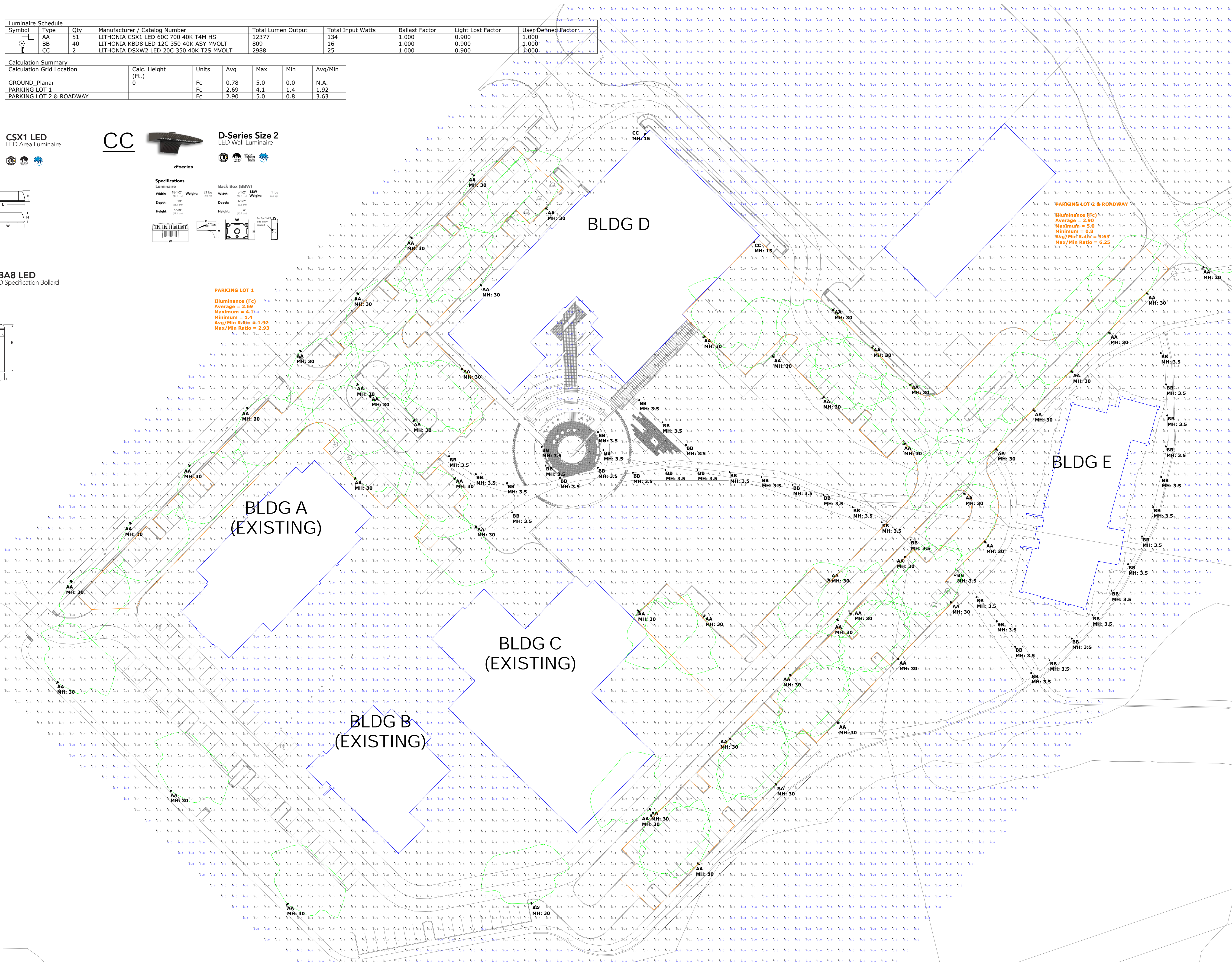


KBA8 LED
LED Specification Bollard



Specifications
Height: 48" (1219mm)
Height: 27 1/2" (700mm)
Height: 10 1/2" (267mm)

PARKING LOT 1
Illuminance (Fc)
Average = 2.69
Maximum = 4.1
Minimum = 1.4
Avg/Min Ratio = 1.92
Max/Min Ratio = 2.93





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.

