DEVELOPMENT PETITION APPLICATION

159TH & LAGRANGE RETAIL

15901 LAGRANGE ROAD,
ORLAND PARK, IL 60467
ORLAND TOWNSHIP, PIN 27-21-201-002-0000 & 27-21-201-003-0000
75% PROGRESS SET

Call Before You Dig
JULIE
1-800-892-0123

UTILITY AND GOVERNING AGENCY CONTACTS

DEVELOPMENT SERVICES
VILLAGE OF ORLAND PARK
14700 S RAVINIA AVE
ORLAND PARK, IL 60462
TEL: (708) 403-6100
CONTACT: STEVE MARCIANI

WATER SERVICE
ILLINOIS AMERICAN WATER
1406 CARDINAL CT
URBANA, IL 61801
TEL: (800) 422-2782
CONTACT: RAYMOND FOWLER

ENGINEERING
VILLAGE OF ORLAND PARK
14700 S RAVINIA AVE
ORLAND PARK, IL 60462
TEL: (708) 403-5003

PUBLIC WORKS
VILLAGE OF ORLAND PARK
14700 S RAVINIA AVE
ORLAND PARK, IL 60462
TEL: (708) 403-6350

POWER COMPANY
COMED
3 LINCOLN CENTER
OAK BROOK TERRACE, IL 60181
TEL: (630) 437-4130

NATURAL GAS COMPANY
NICOR GAS COMPANY
90 NORTH FINLEY ROAD
GLEN ELLYN, IL 60137
TEL: (888) 388-2112

TELEPHONE
AT&T ILLINOIS
1001 COMMERCE DRIVE
OAK BROOK, IL 60523
TEL: (630) 573-6434

PROJECT TEAM

CIVIL ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
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WARRENVILLE, IL 60555
TEL: (630) 487-5550
EMAIL: TAYLOR.ESCHBACH@KIMLEY-HORN.COM
CONTACT: TAYLOR ESCHBACH, PE

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KIMLEY-HORN AND ASSOCIATES, INC.
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CONTACT: DANIEL GROVE

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4201 WINFIELD RD, SUITE 600
WARRENVILLE, IL 60555
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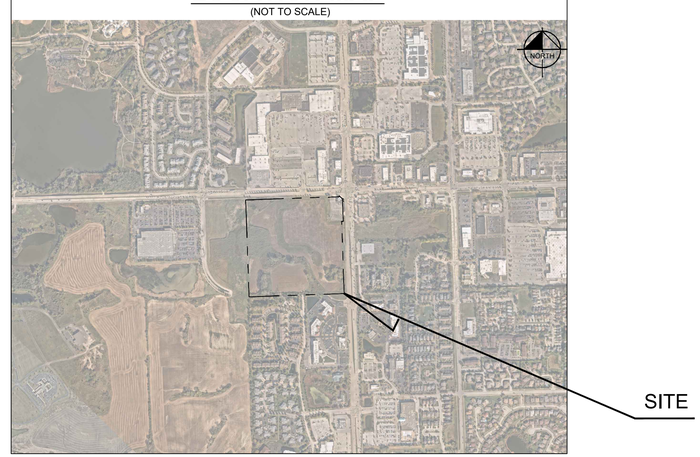
EMAIL: RORY.FANCLER@KIMLEY-HORN.COM
CONTACT: RORY FANCLER, AICP, PTP

SURVEYOR
KIMLEY-HORN AND ASSOCIATES, INC.
4201 WINFIELD RD, SUITE 600
WARRENVILLE, IL 60555
TEL: (331) 209-0476
CONTACT: BRAD STROHL, PLS

ARCHITECT
BRR ARCHITECTURE, INC.
2200 6TH AVE #523
SEATTLE, WA 98121
TEL: (206) 393-5352
CONTACT: AUSTIN ABBOT. AIA, NCARB

LOCATION MAP

(NOT TO SCALE)



LEGAL DESCRIPTION

PARCEL 1:
THE NORTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 21, TOWNSHIP 36 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN;
EXCEPTING THEREFROM A TRACT OF LAND BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION AS MARKED BY CROSS IN 4 INCH SQUARE IRON PLATE, THENCE WEST ALONG THE NORTH LINE OF SAID SECTION, 208.71 FEET, THENCE SOUTH 208.72 FEET, THENCE EAST 208.71 FEET TO THE EAST LINE OF SAID SECTION; THENCE NORTH 208.71 FEET TO THE POINT OF BEGINNING;
ALSO EXCEPTING THEREFROM THAT PART THEREOF DEDICATED FOR 159TH STREET PER DOCUMENT NO. 10909317 RECORDED MAY 26, 1931 AND THAT PART THEREOF DEDICATED FOR LAGRANGE ROAD PER DOCUMENT NO. 10155684 RECORDED SEPTEMBER 24, 1928,
ALSO EXCEPTING ANY PARTS TAKEN IN CASE NO. 06 L 050813, ALL IN COOK COUNTY, ILLINOIS.

PARCEL 2:
THAT PART OF THE NORTHEAST 1/4 OF SECTION 21, TOWNSHIP 36 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEAST CORNER OF SECTION 21 AS MARKED BY CROSS IN A 4 INCH SQUARE IRON PLATE; THENCE WEST ALONG THE NORTH LINE OF SAID SECTION 21, 208.71 FEET; THENCE SOUTH 208.71 FEET; THENCE EAST 208.71 FEET OF THE EAST LINE OF SAID SECTION 21; THENCE NORTH 208.71 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS, EXCEPT THAT PART TAKEN FOR ROAD BY CASE NO. 06L050813.

SHEET INDEX

SHEET NUMBER	SHEET TITLE
C0.0	COVER
S1.0 - S1.6	ALTA SURVEY
C1.0 - C1.1	GENERAL NOTES
C2.0	OVERALL EXISTING CONDITIONS & DEMOLITION PLAN
C2.1 - C2.7	EXISTING CONDITIONS & DEMOLITION PLAN
C3.0	OVERALL SITE DIMENSION PLAN
C3.1 - C3.7	SITE DIMENSION PLAN
C3.8	FIRE TRUCK PLAN
C4.0	OVERALL EROSION CONTROL PLAN
C5.0	OVERALL PAVING & GRADING PLAN
C5.1 - C5.6	PAVING & GRADING PLAN
C5.7 - C5.8	CROSS SECTIONS
C6.0	OVERALL DRAINAGE PLAN
C6.1 - C6.6	DRAINAGE PLAN
C7.0	OVERALL UTILITY PLAN
C7.1 - C7.6	UTILITY PLAN
C8.0 - C8.3	CONSTRUCTION DETAILS
C9.0	EROSION CONTROL DETAILS
TP1.0	OVERALL TREE PRESERVATION PLAN
TP1.1 - TP1.6	TREE PRESERVATION PLAN
TP2.0	TREE PRESERVATION TABLE
L1.0	OVERALL LANDSCAPE PLAN
L1.1 - L1.6	LANDSCAPE PLAN
L2.0	MONUMENT SIGN ENLARGEMENTS
L3.0	LANDSCAPE SCHEDULE
L3.1	LANDSCAPE NOTES AND DETAILS
L3.2	LANDSCAPE DETAILS
L3.3	LANDSCAPE NOTES
L3.4	LANDSCAPE SPECIFICATIONS
P1.0	OVERALL PHOTOMETRIC PLAN
P1.1 - P1.5	PHOTOMETRIC PLAN
P1.6	PHOTOMETRIC DETAILS

11/14/2025
ENGINEER'S PROJECT No. 149621089
159TH & LAGRANGE RETAIL
REVISIONS:

No.	DESCRIPTION	DATE	BY

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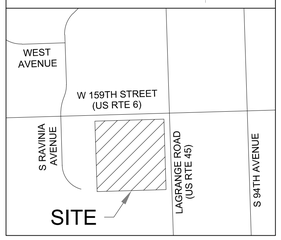
PIN:27-21-201-002-0000 &
27-21-201-003-000

PLAT OF SURVEY
OF
THAT PART OF THE NORTHEAST ¼ OF THE NORTHEAST ¼ OF SECTION 21, TOWNSHIP 36 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN

VICINITY MAP

N.T.S.

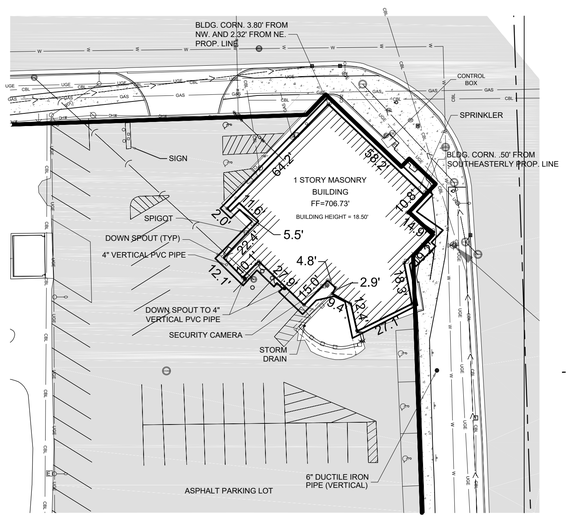


SURVEYOR'S NOTES:

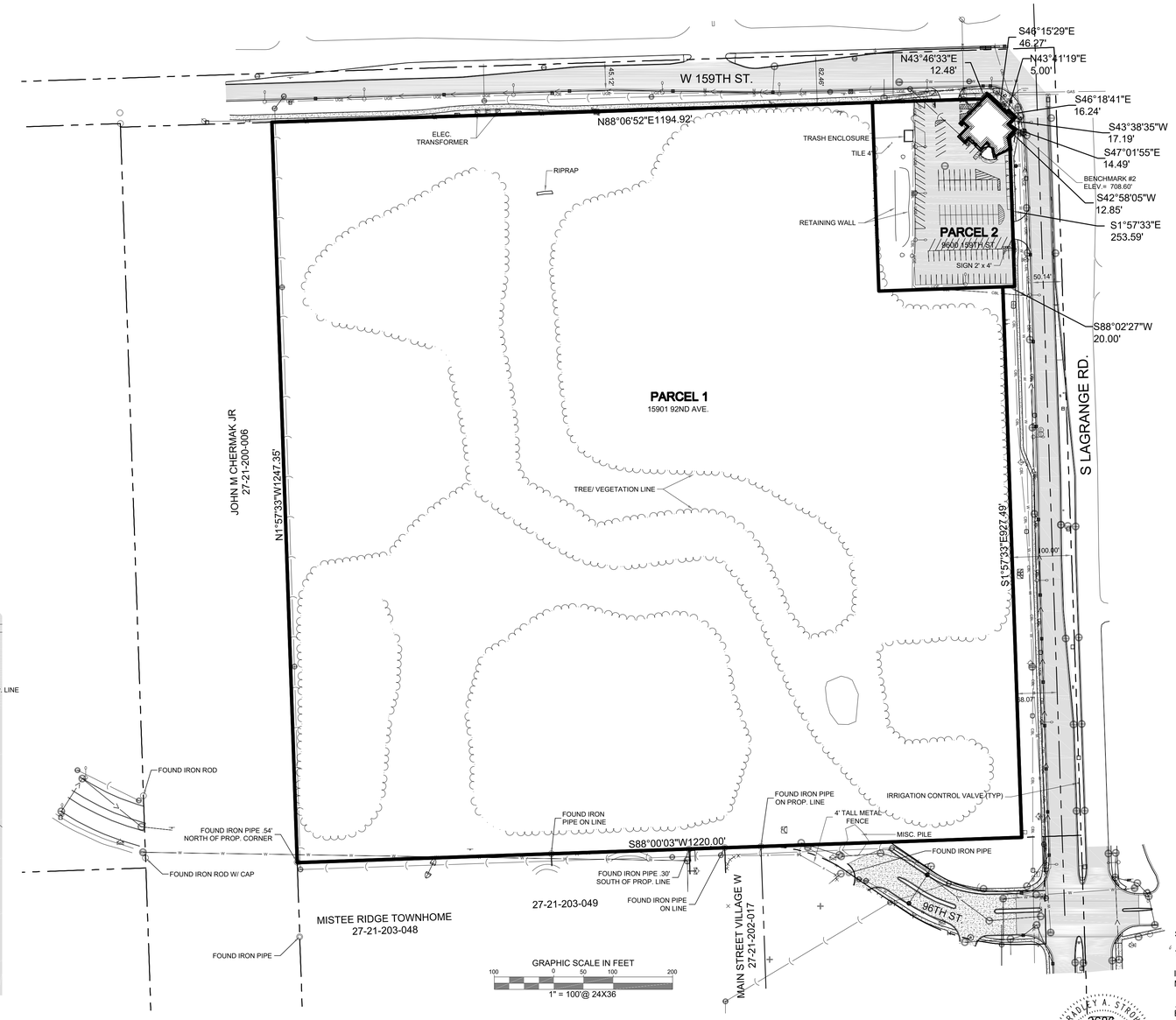
1. FIELD WORK COMPLETED ON MAY 20, 2025.
2. UNDERGROUND UTILITIES NOT SHOWN
3. MEASUREMENTS ARE MADE IN FEET AND DECIMAL FEET, MEASUREMENTS SHOWN IN PARENTHESES EX.(100.00') ARE RECORD DIMENSIONS.
4. IRON PIPES SET AT ALL CORNERS UNLESS OTHERWISE DENOTED.

SITE ADDRESS:
15901 92ND AVENUE & 9600 159TH STREET
ORLAND PARK, ILLINOIS

BUILDING DETAIL
1" = 30'



GRAPHIC SCALE IN FEET
30 0 15 30 60
1" = 30'@ 24X36



GRAPHIC SCALE IN FEET
100 0 50 100 200
1" = 100'@ 24X36

NORTH

BASIS OF BEARINGS

All bearings shown are based on grid north of the Illinois Coordinate System of 1983, East Zone (1201), North American Datum of 1983.

REFERENCE DATUM:

NORTH AMERICAN VERTICAL DATUM 1988

BENCHMARK #1ELEVATION = 715.33'

SOUTHWEST BOLT ON FIRE HYDRANT AT SOUTH EAST CORNER OF PROJECT

BENCHMARK #2ELEVATION =708.60'

SOUTHWEST BOLT ON FIRE HYDRANT AT SOUTH SOUTHWEST CORNER OF 159TH STREET AND LAGRANGE ROAD.