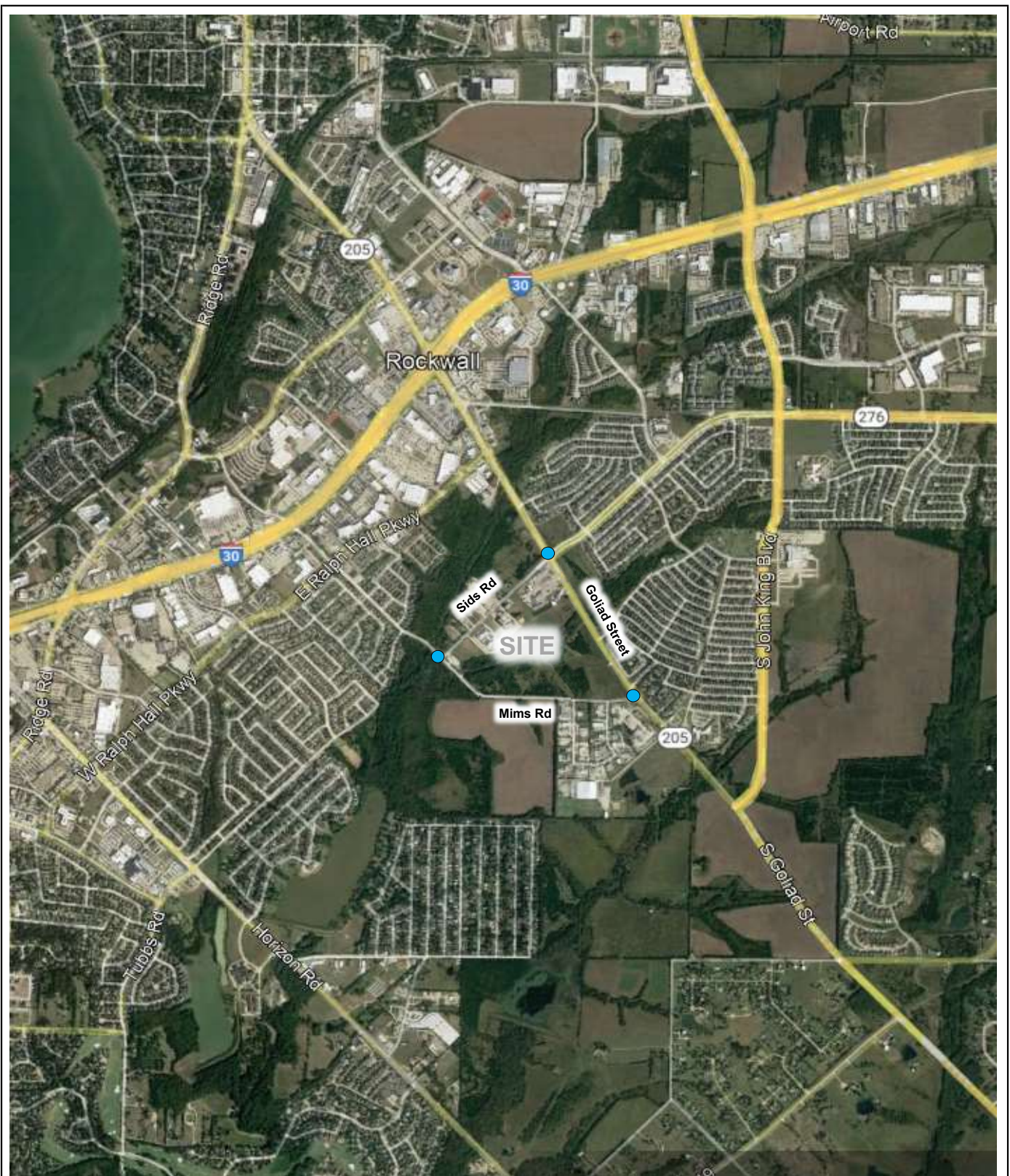



EXHIBIT 1

Vicinity Map
 Lineman Building - Rockwall, Texas

Kimley»Horn

LEGEND:
 = Study Intersection

North

 Not To Scale

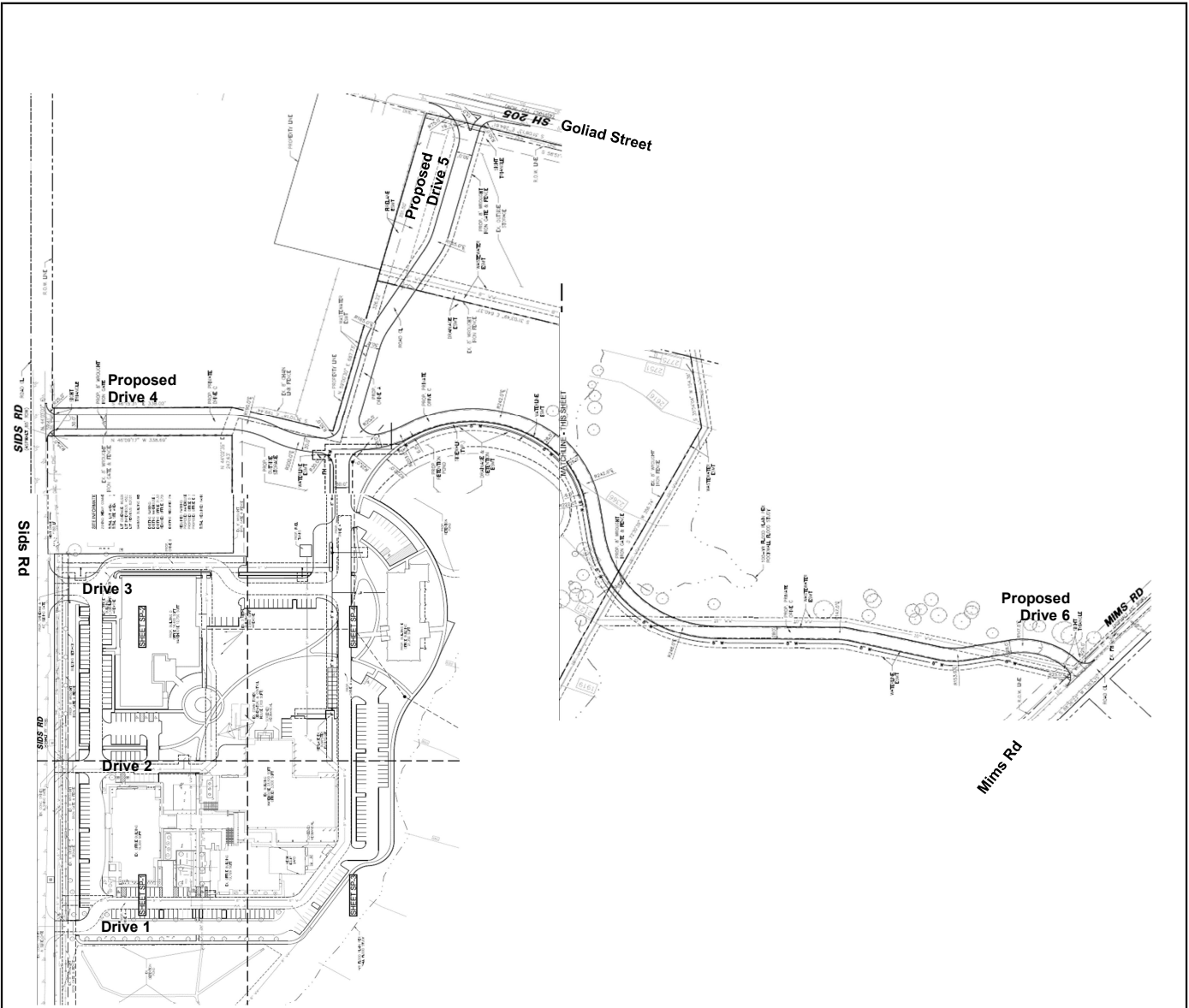


EXHIBIT 2
 Conceptual Site Plan
 Lineman Building - Rockwall, Texas



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 northernmost 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

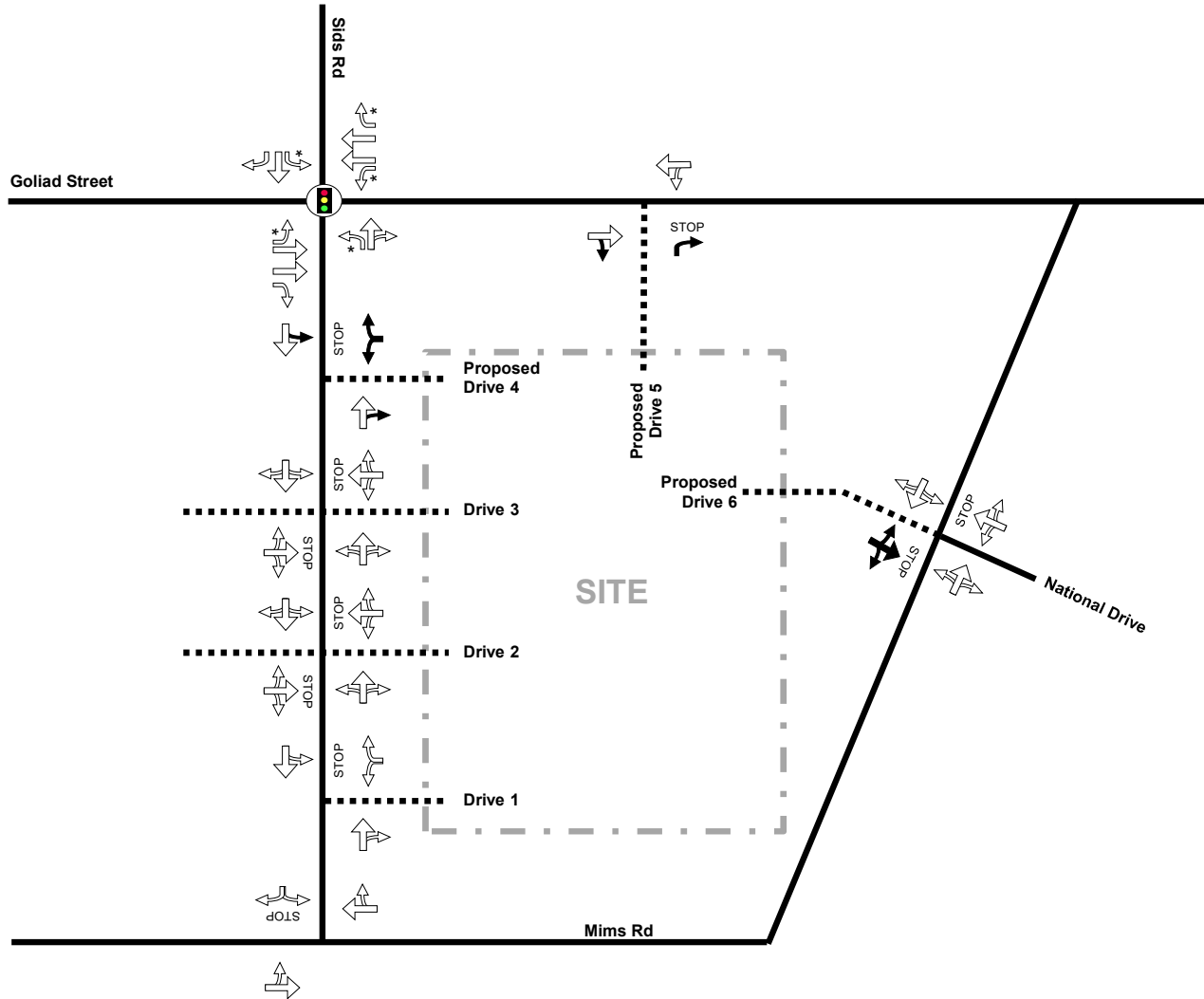


EXHIBIT 3

Lane Assignment and Intersection Control
 Lineman Building - Rockwall, Texas



LEGEND:

	= Signalized Intersection	*	= Turn Bay
STOP	= Stop-Controlled Approach		= Driveway Lanes or Off-Site Improvements
	= Travel Lane	TWLTL	= Two-Way Left Turn Lane

North
 Not To Scale

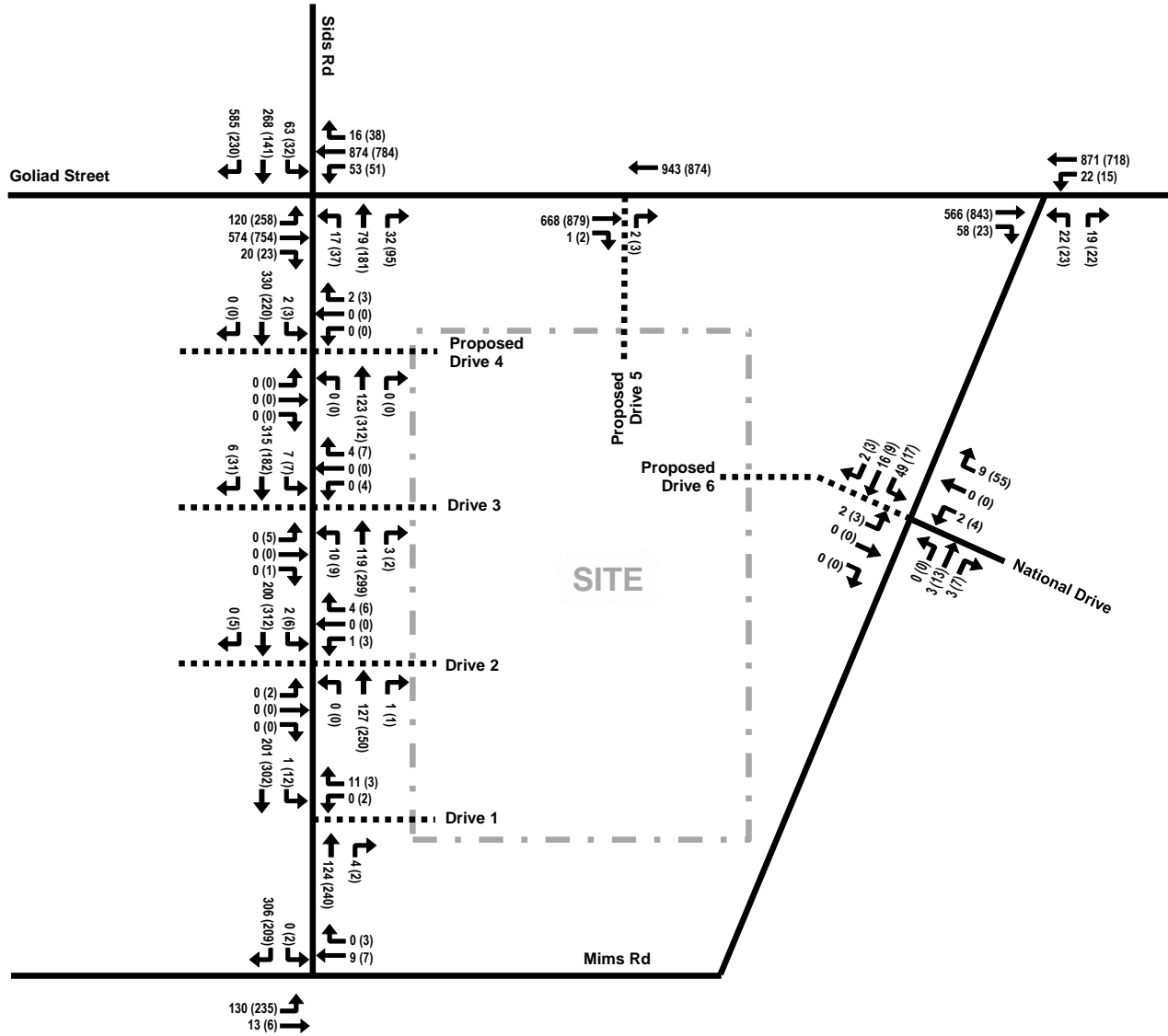


EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes
 Lineman Building - Rockwall, Texas



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.