BENCHMARK #3ELEVATION = 700.37'

BOX CUT ON LIGHT POLE BASE AT NORTH WEST CORNER OF PROJECT

HATCH LEGEND

	BUILDING OUTLINE AREA
	CONCRETE AREA
	ASPHALT PAVEMENT AREA

LINE TYPE LEGEND

OHP	OVERHEAD UTILITY LINE
UGE	UNDERGROUND ELECTRIC LINE
W	WATER LINE
GAS	GAS LINE

LEGEND

	UTILITY POLE W/ LIGHT		WATER VALVE
	UTILITY POLE W/ TRANSFORMER		FIRE HYDRANT
	UTILITY POLE		SIGN POST
	GUY WIRE ANCHOR		MARQUEE SIGN
	UTILITY HAND HOLE		TREE (DECIDUOUS)
	POWER METER		SURVEY BENCHMARK
	GAS METER		FOUND IRON PIPE
	STORM MANHOLE		FOUND IRON ROD
	STORM FES		SANITARY CLEAN-OUT

LEGAL DESCRIPTION:

PARCEL 1: THE NORTHEAST 1/4 OF THE NORTH EAST 1/4 OF SECTION 21, TOWNSHIP 36 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN; EXCEPTING THEREFROM A TRACT OF LAND BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION AS MARKED BY CROSS IN A FOUR INCH SQUARE IRON PLATE, THENCE WEST ALONG THE NORTH LINE OF SAID SECTION, 208.71 FEET, THENCE SOUTH 208.72 FEET, THENCE EAST 208.71 FEET TO THE EAST OF SAID SECTION; THEN NORTH 208.71 FEET TO THE EAST LINE OF SAID SECTION; THENCE NORTH 208.71 FEET TO THE POINT OF BEGINNING;

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SURVEYORS CERTIFICATION:

To: VILLAGE OF ORLAND PARK

I HEREBY CERTIFY THAT THIS SURVEY AND THE PLAT SHOWN HEREON MEET THE ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

BRADLEY A. STROHL — DATE JUNE 06, 2025
PROFESSIONAL LAND SURVEYOR NO. 3686
MY LICENSE EXPIRES 11/30/2026
KIMLEY-HORN AND ASSOCIATES, INC.
4201 WINFIELD ROAD, SUITE 600
WARRENVILLE, IL 60555
Ph. 331-209-0476
BRAD.STROHL@KIMLEY-HORN.COM

BRADLEY A. STROHL 3686 PROFESSIONAL LAND SURVEYOR STATE OF ILLINOIS WARRENVILLE, ILLINOIS

No.	DATE	REVISION DESCRIPTION

Kimley»Horn
4201 Winfield Road
Warrenville, Illinois 60555
DESIGN FIRM # 184002012-0006
Tel. No. (630) 487-5550
www.kimley-horn.com

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1"=100'	JI	BAS	06/05/2025	149621089	1

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WARRENVILLE, IL 60555
630-487-5550
WWW.KIMLEY-HORN.COM

LICENSED PROFESSIONAL
XXXX
ILLINOIS LICENSE NUMBER
XXXX
DATE: 11/14/2025

KHA PROJECT 149621089
DATE 11/14/2025
SCALE AS SHOWN
DESIGNED BY ###
DRAWN BY ###
CHECKED BY ###

ALTA SURVEY

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
S1.0

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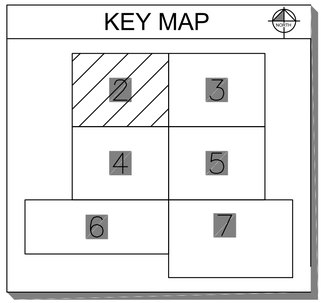
PIN:27-21-201-002-0000 &
27-21-201-003-000

TOPOGRAPHIC SURVEY
OF
15901 92ND AVENUE & 9600 159TH STREET
ORLAND PARK, ILLINOIS

KEY MAP



HATCH LEGEND

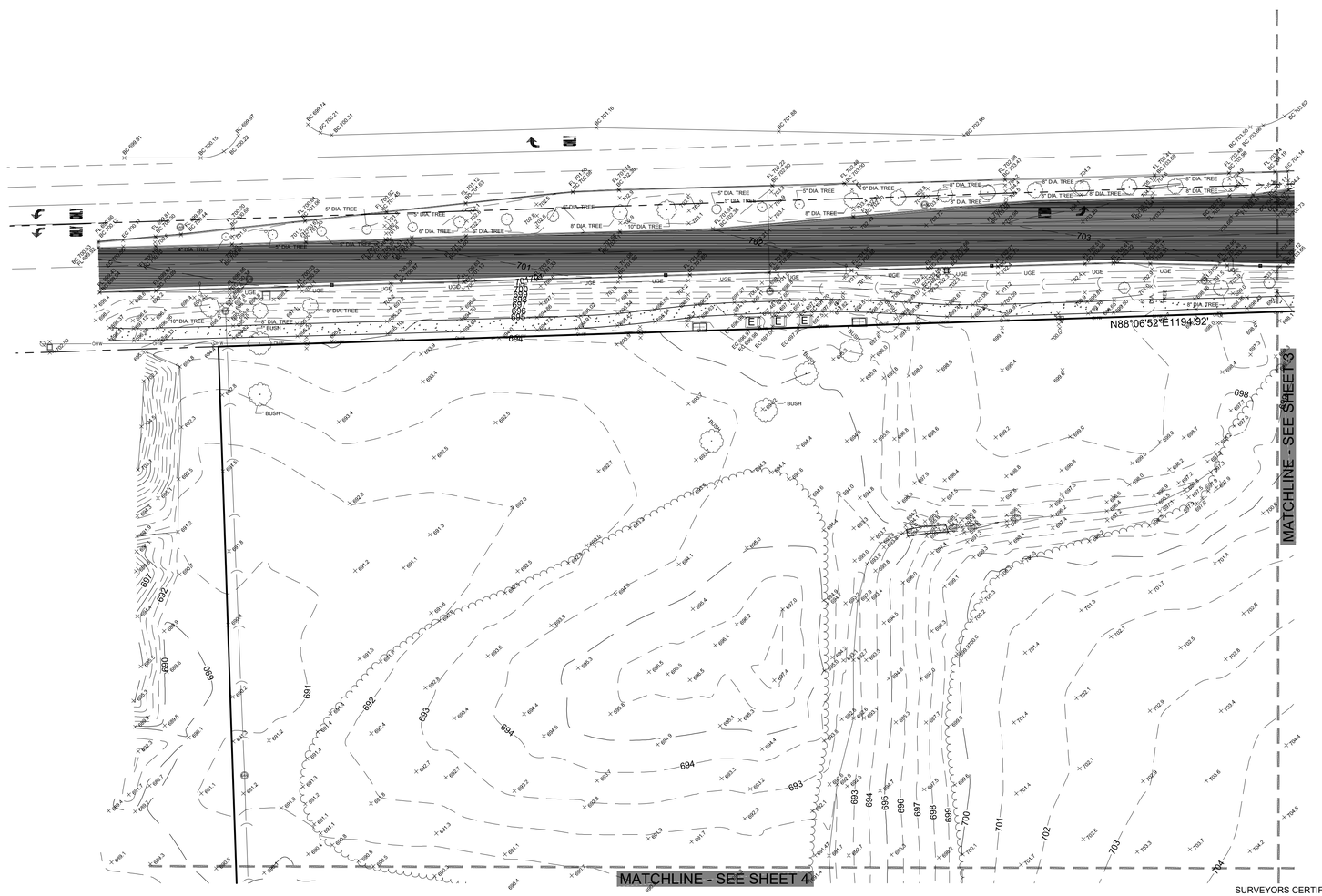
- BUILDING OUTLINE AREA
- CONCRETE AREA
- ASPHALT PAVEMENT AREA

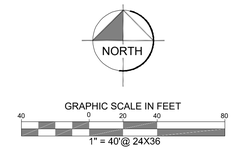
LINE TYPE LEGEND

- OVERHEAD UTILITY LINE
- UNDERGROUND ELECTRIC LINE
- WATER LINE
- GAS LINE
- UNDERGROUND CABLE
- SANITARY SEWER
- STORM SEWER

LEGEND

UTILITY POLE W/ LIGHT	WATER VALVE
UTILITY POLE W/ TRANSFORMER	FIRE HYDRANT
UTILITY POLE	SIGN POST
GUY WIRE ANCHOR	MARQUEE SIGN
FIBEROPTIC HAND HOLE	TREE (DECIDUOUS)
ELEC. METER	SURVEY BENCHMARK
GAS METER	WATER VALVE VAULT
STORM MANHOLE	STORM CULVERT
FLARED END SECTION	SANITARY CLEAN-OUT
TRAFFIC SIGNAL	TELEPHONE MANHOLE
TRAFFIC MANHOLE	TELEPHONE TRANSFORMER
STORM INLET	SANITARY MANHOLE





BASIS OF BEARINGS

All bearings shown are based on grid north of the Illinois Coordinate System of 1983, East Zone (1201), North American Datum of 1983.

REFERENCE DATUM:

NORTH AMERICAN VERTICAL DATUM 1988

BENCHMARK #1ELEVATION = 715.33'

SOUTHWEST BOLT ON FIRE HYDRANT AT SOUTH EAST CORNER OF PROJECT

BENCHMARK #2ELEVATION =708.60'

SOUTHWEST BOLT ON FIRE HYDRANT AT SOUTH SOUTHWEST CORNER OF 159TH STREET AND LAGRANGE ROAD.

BENCHMARK #3ELEVATION = 700.37'

BOX CUT ON LIGHT POLE BASE AT NORTH WEST CORNER OF PROJECT

SURVEYORS CERTIFICATION:

To:

I hereby certify that this survey and the plat shown hereon meet the Illinois Minimum Standards for a TOPOGRAPHIC (&/or Topographic) Survey.

_____

Bradley A. Strohl Date
Professional Land Surveyor No. 3686
Kimley-Horn and Associates, Inc.
4201 Winfield Road, Suite 600
Warrenville, IL 60555
Ph. 331-209-0476
brad.strohl@kimley-horn.com

No.	DATE	REVISION DESCRIPTION

Kimley»Horn
4201 Winfield Road
Warrenville, Illinois 60555
DESIGN FIRM # 184002012-0006
Tel. No. (630) 487-5550
www.kimley-horn.com

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1"=40'	JMT	XXX	05/05/2025	149621089	2 OF 7

No.	REVISIONS	DATE	BY
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WARRENVILLE, ILLINOIS 60555
630-487-5550
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XXXX
ILLINOIS LICENSE NUMBER
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DATE: 11/14/2025

KHA PROJECT	149621089
DATE	11/14/2025
SCALE	AS SHOWN
DESIGNED BY	####
DRAWN BY	####
CHECKED BY	####

ALTA SURVEY

159TH & LAGRANGE RETAIL
CITY OF ORLAND PARK ILLINOIS

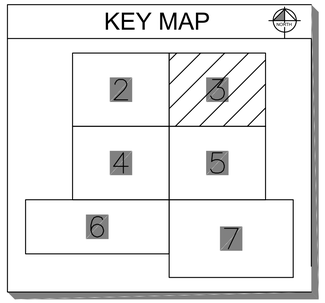
SHEET NUMBER
S1.1

TOPOGRAPHIC SURVEY
OF
15901 92ND AVENUE & 9600 159TH STREET
ORLAND PARK, ILLINOIS

BASIS OF BEARINGS

All bearings shown are based on grid north of the Illinois Coordinate System of 1983, East Zone (1201), North American Datum of 1983.

KEY MAP



HATCH LEGEND

- BUILDING OUTLINE AREA
- CONCRETE AREA
- ASPHALT PAVEMENT AREA

LINE TYPE LEGEND

- OVERHEAD UTILITY LINE
- UNDERGROUND ELECTRIC LINE
- WATER LINE
- GAS LINE
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- STORM SEWER

LEGEND

UTILITY POLE W/ LIGHT	WATER VALVE
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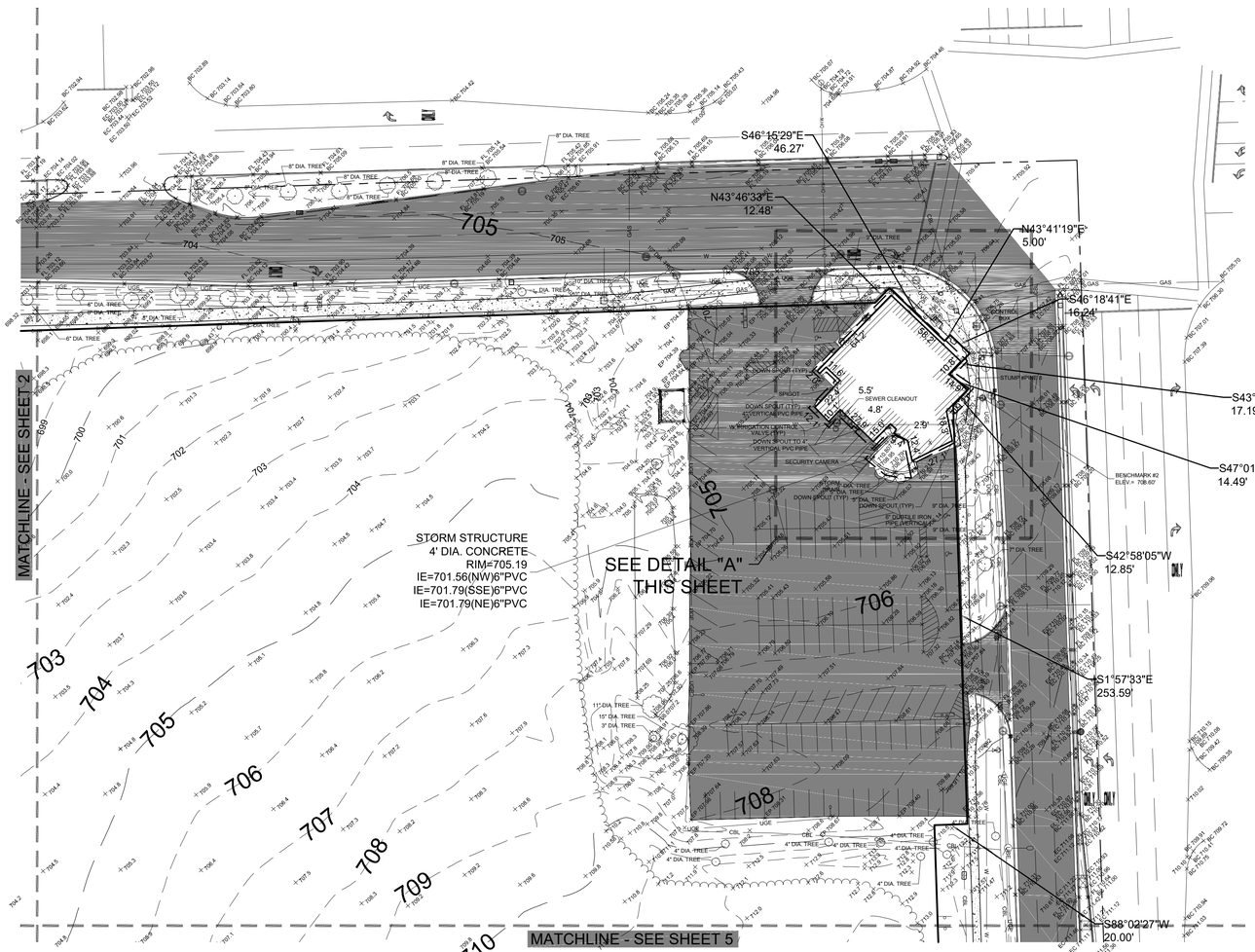
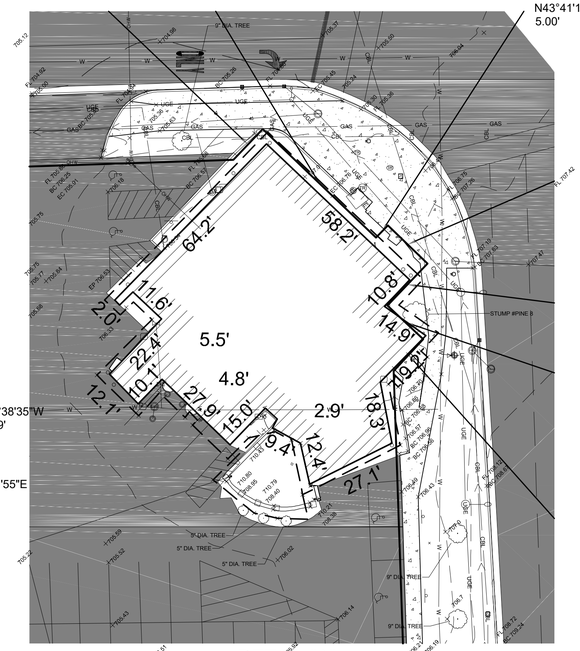
TRAFFIC SIGNAL	TELEPHONE MANHOLE
TRAFFIC MANHOLE	TELEPHONE TRANSFORMER
STORM INLET	SANITARY MANHOLE





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1"=40'	JMT	XXX	05/05/2025	149621089	3 OF 7

No.	REVISIONS	DATE	BY

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WARRENVILLE, ILLINOIS 60555
630-487-5550
WWW.KIMLEY-HORN.COM

LICENSED PROFESSIONAL
XXXX
ILLINOIS LICENSE NUMBER
XXXX
DATE: 11/14/2025

KHA PROJECT
149621089
DATE
11/14/2025
SCALE AS SHOWN
DESIGNED BY ###
DRAWN BY ###
CHECKED BY ###

ALTA SURVEY

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
S1.2

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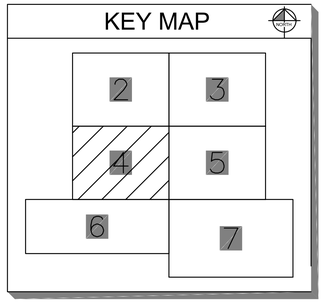
TOPOGRAPHIC SURVEY
OF
15901 92ND AVENUE & 9600 159TH STREET
ORLAND PARK, ILLINOIS

KEY MAP



HATCH LEGEND

- BUILDING OUTLINE AREA
- CONCRETE AREA
- ASPHALT PAVEMENT AREA

LINE TYPE LEGEND

- OVERHEAD UTILITY LINE
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LEGEND

UTILITY POLE W/ LIGHT	WATER VALVE
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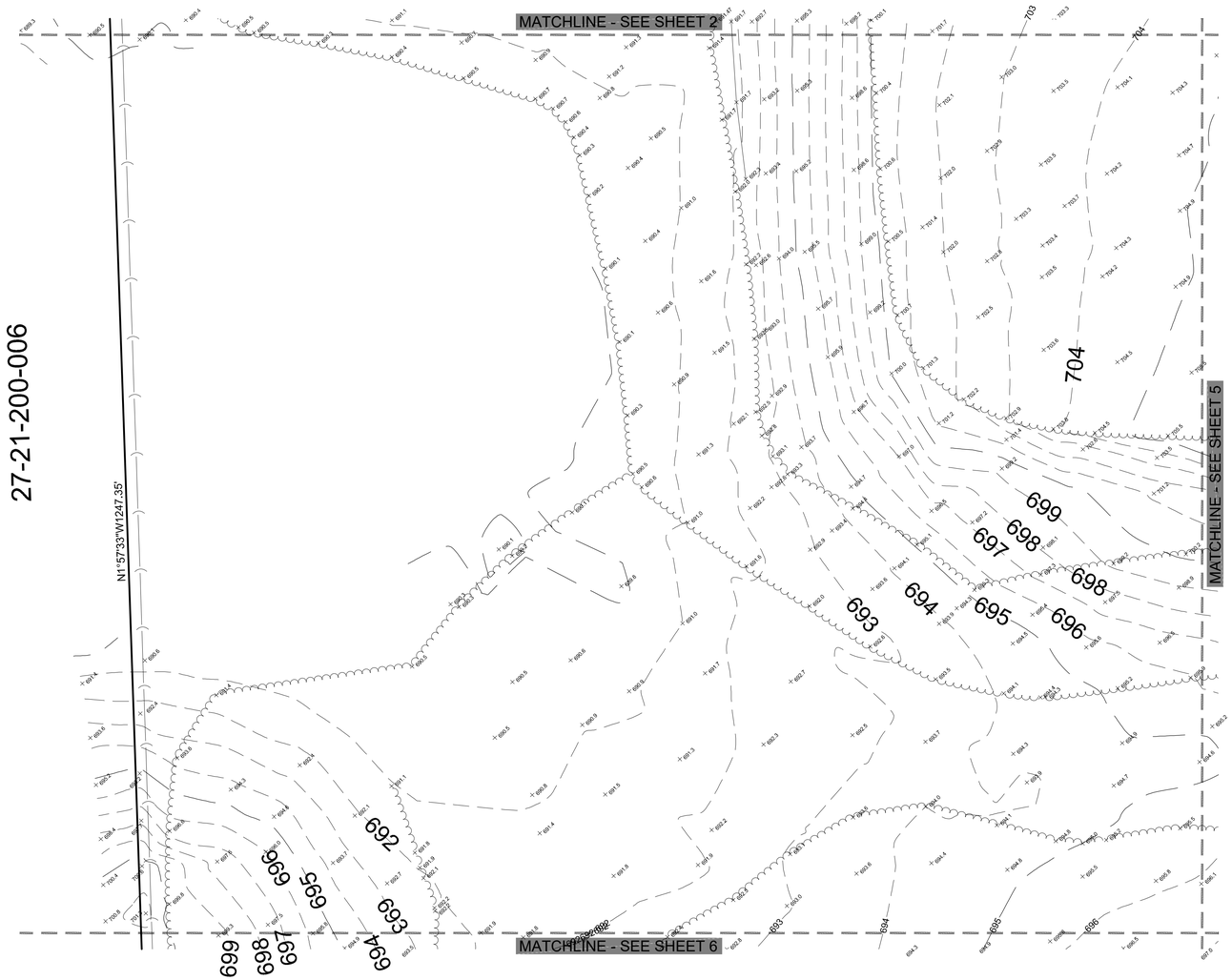

NORTH

GRAPHIC SCALE IN FEET
40 0 20 40 80
1" = 40'@ 24X36

BASIS OF BEARINGS

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Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1"=40'	JI	MGJ	06/05/2025	149621089	4 OF 7

No.	REVISIONS	DATE	BY
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4201 WINFIELD ROAD, SUITE 600
WARRENVILLE, ILLINOIS 60555
630-487-5550
WWW.KIMLEY-HORN.COM

LICENSED PROFESSIONAL
XXXX
ILLINOIS LICENSE NUMBER
XXXX
DATE: 11/14/2025

KHA PROJECT
149621089
DATE
11/14/2025
SCALE AS SHOWN
DESIGNED BY ####
DRAWN BY ####
CHECKED BY ####

ALTA SURVEY

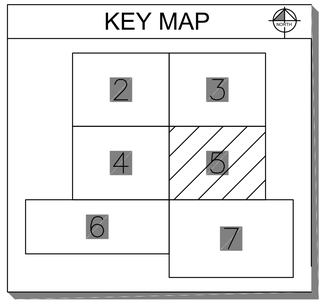
159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
S1.3

TOPOGRAPHIC SURVEY
OF
15901 92ND AVENUE & 9600 159TH STREET
ORLAND PARK, ILLINOIS

KEY MAP



HATCH LEGEND

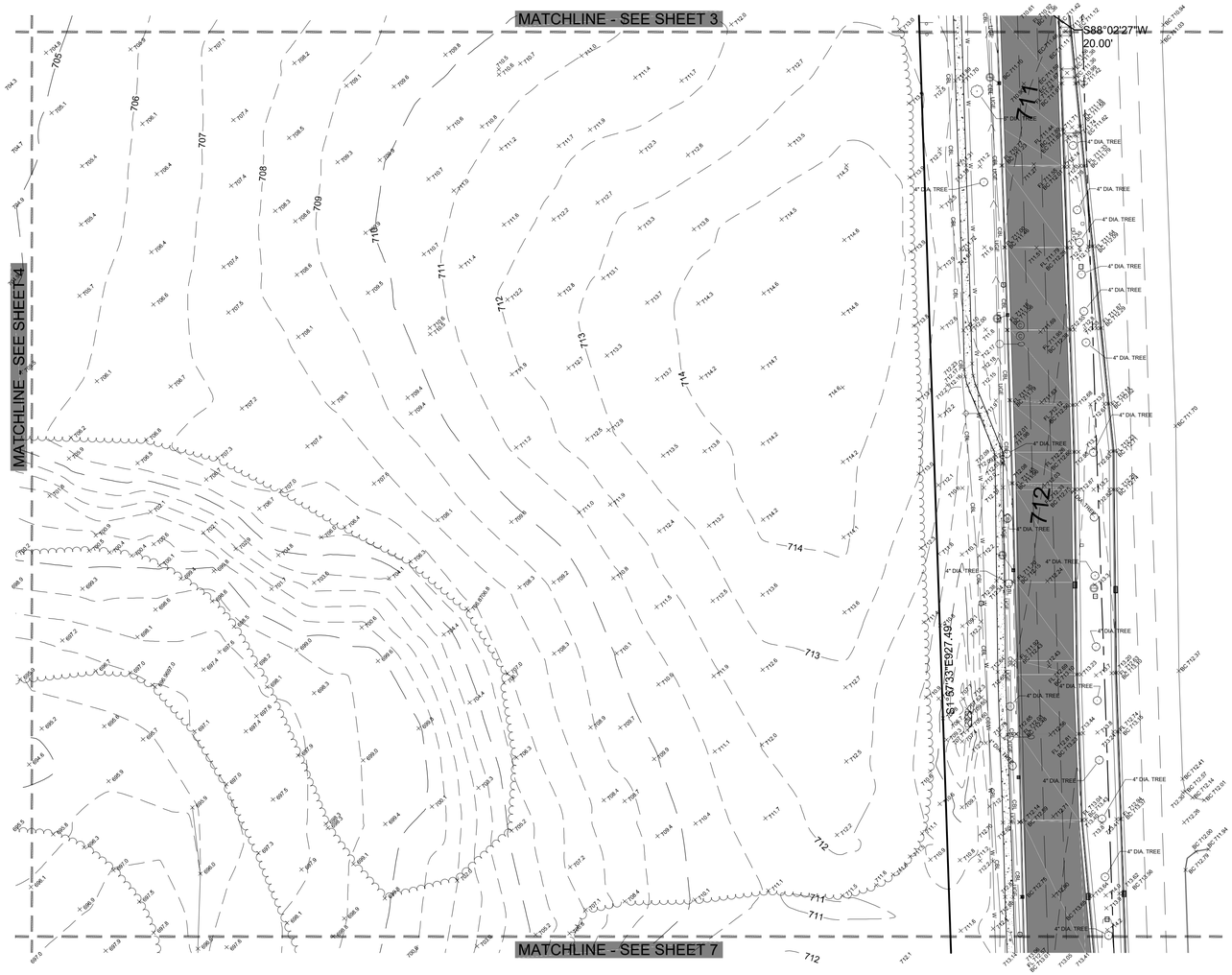
- BUILDING OUTLINE AREA
- CONCRETE AREA
- ASPHALT PAVEMENT AREA

LINE TYPE LEGEND

- OVERHEAD UTILITY LINE
- UNDERGROUND ELECTRIC LINE
- WATER LINE
- GAS LINE
- UNDERGROUND CABLE
- SANITARY SEWER
- STORM SEWER

LEGEND

UTILITY POLE W/ LIGHT	WATER VALVE
UTILITY POLE W/ TRANSFORMER	FIRE HYDRANT
UTILITY POLE	SIGN POST
GUY WIRE ANCHOR	MARQUEE SIGN
FIBEROPTIC HAND HOLE	TREE (DECIDUOUS)
ELEC. METER	SURVEY BENCHMARK
GAS METER	WATER VALVE VAULT
STORM MANHOLE	STORM CULVERT
FLARED END SECTION	SANITARY CLEAN-OUT
TRAFFIC SIGNAL	TELEPHONE MANHOLE
TRAFFIC MANHOLE	TELEPHONE TRANSFORMER
STORM INLET	SANITARY MANHOLE



NORTH

GRAPHIC SCALE IN FEET
40 0 20 40 80
1" = 40'@ 24X36

BASIS OF BEARINGS

All bearings shown are based on grid north of the Illinois Coordinate System of 1983, East Zone (1201), North American Datum of 1983.

No.	DATE	REVISION DESCRIPTION

Kimley»Horn
4201 Winfield Road
Warrenville, Illinois 60555
DESIGN FIRM # 184002012-0006
Tel. No. (630) 487-5550
www.kimley-horn.com

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1"=40'	JI	MGJ	06/05/2025	149621089	5 OF 7

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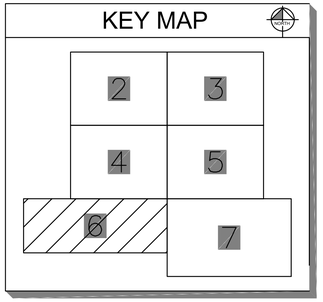
ORLAND PARK, ILLINOIS

KEY MAP



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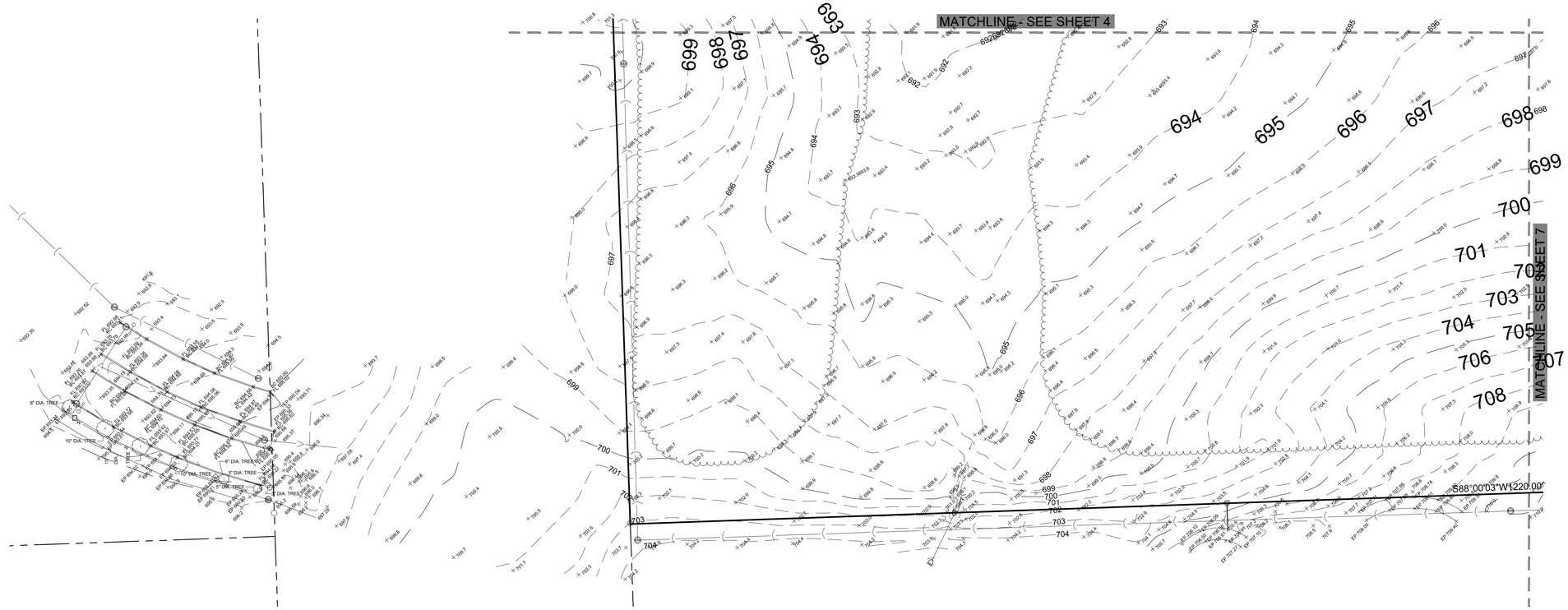

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ALTA SURVEY

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
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ORLAND PARK, ILLINOIS

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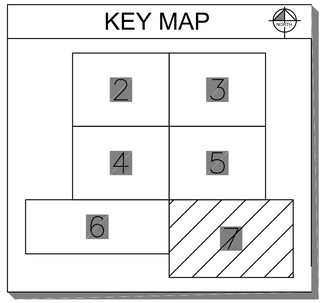

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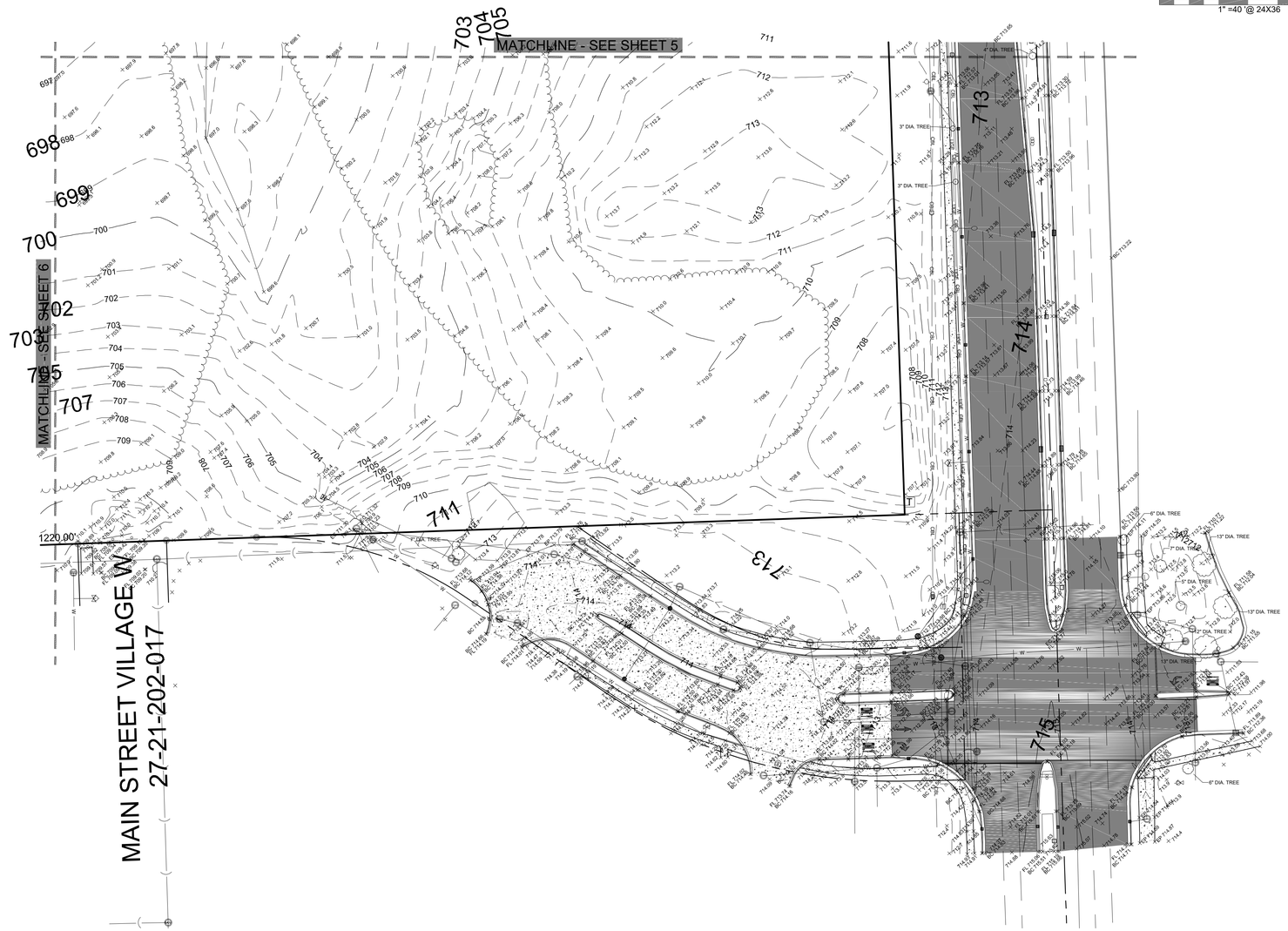

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GENERAL NOTES

1. EXISTING SITE TOPOGRAPHY, UTILITIES, RIGHT-OF-WAY AND HORIZONTAL CONTROL SHOWN ON THE DRAWINGS WERE OBTAINED FROM A SURVEY PREPARED BY:

   LANDMARK ENGINEERING, LLC
   7808 WEST 103RD STREET
   PALOS HILLS, IL 60465
   TEL: (708) 599-3737

   COPIES OF THE SURVEY ARE AVAILABLE FROM THE ENGINEER. SITE CONDITIONS MAY HAVE CHANGED SINCE THE SURVEY WAS PREPARED. CONTRACTORS TO VISIT SITE TO FAMILIARIZE THEMSELVES WITH THE CURRENT CONDITIONS.