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
<i>Existing Site (Observed)</i>	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
<i>Existing Site (Observed)</i>				-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.

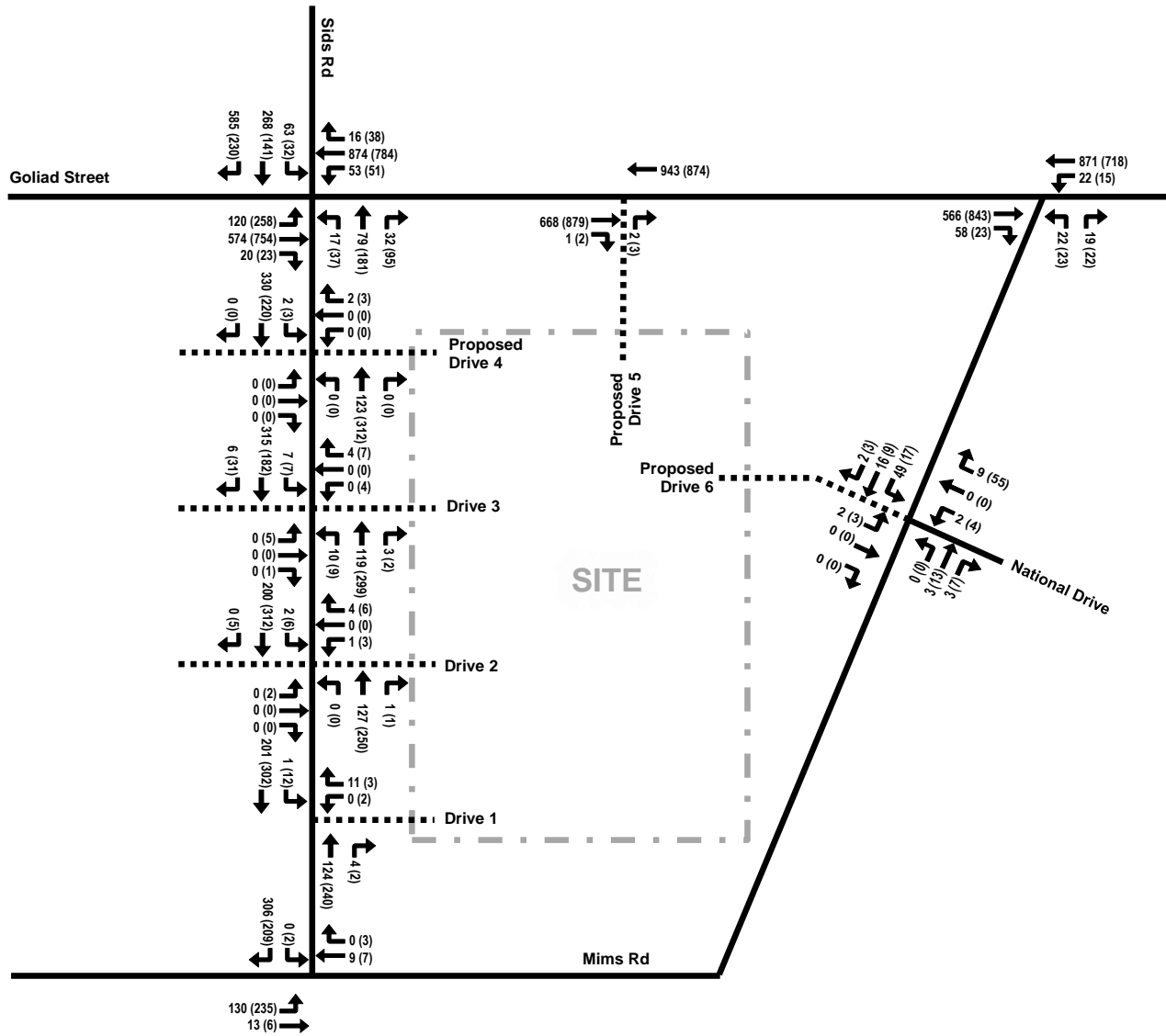


EXHIBIT 8
 2024 Background Plus Site-Generated Traffic Volumes
 Lineman Building - Rockwall, Texas

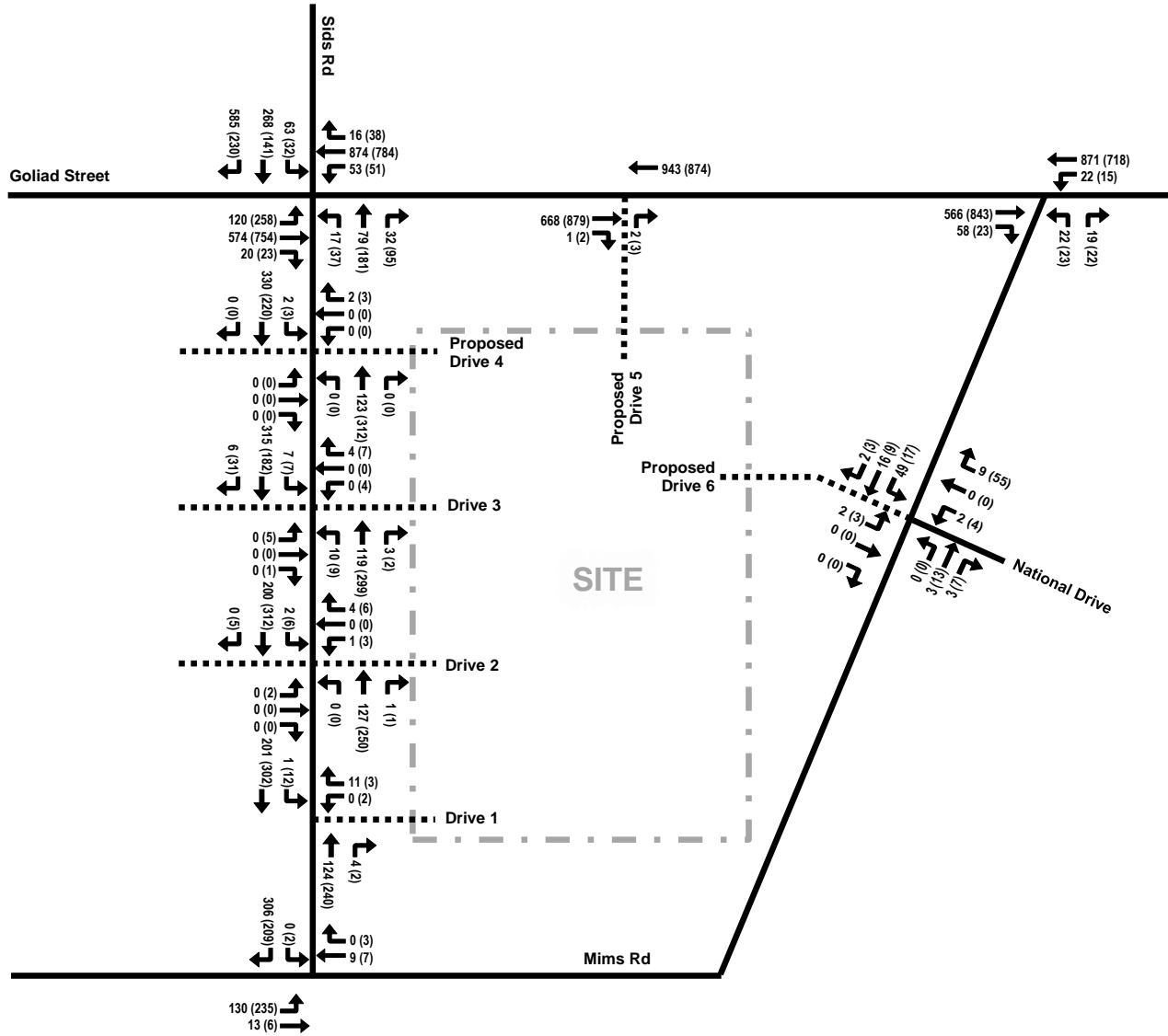


EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes
 Lineman Building - Rockwall, Texas



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.



Not To Scale

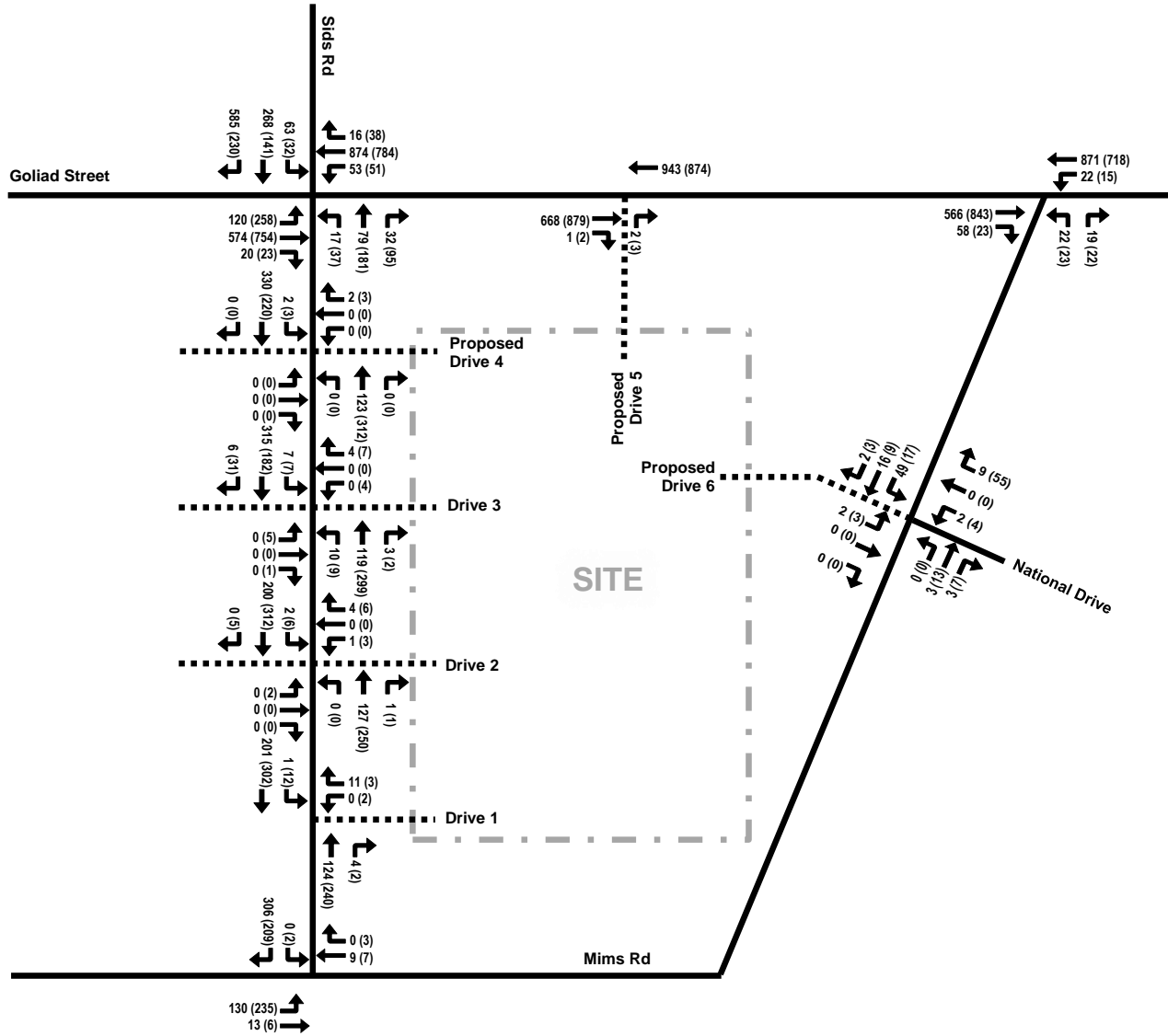


EXHIBIT 8
 2024 Background Plus Site-Generated Traffic Volumes
 Lineman Building - Rockwall, Texas



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.