2. COPIES OF SOILS INVESTIGATION REPORTS MAY BE OBTAINED FROM THE OWNER. ANY BRACING, SHEETING OR SPECIAL CONSTRUCTION METHODS DEEMED NECESSARY BY THE CONTRACTOR IN ORDER TO INSTALL THE PROPOSED IMPROVEMENTS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE PROJECT. ANY ADDITIONAL SOILS DATA NEEDED TO CONFIRM THE CONTRACTOR'S OPINIONS OF THE SUBSOIL CONDITIONS SHALL BE DONE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL OBTAIN THE OWNER'S WRITTEN AUTHORIZATION TO ACCESS THE SITE TO CONDUCT A SUPPLEMENTAL SOILS INVESTIGATION.

3. THE CONTRACTOR SHALL PHOTOGRAPH THE WORK AREA PRIOR TO CONSTRUCTION FOR THE PURPOSE OF DOCUMENTING EXISTING CONDITIONS.

4. EXCEPT WHERE MODIFIED BY THE CONTRACT DOCUMENTS, ALL PROPOSED WORK SHALL BE IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS WHICH ARE HEREBY MADE A PART HEREOF:

   A. "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS," AS PREPARED BY IDOT, LATEST EDITION.

   B. "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" AS PUBLISHED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA), LATEST EDITION.

   C. "ILLINOIS RECOMMENDED STANDARDS FOR SEWAGE WORKS," AS PUBLISHED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA), LATEST EDITION.

   D. REGULATIONS, STANDARDS AND GENERAL REQUIREMENTS SET FORTH BY THE MUNICIPALITY, UNLESS OTHERWISE NOTED ON THE PLANS.

   E. THE NATIONAL ELECTRIC CODE.

   F. ALL APPLICABLE PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT ARE HEREIN INCORPORATED BY REFERENCE.

5. STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, AND RECURRING SPECIAL PROVISIONS, CONSTRUCTION PLANS, AND SUBSEQUENT DETAILS ARE ALL TO BE CONSIDERED AS PART OF THE CONTRACT. INCIDENTAL ITEMS OR ACCESSORIES NECESSARY TO COMPLETE THE CONTRACTOR'S WORK MAY NOT BE SPECIFICALLY NOTED, BUT ARE CONSIDERED A PART OF THE CONTRACTOR'S CONTRACT.

6. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL ITEMS REQUIRED FOR CONSTRUCTION OF THE PROJECT, AS SHOWN ON THE PLANS, ARE INCLUDED IN THE CONTRACT. ANY ITEM NOT SPECIFICALLY INCLUDED IN THE CONTRACT, BUT SHOWN ON THE PLANS, SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IN THE EVENT OF A DISCREPANCY WITH THE PLANS AND QUANTITIES.

7. THE CONTRACTOR IS RESPONSIBLE FOR HAVING A SET OF "APPROVED" ENGINEERING PLANS WITH THE LATEST REVISION DATE ON THE JOB SITE PRIOR TO THE START OF CONSTRUCTION. IF THERE ARE ANY DISCREPANCIES WITH WHAT IS SHOWN ON THE CONSTRUCTION PLANS, HE MUST IMMEDIATELY REPORT THEM TO THE SURVEYOR OR ENGINEER BEFORE DOING ANY WORK. OTHERWISE, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, SPECIFICATIONS, AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTION, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT THE CONTRACTOR'S OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTIONS ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.

8. THE CONTRACTOR SHALL SUBSCRIBE TO ALL GOVERNING REGULATIONS AND SHALL OBTAIN ALL NECESSARY PUBLIC AGENCY PERMITS PRIOR TO STARTING WORK. THE CONTRACTOR, BY USING THESE PLANS FOR THEIR WORK, AGREE TO HOLD HARMLESS KIMLEY-HORN AND ASSOCIATES, INC, THE MUNICIPALITY, THEIR EMPLOYEES AND AGENTS AND THE OWNER FROM AND AGAINST ANY AND ALL LIABILITY, CLAIMS, DAMAGES, AND THE COST OF DEFENSE ARISING OUT OF CONTRACTOR(S) PERFORMANCE OF THE WORK DESCRIBED HEREIN.

9. THE ENGINEER AND OWNER ARE NOT RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, TIME OF PERFORMANCE, PROGRAMS OR FOR ANY SAFETY PRECAUTIONS USED BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXECUTION OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS.

10. CONSTRUCTION MATERIALS AND/OR EQUIPMENT MAY NOT BE STORED IN THE RIGHT-OF-WAY, AS DIRECTED BY THE OWNER.

11. EASEMENTS FOR THE EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, AND UTILITIES WITHIN PUBLIC RIGHT-OF-WAYS ARE SHOWN ON THE PLANS ACCORDING TO AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF THESE UTILITY LINES AND THEIR PROTECTION FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT WITH LOCATIONS OF THE NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.

12. OWNER SHALL OBTAIN EASEMENTS AND APPROVAL OF PERMITS NECESSARY TO FACILITATE CONSTRUCTION OF THE PROPOSED UTILITIES. THE CONTRACTOR, HOWEVER, SHALL FURNISH ALL REQUIRED BONDS AND EVIDENCE OF INSURANCE NECESSARY TO SECURE THESE PERMITS AND EASEMENTS.

13. THE CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES UNTIL THEY ARE NO LONGER NEEDED. ANY STAKES DESTROYED OR DISTURBED BY THE CONTRACTOR PRIOR TO THEIR USE SHALL BE RESET BY THE SURVEYOR AT THE CONTRACTOR'S EXPENSE.

14. NOTIFICATION OF COMMENCING CONSTRUCTION:

   14.A. THE CONTRACTOR SHALL NOTIFY AFFECTED GOVERNMENTAL AGENCIES IN WRITING AT LEAST THREE FULL WORKING DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL NOTIFY, AS NECESSARY, ALL TESTING AGENCIES, THE MUNICIPALITY, AND THE OWNER SUFFICIENTLY IN ADVANCE OF CONSTRUCTION.

   14.B. FAILURE OF THE CONTRACTOR TO ALLOW PROPER NOTIFICATION TIME WHICH RESULTS IN THE TESTING COMPANIES TO BE UNABLE TO VISIT THE SITE AND PERFORM TESTING WILL CAUSE THE CONTRACTOR TO SUSPEND THE OPERATION TO BE TESTED UNTIL THE TESTING AGENCY CAN SCHEDULE TESTING OPERATIONS. COST OF SUSPENSION OF WORK SHALL BE BORNE BY THE CONTRACTOR.

15. ALL CONTRACTORS SHALL KEEP ACCESS AVAILABLE AT ALL TIMES FOR ALL EMERGENCY TRAFFIC, AS DIRECTED BY THE MUNICIPALITY.

16. ANY EXISTING SIGNS, LIGHT STANDARDS, AND UTILITY POLES THAT INTERFERE WITH CONSTRUCTION OPERATIONS AND ARE NOT NOTED ON THE PLANS FOR DISPOSAL SHALL BE REMOVED AND RESET BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE, AS DIRECTED BY THE ENGINEER. ANY DAMAGE TO THESE ITEMS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE TO THE SATISFACTION OF THE OWNER. ANY SIGNS NOT REQUIRED TO BE RESET SHALL BE DELIVERED TO THE RESPECTIVE OWNERS.

17. ALL TREES TO BE SAVED SHALL BE IDENTIFIED PRIOR TO CONSTRUCTION BY THE LANDSCAPE ARCHITECT AND SHALL BE PROTECTED PER IDOT SECTION 201.05. THE RIGHT-OF-WAY LINE AND LIMITS OF THE CONTRACTOR'S OPERATIONS SHALL BE CLEARLY DEFINED THROUGHOUT THE CONSTRUCTION PERIOD. ALL TREES NOTED TO REMAIN SHALL BE PROTECTED FROM DAMAGE TO TRUNKS, BRANCHES AND ROOTS. NO EXCAVATING, FILLING OR GRADING IS TO BE DONE INSIDE THE DRIP LINE OF TREES UNLESS OTHERWISE INDICATED.

18. LIMB PRUNING SHALL BE PERFORMED UNDER THE SUPERVISION OF AN APPROVED LANDSCAPE ARCHITECT, FORESTER, OR ARBORIST AND SHALL BE UNDERTAKEN IN A TIMELY FASHION SO AS NOT TO INTERFERE WITH CONSTRUCTION. ALL LIMBS, BRANCHES, AND OTHER DEBRIS RESULTING FROM THE CONTRACTOR'S WORK SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE. ALL CUTS OVER ONE (1) INCH IN DIAMETER SHALL BE PAINTED WITH AN APPROVED TREE PAINT.

19. ALL EXISTING PAVEMENT OR CONCRETE TO BE REMOVED SHALL BE SAWCUT ALONG LIMITS OF PROPOSED REMOVAL BEFORE COMMENCEMENT OF PAVEMENT REMOVAL.

20. ALL EXISTING UTILITIES OR IMPROVEMENTS, INCLUDING WALKS, CURBS, PAVEMENT, AND PARKWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE PROMPTLY RESTORED TO THEIR RESPECTIVE ORIGINAL CONDITION. THE CONTRACTOR'S WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNLESS A PAY ITEM IS LISTED ON THE BID LIST.

21. REMOVAL OF SPECIFIED ITEMS, INCLUDING BUT NOT LIMITED TO, PAVEMENT, SIDEWALK, CURB, CURB AND GUTTER, CULVERTS, ETC., SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR ANY PERMITS REQUIRED FOR SUCH DISPOSAL.

22. THE CONTRACTOR SHALL COLLECT AND REMOVE ALL CONSTRUCTION DEBRIS, EXCESS MATERIALS, TRASH, OIL AND GREASE RESIDUE, MACHINERY, TOOLS, AND OTHER MISCELLANEOUS ITEMS WHICH WERE NOT PRESENT PRIOR TO PROJECT COMMENCEMENT AT NO ADDITIONAL EXPENSE TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY AND ALL PERMITS NECESSARY FOR THE HAULING AND DISPOSAL REQUIRED FOR CLEANUP, AS DIRECTED BY THE ENGINEER OR OWNER. BURNING ON THE SITE IS NOT PERMITTED.

23. NO UNDERGROUND WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE COVERED UNTIL IT HAS BEEN APPROVED BY THE MUNICIPALITY. APPROVAL TO PROCEED MUST BE OBTAINED FROM THE MUNICIPALITY PRIOR TO INSTALLING PAVEMENT BASE, BINDER, AND SURFACE, AND PRIOR TO POURING ANY CONCRETE AFTER FORMS HAVE BEEN SET, AS NECESSARY.

24. WHERE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER, EXISTING DRAINAGE STRUCTURES AND PIPE SHALL BE CLEANED OF DEBRIS AND PATCHED AS NECESSARY TO ASSURE INTEGRITY OF THE STRUCTURE. THE CONTRACTOR'S WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE MERGED INTO THE CONTRACT UNIT PRICE EACH FOR STRUCTURES AND CONTRACT UNIT PRICE PER LINEAL FOOT FOR STORM SEWERS, WHICH SHALL BE PAYMENT IN FULL FOR CLEANING, PATCHING, REMOVAL, AND DISPOSAL OF DEBRIS AND DIRT. DRAINAGE STRUCTURES AND STORM SEWERS CONSTRUCTED AS PART OF THE CONTRACTOR'S PROJECT SHALL BE MAINTAINED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. NO EXTRA PAYMENT WILL BE MADE FOR CLEANING STRUCTURES OR STORM SEWERS CONSTRUCTED AS PART OF THE CONTRACTOR'S PROJECT.

25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE UTILITY COMPANIES LOCATE THEIR FACILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND PRESERVATION OF THESE FACILITIES. THE ENGINEER DOES NOT WARRANT THE LOCATION OF ANY EXISTING UTILITIES SHOWN ON THE PLANS. THE CONTRACTOR SHALL CALL J.U.L.I.E. (1-800-892-0123) AND THE MUNICIPALITY FOR UTILITY LOCATIONS.

26. THE GENERAL CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO PROVIDE CABLE TV, PHONE, ELECTRIC, GAS AND IRRIGATION SERVICES. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING SITE LAYOUTS FOR THESE UTILITIES AND SHALL COORDINATE AND PROVIDE CONDUIT CROSSINGS AS REQUIRED. THIS COORDINATION SHALL BE CONSIDERED INCIDENTAL TO GENERAL CONTRACTOR AGREEMENT WITH THE OWNER. ANY CONFLICTS IN UTILITIES SHALL BE CORRECTED BY THE GENERAL CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

27. CONTRACTOR IS TO VERIFY ALL EXISTING STRUCTURES AND FACILITIES AT ALL PROPOSED UTILITY CONNECTION LOCATIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL AND STARTING WORK.

28. ANY FIELD TILES ENCOUNTERED SHALL BE INSPECTED BY THE ENGINEER. THE DRAIN TILE SHALL BE CONNECTED TO THE STORM SEWER SYSTEM AND A RECORD KEPT BY THE CONTRACTOR OF THE LOCATIONS AND TURNED OVER TO THE ENGINEER UPON COMPLETION OF THE PROJECT. THE COST OF THE CONTRACTOR'S WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT, AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

29. ALL FRAMES AND LIDS FOR STORM AND SANITARY SEWERS, VALVE VAULT COVERS, FIRE HYDRANTS, AND B-BOXES ARE TO BE ADJUSTED TO MEET FINISHED GRADE. THE CONTRACTOR'S ADJUSTMENT IS TO BE MADE BY THE SEWER AND WATER CONTRACTOR, AND THE COST IS TO BE CONSIDERED INCIDENTAL. THESE ADJUSTMENTS TO FINISHED GRADE WILL NOT ALLEVIATE THE CONTRACTOR FROM ANY ADDITIONAL ADJUSTMENTS AS REQUIRED BY THE MUNICIPALITY UPON FINAL INSPECTION OF THE PROJECT.