Not To Scale

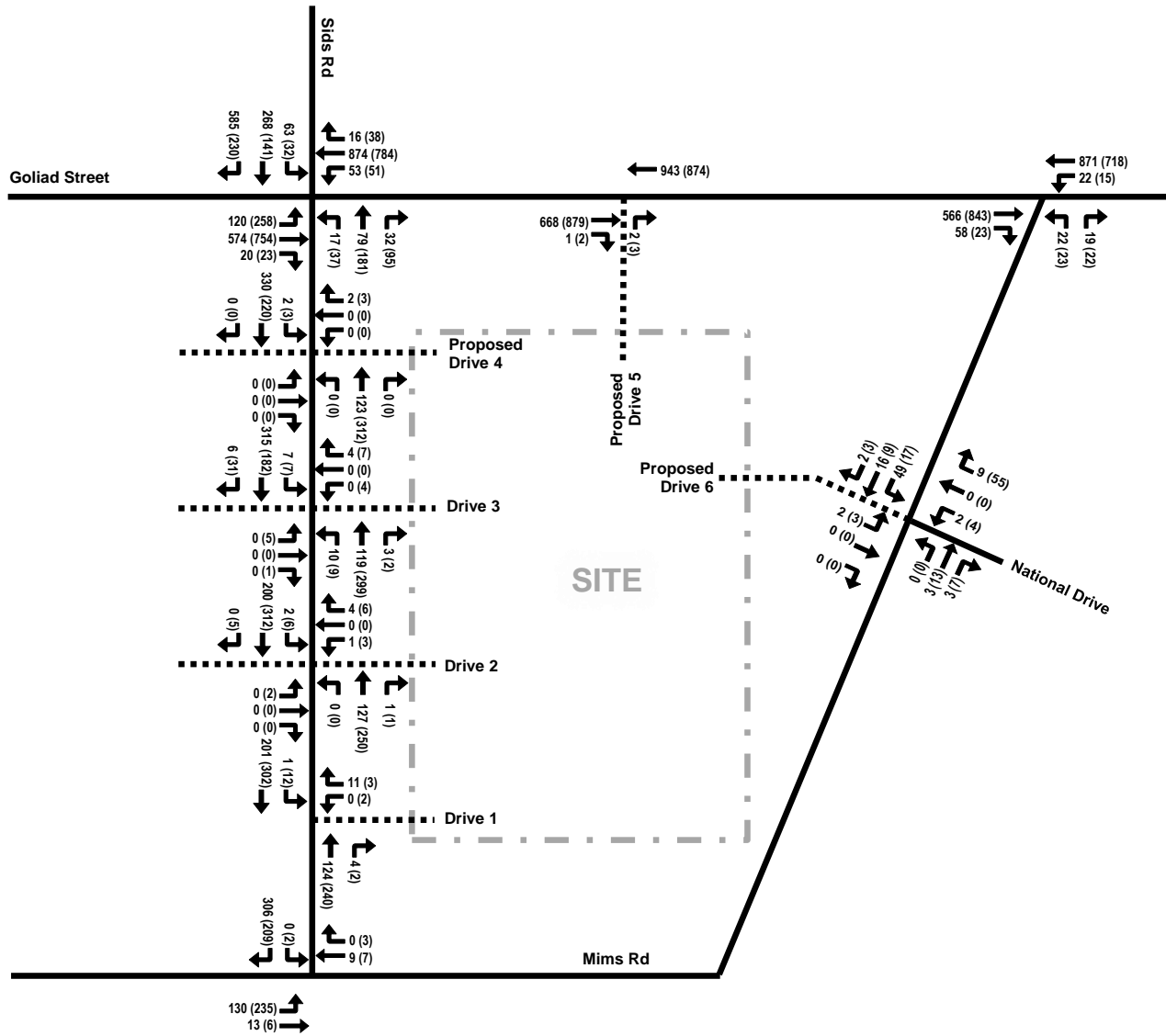


EXHIBIT 8

2024 Background Plus Site-Generated Traffic Volumes
 Lineman Building - Rockwall, Texas



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.



Not To Scale

IV. TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn conducted a traffic operations analysis to determine potential capacity deficiencies in the 2022 & 2024 study 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.

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	0	1	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
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
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
APPROACH %'s :	25.00%	0.00%	75.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	1.96%	96.82%	1.22%	0.00%					600
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							0.776				0.773							
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
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
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
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%					769
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				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	1	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
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	0.00%	0.00%	100.00%	0.00%	0	0	0	0	0.00%	96.35%	3.65%	0.00%	3.54%	96.46%	0.00%	0.00%	590
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				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	1	0	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
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	33.33%	0.00%	66.67%	0.00%	0	0	0	0	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	762
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				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
6:30 AM	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	302
6:45 AM	2	193	0	0	0	90	9	0	8	0	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	0	331
7:15 AM	2	195	0	0	0	119	16	0	4	0	3	0	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	0	353
7:45 AM	1	210	0	1	0	161	15	0	5	0	6	0	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	0	365
8:15 AM	5	171	0	0	0	137	10	0	8	0	5	0	0	0	0	0	0	336
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
APPROACH %'s :	38	1598	0	1	0	922	98	0	44	0	21	0	0	0	0	0	2722	
	2.32%	97.62%	0.00%	0.06%	0.00%	90.39%	9.61%	0.00%	67.69%	0.00%	32.31%	0.00%	0	0	0	0		
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	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	0.000	0.912
	0.968				0.828				0.841									
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
4:30 PM	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	378
4:45 PM	3	159	0	0	0	194	10	0	7	0	5	0	0	0	0	0	0	373
5:00 PM	2	154	0	0	0	198	2	0	10	0	7	0	0	0	0	0	0	396
5:15 PM	2	186	0	0	0	177	5	0	22	0	4	0	0	0	0	0	0	369
5:30 PM	2	188	0	0	0	165	3	0	7	0	4	0	0	0	0	0	0	382
5:45 PM	4	155	0	0	0	202	6	0	5	0	10	0	0	0	0	0	0	379
6:00 PM	2	152	0	0	0	210	9	0	5	0	1	0	0	0	0	0	0	402
6:15 PM	3	176	0	0	0	211	4	0	5	0	3	0	0	0	0	0	0	353
	1	144	0	0	0	202	4	0	2	0	0	0	0	0	0	0	0	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
APPROACH %'s :	19	1314	0	0	0	1559	43	0	63	0	34	0	0	0	0	0	3032	
	1.43%	98.57%	0.00%	0.00%	0.00%	97.32%	2.68%	0.00%	64.95%	0.00%	35.05%	0.00%	0	0	0	0		
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	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	0.000	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				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
6:30 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	16
6:45 AM	0	0	3	0	0	0	0	0	0	0	0	0	11	0	0	0	0	14
7:00 AM	1	0	5	0	0	0	0	0	0	0	1	0	5	0	0	0	0	12
7:15 AM	0	0	4	0	0	0	0	0	0	0	1	0	2	0	0	0	0	7
7:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	4
7:45 AM	1	0	2	0	0	0	0	0	0	0	1	0	5	2	0	0	0	11
8:00 AM	0	0	2	0	0	0	0	0	0	0	2	0	5	8	0	0	0	17
8:15 AM	0	0	4	0	0	0	0	0	0	0	3	0	7	5	0	1	0	20
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		TOTAL
APPROACH %'s :	10.71%	0.00%	89.29%	0.00%	0	0	0	0	0.00%	27.27%	72.73%	0.00%	74.19%	24.19%	0.00%	1.61%		101
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				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
	4:30 PM	1	0	10	0	0	0	0	0	0	5	3	0	3	3	0	0	0
4:45 PM	0	0	7	0	0	0	0	0	0	4	2	0	3	2	0	0	0	18
5:00 PM	1	0	14	0	0	0	0	0	0	1	2	0	5	2	0	0	0	25
5:15 PM	1	0	8	0	0	0	0	0	0	2	0	0	5	1	0	0	0	17
5:30 PM	0	0	3	0	0	0	0	0	0	5	2	0	6	2	0	0	0	18
5:45 PM	0	0	2	0	0	0	0	0	0	3	1	0	7	0	0	0	0	13
6:00 PM	1	0	7	0	0	0	0	0	0	0	0	0	0	2	0	0	0	10
6:15 PM	0	0	1	0	0	0	0	0	0	0	1	0	1	1	0	0	0	4
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		TOTAL
APPROACH %'s :	7.14%	0.00%	92.86%	0.00%	0	0	0	0	0.00%	64.52%	35.48%	0.00%	69.77%	30.23%	0.00%	0.00%		130
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	0	0	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			
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL			
APPROACH %'s :	0.00%	88.89%	11.11%	0.00%	91.94%	8.06%	0.00%	0.00%	0	0	0	0	0.00%	0.00%	100.00%	0.00%	604			
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	0	0	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			
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL			
APPROACH %'s :	0.00%	73.33%	26.67%	0.00%	97.19%	2.81%	0.00%	0.00%	0	0	0	0	0.60%	0.00%	99.09%	0.30%	773			
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				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:30 AM	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	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
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%	0	0	0	0	5.16%	93.43%	1.41%	0.00%	2.17%	95.66%	2.17%	0.00%	631
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								0.776				0.786				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	1	0	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
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
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%	866
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 Gollad St & SR 276/Sids Rd
City: Rockwall
Control: Signalized