30. HYDRANTS SHALL NOT BE FLUSHED DIRECTLY ONTO THE ROAD SUBGRADES. WHENEVER POSSIBLE, HOSES SHALL BE USED TO DIRECT THE WATER INTO LOT AREAS OR THE STORM SEWER SYSTEM, IF AVAILABLE. DAMAGE TO THE ROAD SUBGRADE OR LOT GRADING DUE TO EXCESSIVE WATER SATURATION AND/OR EROSION FROM HYDRANT FLUSHING, OR FROM LEAKS IN THE WATER DISTRIBUTION SYSTEM, WILL BE REPAIRED BY THE CONTRACTOR FLUSHING OR USING THE HYDRANT AT THE CONTRACTOR'S OWN EXPENSE. LEAKS IN THE WATER DISTRIBUTION SYSTEM SHALL BE THE RESPONSIBILITY OF THE WATER MAIN CONTRACTOR AND SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

31. TRENCH BACKFILL WILL BE REQUIRED TO THE FULL DEPTH ABOVE SEWERS AND WATERMAIN WITHIN TWO (2) FEET HORIZONTAL OF PROPOSED OR EXISTING PAVEMENT. TRENCH BACKFILL TO MEET THE REQUIREMENTS OF ARTICLE 208.02 OF THE IDOT STANDARD SPECIFICATIONS.

32. IF SOFT, SPONGY, OR OTHER UNSUITABLE SOILS WITH UNCONFINED COMPRESSIVE STRENGTH LESS THAN 0.5 TSF ARE ENCOUNTERED AT THE BOTTOM OF THE TRENCH, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH WELL-COMPACTED, CRUSHED LIMESTONE BEDDING MATERIAL. IF ROCK IS ENCOUNTERED, IT SHALL BE REMOVED TO AT LEAST SIX (6) INCHES BELOW THE BOTTOM OF THE PIPE TO ALLOW PROPER THICKNESS OF BEDDING. ANY UNDERCUTS OF TWO (2) FEET OR LESS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. DEPTHS GREATER THAN TWO (2) FEET SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PROCEEDING.

33. THE TRENCHES FOR PIPE INSTALLATION SHALL BE KEPT DRY AT ALL TIMES DURING PIPE PLACEMENT. APPROPRIATE FACILITIES TO MAINTAIN THE DRY TRENCH SHALL BE PROVIDED BY THE CONTRACTOR, AND THE COST OF SUCH SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR THE ITEM. PLANS FOR THE SITE DEWATERING, IF EMPLOYED, SHALL BE SUBMITTED TO AND APPROVED BY THE OWNER PRIOR TO IMPLEMENTATION. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR DEWATERING DURING CONSTRUCTION UNLESS APPROVED IN WRITING BY THE OWNER.

34. AFTER THE STORM SEWER SYSTEM HAS BEEN CONSTRUCTED, THE CONTRACTOR SHALL PLACE PROPER INLET PROTECTION EROSION CONTROL AT LOCATIONS INDICATED BY THE ENGINEER. THE PURPOSE OF THE INLET PROTECTION WILL BE TO MINIMIZE THE AMOUNT OF SILTATION THAT NORMALLY WOULD ENTER THE STORM SEWER SYSTEM FROM ADJACENT AND/OR UPSTREAM DRAINAGE AREAS.

35. AT THE CLOSE OF EACH WORKING DAY AND AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS.

36. EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH IEPA REGULATIONS AND IDOT STANDARDS FOR SOIL EROSION AND SEDIMENTATION CONTROL AND SHALL BE MAINTAINED BY THE CONTRACTOR AND REMAIN IN PLACE UNTIL A SUITABLE GROWTH OF GRASS, ACCEPTABLE TO THE ENGINEER, HAS DEVELOPED.

37. THE CONTRACTOR SHALL CONFORM TO ALL EROSION CONTROL REQUIREMENTS AS SET FORTH BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY THROUGH THE NPDES PHASE II PERMIT PROGRAM REQUIREMENTS AND GOVERNING MUNICIPALITY. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL MEASURES AS INDICATED ON THE EROSION CONTROL DRAWINGS AND SPECIFICATIONS AS WELL AS THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED BY KIMLEY-HORN AND ASSOCIATES, INC. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THE PROVISIONS INDICATED IN THE SWPPP AT A MINIMUM, INCLUDING EROSION CONTROL MEASURES AND INSPECTION FREQUENCY, AS REQUIRED BY THE IEPA NPDES PHASE II PERMIT PROGRAM REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL SWPPP DOCUMENTATION CURRENT AND READILY AVAILABLE ON THE PROJECT SITE AT ALL TIMES FOR REVIEW BY THE OWNER, ENGINEER, AND REGULATORY AGENCIES. KIMLEY-HORN AND ASSOCIATES, INC. IS NOT RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR SUPPLIERS, WHICH CONTRIBUTE TO DEFICIENCIES IN THE SWPPP OR ANY VIOLATIONS RESULTING FROM INADEQUATE EROSION CONTROL PROTECTION AND/OR DOCUMENTATION.

38. THE PAVEMENT SHALL BE KEPT FREE OF MUD AND DEBRIS AT ALL TIMES. IT MAY BE NECESSARY TO KEEP A SWEEPER ON-SITE AT ALL TIMES.

39. ALL DISTURBED AREAS WITHIN THE COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS (CCDOTH) RIGHT-OF-WAY SHALL BE FULLY RESTORED TO PRE-CONSTRUCTION CONDITIONS WITH A MINIMUM OF FOUR (4) INCHES OF TOPSOIL, FERTILIZER, AND SOD PER CCDOTH STANDARDS.

40. ALL PROPOSED GRADES SHOWN ON PLANS ARE FINISHED SURFACE ELEVATIONS, UNLESS NOTED OTHERWISE.

41. ALL TESTING SHALL BE THE RESPONSIBILITY AND EXPENSE OF THE CONTRACTOR. IF REQUESTED BY THE MUNICIPALITY OR ENGINEER, COPIES OF ALL TEST RESULTS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW AND APPROVAL.

42. PROVIDE SMOOTH VERTICAL CURVES THROUGH HIGH AND LOW POINTS INDICATED BY SPOT ELEVATIONS. PROVIDE UNIFORM SLOPES BETWEEN NEW AND EXISTING GRADES. AVOID RIDGES AND DEPRESSIONS.

43. WHEN REQUIRED, THE CONTRACTOR SHALL NOTIFY THE OWNER WHEN RECORD DRAWINGS CAN BE PREPARED. RECORD DRAWINGS SHALL INDICATE THE FINAL LOCATION AND LAYOUT OF ALL IMPROVEMENTS, INCLUDING VERIFICATION OF ALL CONCRETE PADS, INVERT, RIM, AND SPOT GRADE ELEVATIONS, AND INCORPORATE ALL FIELD DESIGN CHANGES APPROVED BY THE OWNER.

44. BEFORE ACCEPTANCE, ALL WORK SHALL BE INSPECTED BY THE MUNICIPALITY, AS NECESSARY.

EARTHWORK NOTES

1. GENERAL

1.1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE SOIL AND GROUNDWATER CONDITIONS AT THE SITE.

1.2. ANY QUANTITIES IN THE BID PROPOSAL ARE INTENDED AS A GUIDE FOR THE CONTRACTOR'S USE IN DETERMINING THE SCOPE OF THE COMPLETED PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALL MATERIAL QUANTITIES AND BE KNOWLEDGEABLE OF ALL SITE CONDITIONS.

1.3. THE CONTRACTOR WILL NOTE THAT THE ELEVATIONS SHOWN ON THE CONSTRUCTION PLANS ARE FINISHED GRADE AND THAT PAVEMENT THICKNESS, TOPSOIL, ETC., MUST BE ACCOUNTED FOR.

1.4. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION AND PREVENT STORMWATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS. THE FAILURE TO PROVIDE PROPER DRAINAGE WILL NEGATE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT THEREOF. FINAL GRADES SHALL BE PROTECTED AGAINST DAMAGE FROM EROSION, SEDIMENTATION, AND TRAFFIC.

1.5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. THE INITIAL ESTABLISHMENT OF EROSION CONTROL PROCEDURES AND THE PLACEMENT OF SILT AND FILTER FENCING, ETC., TO PROTECT ADJACENT PROPERTY, WETLANDS, ETC., SHALL OCCUR BEFORE GRADING BEGINS.

1.6. PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES, THE CONTRACTOR SHALL ERECT A CONSTRUCTION FENCE AROUND ANY TREE DESIGNATED TO BE PRESERVED. SAID FENCE SHALL BE PLACED IN A CIRCLE CENTERED AROUND THE TREE, THE DIAMETER OF WHICH SHALL BE SUCH THAT THE ENTIRE DRIP ZONE (EXTENT OF FURTHEST EXTENDING BRANCHES) SHALL BE WITHIN THE FENCE LIMITS. THE EXISTING GRADE WITHIN THE FENCED AREA SHALL NOT BE DISTURBED.

1.7. EXISTING SUBSURFACE CONDITIONS WERE OBTAINED FROM A GEOTECHNICAL PREPARED BY:

   ECS MIDWEST, LLC
   1575 BARCLAY BOULEVARD
   BUFFALO GROVE, IL 60089
   TEL: (847) 279-0366

2. TOPSOIL EXCAVATION INCLUDES:

2.1. EXCAVATION OF TOPSOIL AND OTHER STRUCTURALLY UNSUITABLE MATERIALS WITHIN THOSE AREAS THAT WILL REQUIRE EARTH EXCAVATION OR COMPACTED EARTH FILL MATERIAL. EXISTING VEGETATION SHALL BE REMOVED PRIOR TO STRIPPING TOPSOIL OR FILLING AREAS.

2.2. PLACEMENT OF EXCAVATED MATERIAL IN OWNER-DESIGNATED AREAS FOR FUTURE USE WITHIN AREAS TO BE LANDSCAPED AND THOSE AREAS NOT REQUIRING STRUCTURAL FILL MATERIAL. PROVIDE NECESSARY EROSION CONTROL MEASURES FOR STOCKPILE.

2.3. TOPSOIL STOCKPILED FOR RESPREAD SHALL BE FREE OF CLAY AND SHALL NOT CONTAIN ANY OF THE TRANSITIONAL MATERIAL BETWEEN THE TOPSOIL AND CLAY. THE TRANSITIONAL MATERIAL SHALL BE USED IN NON-STRUCTURAL FILL AREAS OR DISPOSED OF OFF-SITE.

2.4. TOPSOIL RESPREAD SHALL INCLUDE HAULING AND SPREADING SIX (6) INCHES OF TOPSOIL DIRECTLY OVER AREAS TO BE LANDSCAPED WHERE SHOWN ON THE PLANS OR AS DIRECTED BY THE OWNER.

2.5. MODERATE COMPACTION IS REQUIRED IN NON-STRUCTURAL FILL AREAS.

3. EARTH EXCAVATION INCLUDES:

3.1. EXCAVATION OF SUBSURFACE MATERIALS WHICH ARE SUITABLE FOR USE AS STRUCTURAL FILL. THE EXCAVATION SHALL BE TO WITHIN A TOLERANCE OF 0.1 FEET OF THE PLAN SUBGRADE ELEVATIONS WHILE MAINTAINING PROPER DRAINAGE. THE TOLERANCE WITHIN PAVEMENT AREAS SHALL BE SUCH THAT THE EARTH MATERIALS SHALL "BALANCE" DURING THE FINE GRADING OPERATION.

3.2. PLACEMENT OF SUITABLE MATERIALS SHALL BE WITHIN THOSE AREAS REQUIRING STRUCTURAL FILL IN ORDER TO ACHIEVE THE PLAN SUBGRADE ELEVATIONS TO WITHIN A TOLERANCE OF 0.1 FEET. THE FILL MATERIALS SHALL BE PLACED IN LOOSE LIFTS THAT SHALL NOT EXCEED EIGHT (8) INCHES IN THICKNESS, AND THE WATER CONTENT SHALL BE ADJUSTED IN ORDER TO ACHIEVE REQUIRED COMPACTION.

3.3. STRUCTURAL FILL MATERIAL MAY BE PLACED WITHIN THOSE PORTIONS OF THE SITE NOT REQUIRING STRUCTURAL FILL, WITHIN SIX (6) INCHES OF THE PLAN FINISHED GRADE ELEVATION. IN AREAS REQUIRING STRUCTURAL FILL, HOWEVER, THIS MATERIAL SHALL NOT BE PLACED OVER TOPSOIL OR OTHER UNSUITABLE MATERIALS UNLESS SPECIFICALLY DIRECTED BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.

3.4. COMPACTION OF SUITABLE MATERIALS SHALL BE TO AT LEAST 93% OF THE MODIFIED PROCTOR DRY DENSITY WITHIN PROPOSED PAVEMENT AREAS, SIDEWALK, ETC. COMPACTION SHALL BE AT LEAST 95% OF THE MODIFIED PROCTOR WITHIN PROPOSED BUILDING PAD AREAS.

4. UNSUITABLE MATERIAL: UNSUITABLE MATERIALS SHALL BE CONSIDERED MATERIAL THAT IS NOT SUITABLE FOR THE SUPPORT OF PAVEMENT AND BUILDING CONSTRUCTION, AND IS ENCOUNTERED BELOW NORMAL TOPSOIL DEPTHS AND THE PROPOSED SUBGRADE ELEVATION. THE DECISION TO REMOVE SAID MATERIAL AND TO WHAT EXTENT SHALL BE MADE BY THE ENGINEER WITH THE CONCURRENCE OF THE OWNER.

5. MISCELLANEOUS. THE CONTRACTOR SHALL:

5.1. SPREAD AND COMPACT UNIFORMLY TO THE DEGREE SPECIFIED ALL EXCESS TRENCH SPOIL AFTER COMPLETION OF THE UNDERGROUND IMPROVEMENTS.

5.2. SCARIFY, DISC, AERATE, AND COMPACT, TO THE DEGREE SPECIFIED, THE UPPER TWELVE (12) INCHES OF THE SUITABLE SUBGRADE MATERIAL IN ALL AREAS THAT MAY BE SOFT DUE TO EXCESS MOISTURE CONTENT. THIS APPLIES TO CUT AREAS AS WELL AS FILL AREAS.

5.3. PROVIDE WATER TO ADD TO DRY MATERIAL IN ORDER TO ADJUST THE MOISTURE CONTENT FOR THE PURPOSE OF ACHIEVING THE SPECIFIED COMPACTION.

5.4. BACKFILL THE CURB AND GUTTER AFTER ITS CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE BASE COURSE MATERIAL.

6. TESTING AND FINAL ACCEPTANCE

6.1. THE CONTRACTOR SHALL PROVIDE AS A MINIMUM A FULLY LOADED SIX-WHEEL TANDEM AXLE TRUCK FOR PROOF ROLLING THE PAVEMENT SUBGRADE PRIOR TO THE PLACEMENT OF THE CURB AND GUTTER AND THE BASE MATERIAL. THIS SHALL BE WITNESSED BY THE ENGINEER AND THE OWNER. (SEE PAVING SPECIFICATION.)

6.2. ANY UNSUITABLE AREA ENCOUNTERED AS A RESULT OF PROOF ROLLING SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL OR OTHERWISE CORRECTED AND APPROVED BY THE ENGINEER.

PAVING NOTES

1. GENERAL

1.1. PAVING WORK INCLUDES FINAL SUBGRADE SHAPING, PREPARATION, AND COMPACTION; PLACEMENT OF SUBBASE OR BASE COURSE MATERIALS; BITUMINOUS BINDER AND/OR SURFACE COURSES; FORMING, FINISHING, AND CURING CONCRETE PAVEMENT, CURBS, AND WALKS; AND FINAL CLEAN-UP AND ALL RELATED WORK.

1.2. COMPACTION REQUIREMENTS [REFERENCE ASTM D-1557 (MODIFIED PROCTOR)]: SUBGRADE = 93%; SUBBASE = 93%; AGGREGATE BASE COURSE = 95%; BITUMINOUS COURSES = 95% OF MAXIMUM DENSITY, PER ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT) HIGHWAY STANDARDS.

1.3. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE PROPER BARRICADING WARNING DEVICES, AND THE SAFE MANAGEMENT OF TRAFFIC WITHIN THE AREA OF CONSTRUCTION. ALL SUCH DEVICES AND THEIR INSTALLATION SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, AND IN ACCORDANCE WITH THE MUNICIPALITY CODE.

2. SUBGRADE PREPARATION

2.1. EARTHWORK FOR PROPOSED PAVEMENT SUBGRADE SHALL BE FINISHED TO WITHIN 0.1 FOOT, PLUS OR MINUS, OF PLAN ELEVATION. THE CONTRACTOR SHALL CONFIRM THAT THE SUBGRADE HAS BEEN PROPERLY PREPARED AND THAT THE FINISHED TOP SUBGRADE ELEVATION HAS BEEN GRADED WITHIN TOLERANCES ALLOWED IN THESE SPECIFICATIONS, UNLESS THE CONTRACTOR ADVISES THE ENGINEER IN WRITING PRIOR TO FINE GRADING FOR BASE COURSE CONSTRUCTION. IT IS UNDERSTOOD THAT THE CONTRACTOR HAS APPROVED AND ACCEPTS THE RESPONSIBILITY FOR THE SUBGRADE.

2.2. PRIOR TO THE PLACEMENT OF THE BASE COURSE, THE SUBGRADE MUST BE PROOF-ROLLED AND INSPECTED FOR UNSUITABLE MATERIALS AND/OR EXCESSIVE MOVEMENT. IF UNSUITABLE SUBGRADE IS ENCOUNTERED, IT SHALL BE CORRECTED. THIS MAY INCLUDE ONE OR MORE OF THE FOLLOWING METHODS:

2.2.1. SCARIFY, DISC, AND AERATE.

2.2.2. REMOVE AND REPLACE WITH STRUCTURAL CLAY FILL.

2.2.3. REMOVE AND REPLACE WITH GRANULAR MATERIAL.

2.2.4. USE OF GEOTEXTILE FABRIC.

MAXIMUM DEFLECTION ALLOWED IN ISOLATED AREAS MAY BE ONE-QUARTER (1/4) INCH TO ONE-HALF (1/2) INCH IF NO DEFLECTION OCCURS OVER THE MAJORITY OF THE AREA.

2.3. PRIOR TO THE CONSTRUCTION OF THE CURB AND GUTTER AND THE PLACEMENT OF THE BASE MATERIAL, THE PAVEMENT AREA SHALL BE FINE-GRADED TO WITHIN 0.04 FEET (1/2 INCH) OF FINAL SUBGRADE ELEVATION, TO A POINT TWO (2) FEET BEYOND THE BACK OF THE CURB, SO AS TO ENSURE THE PROPER THICKNESS OF PAVEMENT COURSES. NO CLAIMS FOR EXCESS QUANTITY OF BASE MATERIALS DUE TO IMPROPER SUBGRADE PREPARATION WILL BE HONORED.

2.4. PRIOR TO PLACEMENT OF THE BASE COURSE, THE SUBGRADE SHALL BE APPROVED BY THE TESTING ENGINEER.

3. CONCRETE WORK

3.1. ALL EXTERIOR CONCRETE SHALL BE PORTLAND CEMENT CONCRETE WITH AIR ENTRAINMENT OF NOT LESS THAN FIVE (5%) OR MORE THAN EIGHT (8%) PERCENT. CONCRETE SHALL BE A MINIMUM OF SIX (6) BAG MIX AND SHALL DEVELOP A MINIMUM OF 4,000 PSI COMPRESSIVE STRENGTH AT TWENTY-EIGHT (28) DAYS. ALL CONCRETE SHALL BE BROOM-FINISHED PERPENDICULAR TO THE DIRECTION OF TRAVEL.

3.2. CONCRETE CURB AND/OR COMBINATION CURB AND GUTTER SHALL BE OF THE TYPE SHOWN ON THE PLANS. THE CONTRACTOR IS CAUTIONED TO REFER TO THE CONSTRUCTION STANDARDS AND THE PAVEMENT CROSS SECTION TO DETERMINE THE GUTTER FLAG THICKNESS AND THE AGGREGATE BASE COURSE THICKNESS BENEATH THE CURB AND GUTTER. PRE-MOLDED FIBER EXPANSION JOINTS, WITH TWO 3/4-INCH BY 18-INCH EPOXY-COATED STEEL DOWEL BARS, SHALL BE GREASED AND FITTED WITH METAL EXPANSION TUBES

3.3. CURBS SHALL BE DEPRESSED AND MEET THE SLOPE REQUIREMENTS OF THE ILLINOIS ACCESSIBILITY CODE AT LOCATIONS WHERE PUBLIC WALKS INTERSECT CURB LINES AND OTHER LOCATIONS, AS DIRECTED, FOR THE PURPOSE OF PROVIDING ACCESSIBILITY.

3.4. THE CURBS SHALL BE BACKFILLED AFTER THEIR CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE BASE COURSE.

3.5. CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. PROVIDE SCORED JOINTS AT 5-FOOT INTERVALS AND 1/2-INCH PRE-MOLDED FIBER EXPANSION JOINTS AT 20-FOOT INTERVALS AND ADJACENT TO CONCRETE CURBS, DRIVEWAYS, FOUNDATIONS, AND OTHER STRUCTURES.

3.6. CONCRETE CURING AND PROTECTION SHALL BE PER IDOT STANDARDS. TWO (2) COATS OF IDOT APPROVED CURING AGENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES.

3.7. THE COST OF AGGREGATE BASE OR SUBBASE UNDER CONCRETE WORK SHALL BE INCLUDED IN THE COST OF THE RESPECTIVE CONCRETE ITEM.

4. FLEXIBLE PAVEMENT

4.1. THE PAVEMENT MATERIALS FOR BITUMINOUS STREETS, PARKING LOTS, AND DRIVE AISLES SHALL BE AS DETAILED ON THE PLANS. UNLESS OTHERWISE SHOWN ON THE PLANS, THE FLEXIBLE PAVEMENTS SHALL CONSIST OF AGGREGATE BASE COURSE, TYPE B, BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19, N50; AND BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX N50, OF THE THICKNESS AND MATERIALS SPECIFIED ON THE PLANS. THICKNESSES SPECIFIED SHALL BE CONSIDERED TO BE THE MINIMUM COMPACTED THICKNESS.

4.2. ALL TRAFFIC SHALL BE KEPT OFF THE COMPLETED AGGREGATE BASE UNTIL THE BINDER COURSE IS LAID. THE AGGREGATE BASE SHALL BE UNIFORMLY PRIME COATED AT A RATE OF 0.4 TO 0.5 GALLONS PER SQUARE YARD PRIOR TO PLACING THE BINDER COURSE. PRIME COAT MATERIALS SHALL BE IDOT APPROVED.

4.3. PRIOR TO PLACEMENT OF THE SURFACE COURSE, THE BINDER COURSE SHALL BE CLEANED AND TACK-COATED IF DUSTY OR DIRTY. ALL DAMAGED AREAS IN THE BINDER, BASE, OR CURB SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER PRIOR TO LAYING THE SURFACE COURSE. THE CONTRACTOR SHALL PROVIDE WHATEVER EQUIPMENT AND STAFF NECESSARY, INCLUDING THE USE OF POWER BROOMS IF REQUIRED BY THE OWNER, TO PREPARE THE PAVEMENT FOR APPLICATION OF THE SURFACE COURSE. THE TACK COAT SHALL BE UNIFORMLY APPLIED TO THE BINDER COURSE AT A RATE OF 0.05 TO 0.10 GALLONS PER SQUARE YARD. TACK COAT SHALL BE AS PER IDOT STANDARDS.

4.4. SEAMS IN BAM, BINDER, AND SURFACE COURSE SHALL BE STAGGERED A MINIMUM OF 6 INCHES.

5. TESTING AND FINAL ACCEPTANCE.

5.1. THE CONTRACTOR SHALL FOLLOW THE QUALITY CONTROL TESTING PROGRAM FOR CONCRETE AND PAVEMENT MATERIALS ESTABLISHED BY THE MATERIALS/TESTING ENGINEER.

5.2. PRIOR TO PLACEMENT OF THE BITUMINOUS CONCRETE SURFACE COURSE, THE CONTRACTOR, WHEN REQUIRED BY THE MUNICIPALITY, SHALL OBTAIN SPECIMENS OF THE BINDER COURSE WITH A CORE DRILL WHERE DIRECTED, FOR THE PURPOSE OF THICKNESS VERIFICATION.

5.3. WHEN REQUIRED BY THE MUNICIPALITY, THE CONTRACTOR SHALL OBTAIN SPECIMENS OF THE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT STRUCTURE WITH A CORE DRILL WHERE DIRECTED IN ORDER TO CONFIRM THE PLAN THICKNESS. DEFICIENCIES IN THICKNESS SHALL BE ADJUSTED FOR BY THE METHOD REQUIRED BY IDOT STANDARDS.

5.4. FINAL ACCEPTANCE OF THE TOTAL PAVEMENT INSTALLATION SHALL BE SUBJECT TO THE TESTING AND CHECKING REQUIREMENTS CITED ABOVE.

6. ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE MUNICIPALITY CODE. WHEN CONFLICTS ARISE BETWEEN MUNICIPAL CODE, GENERAL NOTES AND SPECIFICATIONS, THE MORE STRINGENT SHALL TAKE PRECEDENCE.

SIGNAGE AND PAVEMENT MARKING NOTES

1. ALL SIGNING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT) STANDARDS.

2. SIGNS: SIGNS SHALL BE CONSTRUCTED OF 0.080-INCH THICK FLAT ALUMINUM PANELS WITH REFLECTORIZED LEGEND ON THE FACE. LEGEND SHALL BE IN ACCORDANCE WITH THE MUTCD.

3. POSTS: SIGN POSTS SHALL BE A HEAVY-DUTY STEEL "U" SHAPED CHANNEL WEIGHING 3.0 POUNDS/FOOT, SUCH AS A TYPE B METAL POST, AS PER THE IDOT STANDARDS (OR 2-INCH PERFORATED STEEL TUBE).

4. SIGNS AND POSTS SHALL BE INSTALLED IN ACCORDANCE WITH IDOT STANDARDS.

5. PAVEMENT MARKINGS: ALL PAVEMENT MARKINGS IN THE PUBLIC RIGHT-OF-WAY, SUCH AS STOP LINES, CENTERLINES, CROSSWALKS, AND DIRECTIONAL ARROWS, SHALL BE REFLECTORIZED THERMOPLASTIC ON ASPHALT AND EPOXY ON CONCRETE OR AS APPROVED BY IDOT.

6. PAVEMENT MARKINGS ON BIKE PATHS, PARKING LOT STALLS, AND SIMILAR "LOW-WEAR" APPLICATIONS, SHALL BE PAINT IN ACCORDANCE WITH IDOT STANDARDS.

7. COLOR, WIDTH, STYLE, AND SIZE OF ALL MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND LOCAL CODE. STANDARD PARKING SPACES SHALL BE PAINTED WHITE OR YELLOW PER LOCAL CODE.

8. THERMOPLASTIC MARKINGS SHALL BE INSTALLED WHEN THE PAVEMENT TEMPERATURE IS 55 DEGREES FAHRENHEIT AND RISING. PAINT MARKINGS MAY BE INSTALLED WHEN THE AIR TEMPERATURE IS 50 DEGREES FAHRENHEIT AND RISING.

SANITARY SEWER NOTES

1. SANITARY SEWER PIPE: ALL SANITARY SEWER PIPE MATERIAL, SIZE AND TYPE SHALL BE INSTALLED AS INDICATED ON THE UTILITY PLAN. UNLESS OTHERWISE NOTED ON THE PLANS, ALL SANITARY SEWER PIPE SHALL BE POLYVINYL CHLORIDE PLASTIC PIPE (PVC SDR-26), CONFORMING TO ASTM D3034 AND D2241 WITH ELASTOMERIC GASKET JOINTS CONFORMING TO ASTM D3139 AND D3212. ANY CHANGES TO THE PIPE MATERIAL, SIZE AND TYPE MUST BE APPROVED BY THE OWNER, ENGINEER AND MUNICIPALITY PRIOR TO ORDERING MATERIALS OR INSTALLING THE PIPE. ALL SANITARY SEWER PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING:

PIPE SIZE	CODE	PIPE MATERIAL
4" – 12"	PVC	POLYVINYL CHLORIDE PLASTIC PIPE SDR-26 (ASTM D3034 AND D2241)
4"-48"	DIP	DUCTILE IRON PIPE, CLASS 52 (ANSI 21.51 AND AWWA C151)

2. BAND-SEAL OR SIMILAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED WHEN CONNECTING SEWER PIPES OF DISSIMILAR MATERIALS. ALL SANITARY SEWER CONSTRUCTION (AND STORM SEWER CONSTRUCTION IN COMBINED SEWER AREAS), REQUIRES STONE BEDDING WITH STONE ¼" TO 1" IN SIZE WITH MINIMUM BEDDING THICKNESS EQUAL TO ¼ THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NO LESS THAN FOUR (4) INCHES NOR MORE THAN EIGHT (8) INCHES. AS A MINIMUM, THE MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" OF THE STATE OF ILLINOIS OR ASTM C-33. THE GRADATION SHALL CONFORM TO GRADATION CA-11 OR CA-13 OF THE ILLINOIS STANDARD SPECIFICATIONS AND SHALL BE EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE WHEN USING PVC.

3. ALL UNSUITABLE MATERIALS SHALL BE REMOVED BELOW THE PROPOSED SANITARY SEWER AND REPLACED WITH COMPACTED CRUSHED GRAVEL OR STONE, AS PER IDOT STANDARDS.

4. ALL TRENCHES BENEATH PROPOSED OR EXISTING UTILITIES, PAVEMENTS, ROADWAYS, SIDEWALKS, AND FOR A DISTANCE OF TWO (2) FEET ON EITHER SIDE OF SAME, AND/OR WHERE SHOWN ON THE PLANS, SHALL BE BACKFILLED WITH SELECT GRANULAR BACKFILL PER IDOT STANDARDS AND THOROUGHLY MECHANICALLY COMPACTED IN 9-INCH THICK (LOOSE MEASUREMENT) LAYERS. JETTING WITH WATER IS NOT PERMITTED.

5. ALL SANITARY SEWERS ARE TO BE CONSTRUCTED USING A LASER INSTRUMENT TO MAINTAIN LINE AND GRADE.

6. CONNECTIONS TO EXISTING SANITARY SEWER SYSTEM SHALL NOT BE DONE UNTIL AUTHORIZED BY THE MUNICIPALITY.

7. WATERMAINS SHALL BE SEPARATED FROM SANITARY SEWERS AND STORM SEWERS IN ACCORDANCE WITH ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA) REQUIREMENTS, AS SPECIFIED IN THE STANDARDS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS.

8. NO WATER LINE SHALL BE PLACED IN THE SAME TRENCH AS A SEWER LINE, EXCEPT UNDER SPECIAL CIRCUMSTANCES AND THEN ONLY UNDER THE FOLLOWING RULES:

   A. IF NECESSARY PERMISSION SHALL BE OBTAINED FROM THE MUNICIPALITY IN WRITING PRIOR TO BEGINNING CONSTRUCTION.

   B. THE BOTTOM OF A WATER LINE SHALL BE INSTALLED ON A SHELF A MINIMUM OF 18 INCHES ABOVE THE TOP OF THE SEWER AND 18 INCHES HORIZONTALLY AWAY FROM THE EDGE OF THE SEWER.

9. ALL SANITARY MANHOLES (AND STORM MANHOLES IN COMBINED SEWER AREAS) SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES AND SHALL BE CAST IN PLACE OR PRE-CAST REINFORCED CONCRETE. A WATERTIGHT BOOT, CONFORMING TO ASTM C-923, SHALL BE USED AT THE PIPE-STRUCTURE CONNECTION.

10. ALL PIPE CONNECTION OPENINGS SHALL BE PRECAST WITH RESILIENT RUBBER WATER-TIGHT SLEEVES. THE BOTTOM OF THE MANHOLE SHALL HAVE A CONCRETE BENCH POURED TO FACILITATE SMOOTH FLOWS.

11. FRAMES AND LIDS: SEE DETAILS FOR ALL SANITARY SEWER MANHOLE FRAMES AND LIDS. THE LIDS SHALL HAVE RECESSED (CONCEALED) PICK HOLE AND BE SELF-SEALING WITH AN "O" RING GASKET. THE LIDS SHALL HAVE THE WORD "SANITARY" EMBOSSED ON THE SURFACE. THE JOINTS BETWEEN THE FRAME AND CONCRETE SECTION SHALL BE SEALED WITH A BUTYL ROPE.

12. A MAXIMUM OF TWELVE (12) INCHES OF CONCRETE-ADJUSTING RINGS SHALL BE USED TO ADJUST FRAME ELEVATIONS. RINGS SHALL BE SEALED TOGETHER WITH BUTYL ROPE.

13. CLEANING: ALL MANHOLES AND PIPES SHALL BE THOROUGHLY CLEANED OF DIRT AND DEBRIS, AND ALL VISIBLE LEAKAGE ELIMINATED, BEFORE FINAL INSPECTION AND ACCEPTANCE.