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

Data - Totals

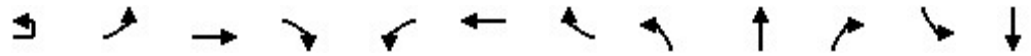
NS/EW Streets:	SR 205/S Gollad St				SR 205/S Gollad St				SR 276/Sids Rd				SR 276/Sids Rd				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	1	0	0	1	1	1	0	
AM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
12:00 AM	0	13	1	0	4	14	1	0	0	1	1	0	0	0	1	0	38
12:15 AM	0	6	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	1	0	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	1	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	15	0	0	3	6	0	0	3	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	1	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	124	5	0	0	23	7	0	13	39	121	0	593
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	594
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
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %:	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%	9160
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
07:30 AM - 08:30 AM																	
0.943 0.968 0.700 0.868																	
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	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	
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	14	0	4	26	70	0	534
12:30 PM	11	139	3	0	38	156	5	0	4	25	15	0	4	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
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %:	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%	7619
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
11:45 AM - 12:45 PM																	
0.843 0.851 0.898 0.918																	
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	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	
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	19	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	5	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	27	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															



Synchro™ Output - 2022 Existing Traffic

Rockwall REC Campus Expansion TIA
Lanes, Volumes, Timings

2022 Existing Traffic - AM Peak
1: Sids Road & Goliad Road

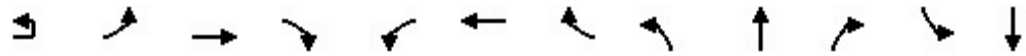


Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↘	↗	↘	↘	↗	↘	↘	↗		↘	↗
Traffic Volume (vph)	2	113	538	17	48	820	15	11	71	30	59	250
Future Volume (vph)	2	113	538	17	48	820	15	11	71	30	59	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage 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
Fr _t				0.850			0.850		0.956			
Fl _t Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1781	0	1770	1863
Fl _t 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	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

Rockwall REC Campus Expansion TIA
Lanes, Volumes, Timings

2022 Existing Traffic - AM Peak
1: Sids Road & Goliad Road











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

 Ø1	 Ø2	 Ø3	 Ø4
12 s	38 s	15 s	55 s
 Ø5	 Ø6	 Ø7	 Ø8
12 s	38 s	15 s	55 s

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
Stage 1	-	-	-	-	9
Stage 2	-	-	-	-	286
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1611	-	-	-	696
Stage 1	-	-	-	-	1014
Stage 2	-	-	-	-	763
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1611	-	-	-	637
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	W		T			T
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
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	NBRWBLn1	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

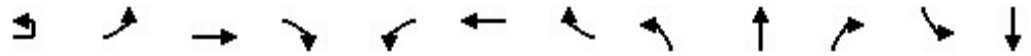
Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	497	497	338	496	499	126	341	0	0	127	0	0
Stage 1	350	350	-	146	146	-	-	-	-	-	-	-
Stage 2	147	147	-	350	353	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
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	-	-

Rockwall REC Campus Expansion TIA
Lanes, Volumes, Timings

2022 Existing Traffic - PM Peak
1: Sids Road & Goliad Road

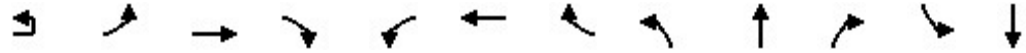


Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Future Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (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

Rockwall REC Campus Expansion TIA
Lanes, Volumes, Timings

2022 Existing Traffic - PM Peak
1: Sids Road & Goliad Road











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

 Ø1 12 s	 Ø2 38 s	 Ø3 15 s	 Ø4 55 s
 Ø5 12 s	 Ø6 38 s	 Ø7 15 s	 Ø8 55 s

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	W		T			T
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	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	573	1306
HCM Lane V/C Ratio	-	-	0.008	0.008
HCM Control Delay (s)	-	-	11.3	7.8
HCM Lane LOS	-	-	B	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					

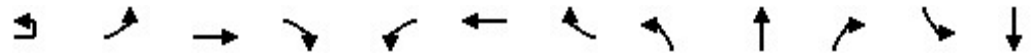
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1341	-	-	471	523	1237	-	-
HCM Lane V/C Ratio	0.007	-	-	0.014	0.015	0.003	-	-
HCM Control Delay (s)	7.7	0	-	12.8	12	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-



Synchro™ Output - 2024 Background Traffic

Rockwall REC Campus Expansion TIA
Lanes, Volumes, Timings

2024 Background Traffic - AM Peak
1: Sids Road & Goliad Road

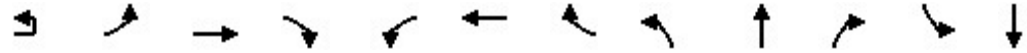


Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	2	120	573	18	51	874	16	12	76	32	63	266
Future Volume (vph)	2	120	573	18	51	874	16	12	76	32	63	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (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