14. TESTING: DEFLECTION, AIR, AND LEAKAGE TESTING WILL BE REQUIRED. THE PROCEDURE AND ALLOWABLE TESTING LIMITS SHALL BE IN ACCORDANCE WITH THE STANDARDS FOR SEWER AND WATER MAIN CONSTRUCTION IN ILLINOIS.

15. TESTING THE ALIGNMENT/STRAIGHTNESS SHALL BE IN ACCORDANCE WITH THE MUNICIPALITY CODE.

16. TELEVISING: IF REQUIRED BY THE MUNICIPALITY, ALL SANITARY SEWERS SHALL BE TELEVISED, AND A COPY OF THE TAPE AND A WRITTEN REPORT SHALL BE SUBMITTED AND REVIEWED BY THE MUNICIPALITY BEFORE FINAL ACCEPTANCE. THE REPORT SHALL INCLUDE STUB LOCATION AS WELL AS A DESCRIPTION OF ALL DEFECTS, WATER LEVEL, LEAKS, AND LENGTHS. IDENTIFY MANHOLE TO MANHOLE BOTH VERBALLY AND ON-SCREEN USING MANHOLE NUMBERS FROM APPROVED PLANS. ORDER OF WRITTEN REPORT SHALL BE THE SAME AS THE VIDEOTAPES.

17. TEST RESULTS: IF THE SANITARY SEWER INSTALLATION FAILS TO MEET THE TEST REQUIREMENTS SPECIFIED, THE CONTRACTOR SHALL DETERMINE THE CAUSE OR CAUSES OF THE DEFECT AND REPAIR, OR REPLACE ALL MATERIALS AND WORKMANSHIP, AS MAY BE NECESSARY TO COMPLY WITH THE TEST REQUIREMENTS.

18. CERTIFICATION: CONTRACTOR SHALL SUBMIT CERTIFIED COPIES OF ALL REPORTS OF TESTS CONDUCTED BY AN INDEPENDENT LABORATORY BEFORE INSTALLATION OF PVC PLASTIC PIPE. TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH STANDARD METHOD OF TEST FOR "EXTERNAL LOADING PROPERTIES OF PLASTIC PIPE BY PARALLEL PLATE LOADING." ASTM STANDARDS D-2241, AS APPROPRIATE FOR THE PIPE, TO BE USED. TESTS SHALL ALSO BE CONDUCTED TO DEMONSTRATE JOINT PERFORMANCE AT FIVE (5) PERCENT MAXIMUM DIAMETRIC DEFLECTION OF THE SPIGOT.

19. CONTRACTOR SHALL VERIFY THAT THE TESTING METHODS DESIGNATED HEREIN ARE ACCEPTABLE TO THE LOCAL AUTHORITIES HAVING JURISDICTION OVER THIS PROJECT.

STORM SEWER NOTES

1. STORM SEWER PIPE: ALL STORM SEWER PIPE MATERIAL, SIZE AND TYPE SHALL BE INSTALLED AS INDICATED ON THE UTILITY PLAN. UNLESS OTHERWISE NOTED ON THE PLANS, ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE PIPE, IN ACCORDANCE WITH IDOT STANDARD SPECIFICATIONS FOR DETERMINING PIPE CLASS AND CONFORMING TO ASTM C76. ANY CHANGES TO THE PIPE MATERIAL, SIZE AND TYPE MUST BE APPROVED BY THE OWNER, ENGINEER AND MUNICIPALITY PRIOR TO ORDERING MATERIALS OR INSTALLING THE PIPE. ALL STORM SEWER PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING:

PIPE SIZE	CODE	PIPE MATERIAL
12"-60"	RCP	REINFORCED CONCRETE PIPE (ASTM C76); SEE IDOT SPECS FOR PIPE CLASS
3" – 12"	PVC	POLYVINYL CHLORIDE PLASTIC PIPE SDR-26 (ASTM D3034 AND D2241)
3"-48"	HDPE	HIGH DENSITY POLYETHYLENE PIPE
3"-48"	DIP	DUCTILE IRON PIPE, CLASS 52 (ANSI 21.51 AND AWWA C151)

2. BAND-SEAL OR SIMILAR COUPLING SHALL BE USED WHEN JOINING SEWER PIPES OF DISSIMILAR MATERIALS.

3. ALL FOOTING DRAIN DISCHARGE PIPES AND DOWN SPOUTS SHALL DISCHARGE TO THE STORM SEWER SYSTEM.

4. CONSTRUCTION: ALL STORM SEWERS ARE TO BE CONSTRUCTED USING A LASER INSTRUMENT TO MAINTAIN LINE AND GRADE.

5. COVER: THE CONTRACTOR SHALL MAINTAIN AT LEAST TWO (2) FEET OF COVER OVER THE TOP OF SHALLOW PIPES AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL MOUND OVER ANY PIPES THAT HAVE LESS THAN TWO (2) FEET OF COVER DURING CONSTRUCTION UNTIL THE AREA IS FINAL GRADED OR PAVED.

6. STRUCTURES: MANHOLE, CATCH BASIN, AND INLET BOTTOMS SHALL BE PRECAST CONCRETE SECTIONAL UNITS OR MONOLITHIC CONCRETE. MANHOLES AND CATCH BASINS SHALL BE A MINIMUM OF FOUR (4) FEET IN DIAMETER UNLESS OTHERWISE SPECIFIED ON THE PLANS. STRUCTURE JOINTS SHALL BE SEALED WITH "O" RING OR BUTYL ROPE. A MAXIMUM OF TWELVE (12) INCHES OF ADJUSTING RINGS SHALL BE USED.

7. A CONCRETE BENCH TO DIRECT FLOWS SHALL BE CONSTRUCTED IN THE BOTTOM OF ALL INLETS AND MANHOLES.

8. THE FRAME, GATE, AND/OR CLOSED LID SHALL BE CAST IRON OF THE STYLE SHOWN ON THE PLANS.

9. CLEANING: THE STORM SEWER SYSTEM SHALL BE THOROUGHLY CLEANED PRIOR TO FINAL INSPECTION AND TESTING.

10. THE STORM SEWER SHALL BE TELEVISED IF REQUIRED BY THE MUNICIPALITY.

11. MANHOLES, CATCH BASINS, INLETS, FRAMES, GRATES, AND OTHER STRUCTURES SHALL BE CONSTRUCTED OF THE TYPE, STYLE, AND SIZE AS SET FORTH WITH THE ORDINANCES AND STANDARDS OF THE MUNICIPALITY.

12. ALL PVC PIPES CONNECTED TO REINFORCED CONCRETE PIPE SHALL BE CORED AND BOOTED PER THE MUNICIPALITY REQUIREMENTS.

WATERMAIN NOTES

1. WATERMAIN PIPE: ALL WATERMAIN PIPE MATERIAL, SIZE AND TYPE SHALL BE INSTALLED AS INDICATED ON THE UTILITY PLAN. UNLESS OTHERWISE NOTED ON THE PLANS, ALL WATERMAIN PIPE SHALL BE CONSTRUCTED OF BITUMINOUS-COATED CEMENT-LINED DUCTILE IRON PIPE, CLASS 52, CONFORMING TO ANSI A21.51 (AWWA C151). CEMENT MORTAR LINING SHALL CONFORM TO ANSI A21.4 (AWWA C104). THE JOINTS SHALL BE PUSH-ON COMPRESSION GASKET JOINTS CONFORMING TO ANSI A21.11 (AWWA C111). ANY CHANGES TO THE PIPE MATERIAL, SIZE AND TYPE MUST BE APPROVED BY THE OWNER, ENGINEER AND MUNICIPALITY PRIOR TO ORDERING MATERIALS OR INSTALLING THE PIPE. ALL WATERMAIN PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING:

PIPE SIZE	CODE	PIPE MATERIAL
3"-48"	DIP	DUCTILE IRON PIPE, CLASS 52 (ANSI 21.51 AND AWWA C151)
< 3"		TYPE "K" COPPER PIPE

2. FITTINGS: ALL FITTINGS SHALL BE OF DUCTILE IRON WITH CEMENT MORTAR LINING AND MECHANICAL JOINTS CONFORMING TO ANSI AS21.10 (AWWA C110).

3. VALVES: GATE VALVES SHALL BE USED ON ALL WATERMAINS. ALL VALVES SHALL TURN COUNTER-CLOCKWISE TO OPEN. VALVES SHALL BE IRON BODY RESILIENT WEDGE GATE VALVES WITH BRONZE-MOUNTED SEATS AND NON-RISING STEMS CONFORMING TO AWWA C-509. THE VALVES SHALL HAVE MECHANICAL JOINTS.

4. THE MECHANICAL JOINTS AND ALL FASTENERS ON THE VALVE BODY SHALL HAVE STAINLESS STEEL NUTS AND BOLTS.

5. VALVE VAULTS: VALVE VAULTS SHALL BE PRECAST CONCRETE STRUCTURES FIVE (5) FEET IN DIAMETER, AS NOTED ON THE PLANS. THE FRAME AND LID SHALL BE ACCORDING TO THE DETAIL ON THE PLANS, WITH "WATER" EMBOSSED ON THE LID.

6. FIRE HYDRANTS: SEE PLANS FOR APPROVED FIRE HYDRANT DETAIL. FIRE HYDRANTS SHALL BE INSTALLED WITH AN AUXILIARY VALVE AND CAST IRON VALVE BOX. FIRE HYDRANTS SHALL HAVE AUXILIARY VALVES WITH A HYDRANT BARREL TO VALVE BOX RESTRAINING DEVICE. THE PUMPER CONNECTION SHALL FACE THE ROADWAY.

7. PROVIDE AND INSTALL FOUR MEGALUG JOINT RESTRAINTS AT EACH JOINT FROM THE MAINLINE TEE TO THE AUXILIARY VALVE AND BETWEEN THE AUXILIARY VALVE AND THE HYDRANT BARREL.

8. THE BREAK FLANGE AND ALL BELOW-GRADE FITTING SHALL HAVE STAINLESS STEEL NUTS AND BOLTS.

9. CORPORATION STOPS: CORPORATION STOPS SHALL BE BRONZE BODY KEY STOPS CONFORMING TO AWWA C-800 AND SHALL INCLUDE "J" BEND, TAILPIECE, AND COMPRESSION FITTINGS. SIZE AND LOCATION AS SHOWN ON THE PLANS.

10. SERVICE BOX: PROVIDE CURB VALVE AND CURB BOX, AS INDICATED ON THE PLANS. BOX SHALL BE EXTENSION TYPE WITH FOOT PIECE AND STATIONARY RODS FOR SIX (6) FEET OF BURY.

11. MAXIMUM DEFLECTION AT PIPE JOINTS SHALL BE IN ACCORDANCE WITH PIPE MANUFACTURER'S CURRENT RECOMMENDATIONS AND AWWA SPECIFICATIONS.

12. BEDDING: ALL WATERMAINS SHALL BE BEDDED ON FIRM GROUND, WITH BELLHOLES EXCAVATED SO THAT THE PIPE HAS AN EVEN BEDDING FOR ITS ENTIRE LENGTH.

13. GRANULAR BEDDING MATERIAL OR GRANULAR BACKFILL MATERIAL SHALL BE CAREFULLY PLACED TO TWELVE (12) INCHES OVER THE TOP OF THE PIPE BEFORE FINAL BACKFILLING AND COMPACTION.

14. A MINIMUM DEPTH OF COVER OF 5-FEET, 6-INCHES SHALL BE MAINTAINED OVER THE WATER LINES. THE MAXIMUM COVER SHALL BE EIGHT (8) FEET, EXCEPT AT SPECIAL CROSSINGS AND ONLY AS DESIGNATED ON THE PLANS..

15. "MEGA-LUG" RETAINER GLANDS AND THRUST BLOCKING SHALL BE INSTALLED ON WATERMAINS AT ALL BENDS, FITTINGS, TEES, ELBOWS, ETC. "MEGA-LUG" RESTRAINED JOINTS ARE REQUIRED ON ALL VALVES AND ALL FITTINGS. THE COST FOR THIS WORK SHALL BE INCIDENTAL TO THE UNIT PRICE FOR THE PIPE INSTALLED.

16. ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA) AND MUNICIPALITY WATERMAIN PROTECTION:

16.1. HORIZONTAL SEPARATION

16.1.1. WATERMAINS SHALL BE LAID AT LEAST TEN (10) FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED DRAIN, STORM SEWER, SANITARY SEWER, OR SEWER SERVICES CONNECTION.

16.1.2. WATERMAINS MAY BE LAID CLOSER THAN TEN (10) FEET TO A SEWER LINE WHEN:

16.1.2.1. LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF TEN (10) FEET;

16.1.2.2. THE WATERMAIN INVERT IS AT LEAST EIGHTEEN (18) INCHES ABOVE THE CROWN OF THE SEWER;

16.1.2.3. THE WATERMAIN IS EITHER IN A SEPARATE TRENCH OR IN THE SAME TRENCH ON AN UNDISTURBED EARTH SHELF LOCATED TO ONE SIDE OF THE SEWER.

16.1.3. WHEN IT IS IMPOSSIBLE TO MEET (1) OR (2) ABOVE, BOTH THE WATERMAIN AND DRAIN OR SEWER SHALL BE CONSTRUCTED OF SLIP-ON OR MECHANICAL JOINT CAST OR DUCTILE IRON PIPE, PRESTRESSED CONCRETE PIPE, OR PVC PIPE EQUIVALENT TO WATERMAIN STANDARDS OF CONSTRUCTION AND IN CONFORMANCE WITH THE ILLINOIS STANDARDS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS. THE DRAIN OR SEWER SHALL BE PRESSURE-TESTED TO THE MAXIMUM EXPECTED SURCHARGE HEAD BEFORE BACKFILLING.

16.2. VERTICAL SEPARATION

16.2.1. A WATERMAIN SHALL BE LAID SO THAT ITS INVERT IS EIGHTEEN (18) INCHES ABOVE THE CROWN OF THE DRAIN OR SEWER WHENEVER WATERMAINS CROSS STORM SEWERS, SANITARY SEWERS, OR SEWER SERVICE CONNECTIONS. THE VERTICAL SEPARATION SHALL BE MAINTAINED FOR THAT PORTION OF THE WATERMAIN LOCATED WITHIN TEN (10) FEET HORIZONTALLY OF ANY SEWER OR DRAIN CROSSED. A LENGTH OF WATERMAIN PIPE SHALL BE CENTERED OVER THE SEWER TO BE CROSSED WITH JOINTS EQUIDISTANT FROM THE SEWER OR DRAIN.

16.2.2. BOTH THE STORM SEWER AND SANITARY SEWER SHALL BE CONSTRUCTED WITH PIPE EQUIVALENT TO WATERMAIN STANDARDS OF CONSTRUCTION OR THE STORM SEWER SHALL BE CONSTRUCTED USING "O" RING GASKET JOINTS, PER ASTM C-443, OR THE WATERMAIN MAY BE IN ENCASED IN A WATERTIGHT CASING PIPE WHEN:

16.2.2.1. IT IS IMPOSSIBLE TO OBTAIN THE PROPER VERTICAL SEPARATION, AS DESCRIBED ABOVE; OR

16.2.2.2. THE WATERMAIN PASSES UNDER A SEWER OR DRAIN.

16.2.3. A VERTICAL SEPARATION OF EIGHTEEN (18) INCHES BETWEEN THE INVERT OF THE SEWER OR DRAIN AND THE CROWN OF THE WATERMAIN SHALL BE MAINTAINED WHERE A WATERMAIN CROSSES UNDER A SEWER. SUPPORT THE SEWER OR DRAIN LINES TO PREVENT SETTLING AND BREAKING OF THE WATERMAIN.

16.2.4. CONSTRUCTION SHALL EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE NORMAL DISTANCE FROM THE WATERMAIN TO THE SEWER OR DRAIN LINE IS AT LEAST TEN (10) FEET.

17. ALL WATERMAINS SHALL BE PRESSURE-TESTED FOR A MIN. OF 2 HOURS AT 200 PSI, FLUSHED, AND DISINFECTED IN ACCORDANCE WITH AWWA AND MUNICIPALITY SPECIFICATIONS. EACH VALVE SECTION SHALL BE PRESSURE-TESTED FOR A MINIMUM OF ONE (1) HOUR. ALLOWABLE LEAKAGE IS TO BE ONLY THAT WHICH IS PREDETERMINED BY THE MUNICIPALITY. AT NO TIME IS THERE TO BE ANY VISIBLE LEAKAGE FROM THE MAIN.