Rockwall REC Campus Expansion TIA
Lanes, Volumes, Timings

2024 Background Traffic - AM Peak
1: Sids Road & Goliad Road











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

 Ø1	 Ø2	 Ø3	 Ø4
12 s	38 s	15 s	55 s
 Ø5	 Ø6	 Ø7	 Ø8
12 s	38 s	15 s	55 s

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
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	NBRWBLn1	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

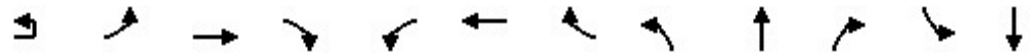
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	529	529	360	528	531	134	363	0	0	135	0	0
Stage 1	372	372	-	156	156	-	-	-	-	-	-	-
Stage 2	157	157	-	372	375	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
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	-	-

Rockwall REC Campus Expansion TIA
Lanes, Volumes, Timings

2024 Background Traffic - PM Peak
1: Sids Road & Goliad Road

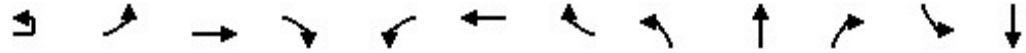


Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↘	↗	↗	↘	↗	↗	↘	↗		↘	↗
Traffic Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Future Volume (vph)	1	258	752	19	48	784	38	31	177	95	32	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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

Rockwall REC Campus Expansion TIA
Lanes, Volumes, Timings

2024 Background Traffic - PM Peak
1: Sids Road & Goliad Road











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

 Ø1	 Ø2	 Ø3	 Ø4
12 s	38 s	15 s	55 s
 Ø5	 Ø6	 Ø7	 Ø8
12 s	38 s	15 s	55 s

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	W		T			T
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	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	573	1306
HCM Lane V/C Ratio	-	-	0.008	0.008
HCM Control Delay (s)	-	-	11.3	7.8
HCM Lane LOS	-	-	B	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

Rockwall REC Campus Expansion TIA
Lanes, Volumes, Timings

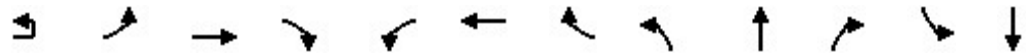
2024 Background + Site Traffic - AM Peak
1: Sids Road & Goliad Road

												
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
Fr _t				0.850			0.850		0.957			
Fl _t Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1770	3539	1583	1770	3539	1583	1770	1783	0	1770	1863
Fl _t 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	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

Rockwall REC Campus Expansion TIA
Lanes, Volumes, Timings

2024 Background + Site Traffic - AM Peak
1: Sids Road & Goliad Road

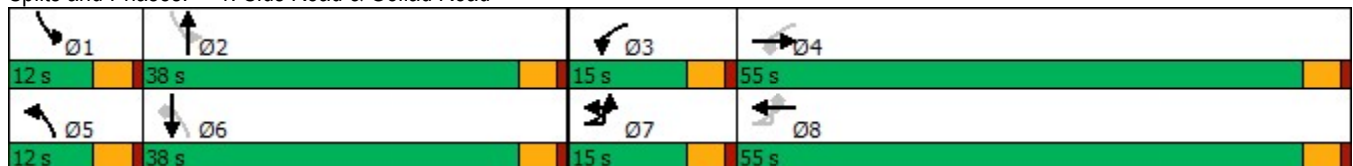


Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	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
Stage 1	-	-	-	-	10
Stage 2	-	-	-	-	313
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1610	-	-	-	671
Stage 1	-	-	-	-	1013
Stage 2	-	-	-	-	741
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1610	-	-	-	609
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
Stage 1	144	-	-
Stage 2	230	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	627	903	-
Stage 1	883	-	-
Stage 2	808	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	626	903	-
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	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	903	1436
HCM Lane V/C Ratio	-	-	0.014	0.001
HCM Control Delay (s)	-	-	9	7.5
HCM Lane LOS	-	-	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

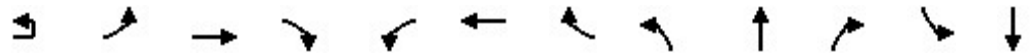
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	675	182	0	0	182	0
Stage 1	182	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	419	861	-	-	1393	-
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	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	861	1393
HCM Lane V/C Ratio	-	-	0.005	0.002
HCM Control Delay (s)	-	-	9.2	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Rockwall REC Campus Expansion TIA
Lanes, Volumes, Timings

2024 Background + Site Traffic - PM peak
1: Sids Road & Goliad Road

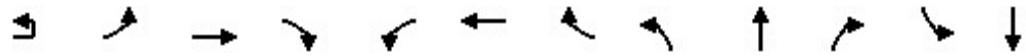


Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	1	258	754	23	51	784	38	38	182	95	32	141
Future Volume (vph)	1	258	754	23	51	784	38	38	182	95	32	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (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

Rockwall REC Campus Expansion TIA
Lanes, Volumes, Timings

2024 Background + Site Traffic - PM peak
1: Sids Road & Goliad Road

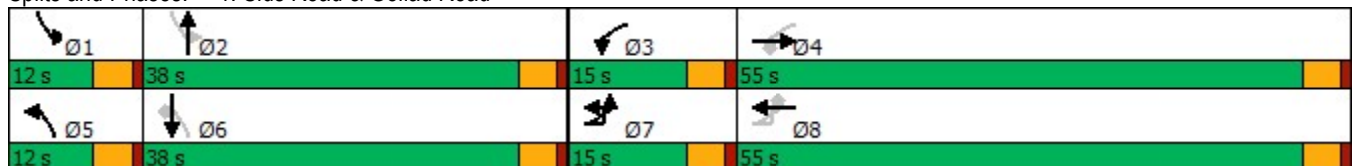


Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Detector Phase	7	7	4	4	3	8	8	5	2		1	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5
Total Split (s)	15.0	15.0	55.0	55.0	15.0	55.0	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	W	R	T	R	L	T
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	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	601	1301
HCM Lane V/C Ratio	-	-	0.009	0.01
HCM Control Delay (s)	-	-	11	7.8
HCM Lane LOS	-	-	B	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	-	313
Stage 1	-	-	0	-	-
Stage 2	-	-	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	W		T			T
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
Stage 1	368	-	-
Stage 2	267	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	443	677	-
Stage 1	700	-	-
Stage 2	778	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	441	677	-
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	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	677	1191
HCM Lane V/C Ratio	-	-	0.005	0.003
HCM Control Delay (s)	-	-	10.3	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0