ADA GENERAL NOTES

1. CURB RAMPS ALONG PUBLIC STREETS AND IN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS OF THE AUTHORITY HAVING JURISDICTION.

2. ALL ACCESSIBLE ROUTES, GENERAL SITE AND BUILDING ELEMENTS, RAMPS, CURB RAMPS, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA STANDARDS FOR ACCESSIBLE DESIGN, LATEST EDITION.

3. ANY COMPONENTS OF THE PROJECT SERVING MULTI-FAMILY DWELLINGS IN BUILDINGS THAT HAVE (4) OR MORE UNITS PER DWELLING SHALL ALSO CONFORM TO THE FAIR HOUSING ACT (FHA), AND COMPLY WITH THE FAIR HOUSING ACT DESIGN MANUAL BY THE US DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.

4. BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY THAT SUITABLE ACCESSIBLE PEDESTRIAN ROUTES (PER ADA AND FHA) EXIST TO AND FROM EVERY DOOR AND ALONG SIDEWALKS, ACCESSIBLE PARKING SPACES, ACCESS AISLES, AND ACCESSIBLE ROUTES. IN NO CASE SHALL AN ACCESSIBLE RAMP SLOPE EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWALK CROSS SLOPES EXCEED 2.0 PERCENT. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPES EXCEED 5.0 PERCENT. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2.0 PERCENT SLOPE IN ANY DIRECTION.

5. CONTRACTOR SHALL TAKE FIELD SLOPE MEASUREMENTS ON FINISHED SUBGRADE AND FORM BOARDS PRIOR TO PLACING PAVEMENT TO VERIFY THAT ADA SLOPE REQUIREMENTS ARE PROVIDED. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO PAVING IF ANY EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR ADA SLOPE COMPLIANCE ISSUES.

NOTE:
IN THE EVENT OF A DISCREPANCY, THE VILLAGE OF ORLAND PARK STANDARD NOTES AND DETAILS SHALL SUPERCEDE.

No.	REVISIONS	DATE	BY

Kimley»Horn
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LICENSED PROFESSIONAL
XXX
ILLINOIS LICENSE NUMBER
XXXX
DATE: 11/14/2025

KHA PROJECT 149621089
DATE 11/14/2025
SCALE AS SHOWN
DESIGNED BY XXX
DRAWN BY XXX
CHECKED BY XXX

GENERAL NOTES

159TH & LAGRANGE RETAIL
CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
C1.0

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A. REFERENCED SPECIFICATIONS

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE FOLLOWING, EXCEPT AS MODIFIED HEREIN OR ON THE PLANS:
   * STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT SS) FOR ALL IMPROVEMENTS EXCEPT SANITARY SEWER AND WATER MAIN CONSTRUCTION;
   * STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION (SSWS) FOR SANITARY SEWER AND WATER MAIN CONSTRUCTION;
   * VILLAGE OF ORLAND PARK MUNICIPAL CODE;
   * THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO (MWRD) WATERSHED MANAGEMENT ORDINANCE AND TECHNICAL GUIDANCE MANUAL;
   * IN CASE OF CONFLICT BETWEEN THE APPLICABLE ORDINANCES NOTED, THE MORE STRINGENT SHALL TAKE PRECEDENCE AND SHALL CONTROL ALL CONSTRUCTION.

B. NOTIFICATIONS

1. THE MWRD LOCAL SEWER SYSTEMS SECTION FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK (CALL 708-588-4055 OR SEND EMAIL NOTIFICATION WITH PROJECT NAME, LOCATION AND PERMIT NUMBER TO WMOJOBSTART@MWRD.ORG).

2. THE VILLAGE OF ORLAND PARK ENGINEERING DEPARTMENT AND PUBLIC MUST BE NOTIFIED AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION AND PRIOR TO EACH PHASE OF WORK. CONTRACTOR SHALL DETERMINE ITEMS REQUIRING INSPECTION PRIOR TO START OF CONSTRUCTION OR EACH WORK PHASE.

3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION FOR THE EXACT LOCATIONS OF UTILITIES AND FOR THEIR PROTECTION DURING CONSTRUCTION. IF EXISTING UTILITIES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, IMMEDIATELY NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED. CALL J.U.L.I.E. AT 1-800-892-0123.

C. GENERAL NOTES

1. ALL ELEVATIONS SHOWN ON PLANS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR IS ___0_____ FT.

2. MWRD, THE MUNICIPALITY AND THE OWNER OR OWNER'S REPRESENTATIVE SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION IMPROVEMENTS.

3. THE CONTRACTOR(S) SHALL INDEMNIFY THE OWNER, ENGINEER, MUNICIPALITY, MWRD, AND THEIR AGENTS, ETC., FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, OR TESTING OF THIS WORK ON THE PROJECT.

4. THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING PLANS AS APPROVED BY MWRD AND THE MUNICIPALITY UNLESS CHANGES ARE APPROVED BY MWRD, THE MUNICIPALITY, OR AUTHORIZED AGENT. THE CONSTRUCTION DETAILS, AS PRESENTED ON THE PLANS, MUST BE FOLLOWED. PROPER CONSTRUCTION TECHNIQUES MUST BE FOLLOWED ON THE IMPROVEMENTS INDICATED ON THE PLANS.

5. THE LOCATION OF VARIOUS UNDERGROUND UTILITIES WHICH ARE SHOWN ON THE PLANS ARE FOR INFORMATION ONLY AND REPRESENT THE BEST KNOWLEDGE OF THE ENGINEER. VERIFY LOCATIONS AND ELEVATIONS PRIOR TO BEGINNING THE CONSTRUCTION OPERATIONS.

6. ANY EXISTING PAVEMENT, SIDEWALK, DRIVEWAY, ETC., DAMAGED DURING CONSTRUCTION OPERATIONS AND NOT CALLED FOR TO BE REMOVED SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.

7. MATERIAL AND COMPACTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MUNICIPALITY, MWRD, AND OWNER.

8. THE UNDERGROUND CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS TO NOTIFY ALL INSPECTION AGENCIES.

9. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS DISTURBED DURING CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO FINAL INSPECTION.

10. RECORD DRAWINGS SHALL BE KEPT BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER AS SOON AS UNDERGROUND IMPROVEMENTS ARE COMPLETED. FINAL PAYMENTS TO THE CONTRACTOR SHALL BE HELD UNTIL THEY ARE RECEIVED. ANY CHANGES IN LENGTH, LOCATION OR ALIGNMENT SHALL BE SHOWN IN RED. ALL WYES OR BENDS SHALL BE LOCATED FROM THE DOWNSTREAM MANHOLE. ALL VALVES, B-BOXES, TEES OR BENDS SHALL BE TIED TO A FIRE HYDRANT.

D. SANITARY SEWER

1. THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT ANY POLLUTED WATER, SUCH AS GROUND AND SURFACE WATER, FROM ENTERING THE EXISTING SANITARY SEWERS.

2. A WATER-TIGHT PLUG SHALL BE INSTALLED IN THE DOWNSTREAM SEWER PIPE AT THE POINT OF SEWER CONNECTION PRIOR TO COMMENCING ANY SEWER CONSTRUCTION. THE PLUG SHALL REMAIN IN PLACE UNTIL REMOVAL IS AUTHORIZED BY THE MUNICIPALITY AND/OR MWRD AFTER THE SEWERS HAVE BEEN TESTED AND ACCEPTED.

3. DISCHARGING ANY UNPOLLUTED WATER INTO THE SANITARY SEWER SYSTEM FOR THE PURPOSE OF SEWER FLUSHING OF LINES FOR THE DEFLECTION TEST SHALL BE PROHIBITED WITHOUT PRIOR APPROVAL FROM THE MUNICIPALITY OR MWRD.

4. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (LATEST EDITION).

5. ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER SYSTEM.

6. ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE TO THE STORM SEWER SYSTEM.

7. ALL SANITARY SEWER PIPE MATERIALS AND JOINTS (AND STORM SEWER PIPE MATERIALS AND JOINTS IN A COMBINED SEWER AREA) SHALL CONFORM TO THE FOLLOWING:

PIPE MATERIAL	PIPE SPECIFICATIONS	JOINT SPECIFICATIONS
VITRIFIED CLAY PIPE	ASTM C-700	ASTM C-425
REINFORCED CONCRETE SEWER PIPE	ASTM C-76	ASTM C-443
CAST IRON SOIL PIPE	ASTM A-74	ASTM C-564
DUCTILE IRON PIPE	ANSI A21.51	ANSI A21.11
POLYVINYL CHLORIDE (PVC) PIPE		
6-INCH TO 15-INCH DIAMETER SDR 26	ASTM D-3034	ASTM D-3212
18-INCH TO 27-INCH DIAMETER F/DY=46	ASTM F-679	ASTM D-3212
HIGH DENSITY POLYETHYLENE (HDPE)	ASTM D-3350 ASTM D-3035	ASTM D-3261,F-2620 (HEAT FUSION) ASTM D-3212,F-477 (GASKETED)
WATER MAIN QUALITY PVC		
4-INCH TO 36-INCH	ASTM D-2241	ASTM D-3139
4-INCH TO 12-INCH	AWWA C900	ASTM D-3139
14-INCH TO 48-INCH	AWWA C905	ASTM D-3139

THE FOLLOWING MATERIALS ARE ALLOWED ON A QUALIFIED BASIS SUBJECT TO DISTRICT REVIEW AND APPROVAL PRIOR TO PERMIT ISSUANCE. A SPECIAL CONDITION WILL BE ADDED TO THE PERMIT WHEN THE PIPE MATERIAL BELOW IS USED FOR SEWER CONSTRUCTION OR A CONNECTION IS MADE.

PIPE MATERIAL	PIPE SPECIFICATIONS	JOINT SPECIFICATIONS
POLYPROPYLENE (PP) PIPE		
12-INCH TO 24-INCH DOUBLE WALL	ASTM F-2736	D-3212, F-477
30-INCH TO 60-INCH TRIPLE WALL	ASTM F-2764	D3212, F-477

8. ALL SANITARY SEWER CONSTRUCTION (AND STORM SEWER CONSTRUCTION IN COMBINED SEWER AREAS), REQUIRES STONE BEDDING WITH STONE ¼ " TO 1" IN SIZE, WITH MINIMUM BEDDING THICKNESS EQUAL TO ¼ THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NOT LESS THAN FOUR (4) INCHES NOR MORE THAN EIGHT (8) INCHES. MATERIAL SHALL BE CA-7, CA-11 OR CA-13 AND SHALL BE EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE WHEN USING PVC.

9. NON-SHEAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPES OF DISSIMILAR PIPE MATERIALS.

10. ALL MANHOLES SHALL BE PROVIDED WITH BOLTED, WATERTIGHT COVERS. SANITARY LIDS SHALL BE CONSTRUCTED WITH A CONCEALED PICKHOLE AND WATERTIGHT GASKET WITH THE WORD "SANITARY" CAST INTO THE LID.

11. WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE, OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED:
    a) A CIRCULAR SAW-CUT OF SEWER MAIN BY PROPER TOOLS ("SHEWER-TAP" MACHINE OR SIMILAR) AND PROPER INSTALLATION OF HUBWYE SADDLE OR HUB-TEE SADDLE.
    b) REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL) AND REPLACE WITH A WYE OR TEE BRANCH SECTION.
    c) WITH PIPE CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED LENGTH OF PIPE FOR INSERTION OF PROPER FITTING, USING "BAND SEAL" OR SIMILAR COUPLINGS TO HOLD IT FIRMLY IN PLACE.

12. WHENEVER A SANITARY/COMBINED SEWER CROSSES UNDER A WATERMAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATERMAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATERMAINS SHALL BE MAINTAINED UNLESS: THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18" VERTICAL SEPARATION; OR THE SEWER IS LAID IN THE SAME TRENCH WITH THE WATERMAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH, KEEPING A MINIMUM 18" VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTANCES DESCRIBED CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATER MAIN, THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN STANDARDS OR IT SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE ENDS SEALED.

13. ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONED TANKS SHALL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.

14. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES, AND SHALL BE CAST IN PLACE OR PRE-CAST REINFORCED CONCRETE.

15. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE PRECAST "RUBBER BOOTS" THAT CONFORM TO ASTM C-923 FOR ALL PIPE CONNECTIONS. PRECAST SECTIONS SHALL CONSIST OF MODIFIED GROOVE TONGUE AND RUBBER GASKET TYPE JOINTS.

16. ALL ABANDONED SANITARY SEWERS SHALL BE PLUGGED AT BOTH ENDS WITH AT LEAST 2 FEET LONG NON-SHRINK CONCRETE OR MORTAR PLUG.

17. EXCEPT FOR FOUNDATION/FOOTING DRAINS PROVIDED TO PROTECT BUILDINGS, OR PERFORATED PIPES ASSOCIATED WITH VOLUME CONTROL FACILITIES, DRAIN TILES/FIELD TILES/UNDERDRAINS/PERFORATED PIPES ARE NOT ALLOWED TO BE CONNECTED TO OR TRIBUTARY TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS IN COMBINED SEWER AREAS. CONSTRUCTION OF NEW FACILITIES OF THIS TYPE IS PROHIBITED; AND ALL EXISTING DRAIN TILES AND PERFORATED PIPES ENCOUNTERED WITHIN THE PROJECT AREA SHALL BE PLUGGED OR REMOVED, AND SHALL NOT BE CONNECTED TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS.

18. A BACKFLOW PREVENTER IS REQUIRED FOR ALL DETENTION BASINS TRIBUTARY TO COMBINED SEWERS. REQUIRED BACKFLOW PREVENTERS SHALL BE INSPECTED AND EXERCISED ANNUALLY BY THE PROPERTY OWNER TO ENSURE PROPER OPERATION, AND ANY NECESSARY MAINTENANCES SHALL BE PERFORMED TO ENSURE FUNCTIONALITY. IN THE EVENT OF A SEWER SURCHARGE INTO AN OPEN DETENTION BASIN TRIBUTARY TO COMBINED SEWERS, THE PERMITTEE SHALL ENSURE THAT CLEAN UP AND WASH OUT OF SEWAGE TAKES PLACE WITHIN 48 HOURS OF THE STORM EVENT.

E. EROSION AND SEDIMENT CONTROL

1. THE CONTRACTOR SHALL INSTALL THE EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.

2. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE FUNCTIONAL PRIOR TO HYDROLOGIC DISTURBANCE OF THE SITE.

3. ALL DESIGN CRITERIA, SPECIFICATIONS, AND INSTALLATION OF EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL.

4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

5. INSPECTIONS AND DOCUMENTATION SHALL BE PERFORMED, AT A MINIMUM:
   a) UPON COMPLETION OF INITIAL EROSION AND SEDIMENT CONTROL MEASURES, PRIOR TO ANY SOIL DISTURBANCE.
   b) ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT WITH GREATER THAN 0.5 INCH OF RAINFALL OR LIQUID EQUIVALENT PRECIPITATION.

6. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. IF STRIPPING, CLEARING, GRADING, OR LANDSCAPING ARE TO BE DONE IN PHASES, THE CO-PERMITTEE SHALL PLAN FOR APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.

7. A STABILIZED MAT OF CRUSHED STONE MEETING THE STANDARDS OF THE ILLINOIS URBAN MANUAL SHALL BE INSTALLED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE. SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.

8. CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL AND SHALL BE INSTALLED PRIOR TO ANY ON SITE CONSTRUCTION ACTIVITIES INVOLVING CONCRETE.

9. MORTAR WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ADDITION TO CONCRETE WASHOUT FACILITIES FOR ANY BRICK AND MORTAR BUILDING ENVELOPE CONSTRUCTION ACTIVITIES.

10. TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO DIRECT ALL RUNOFF FROM HYDROLOGICALLY DISTURBED AREAS TO AN APPROPRIATE SEDIMENT TRAP OR BASIN. VOLUME CONTROL FACILITIES SHALL NOT BE USED AS TEMPORARY SEDIMENT BASINS.

11. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN SEVEN (7) DAYS.

12. ALL FLOOD PROTECTION AREAS AND VOLUME CONTROL FACILITIES SHALL, AT A MINIMUM, BE PROTECTED WITH A DOUBLE-ROW OF SILT FENCE (OR EQUIVALENT).

13. VOLUME CONTROL FACILITIES SHALL NOT BE CONSTRUCTED UNTIL ALL OF THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

14. SOIL STOCKPILES SHALL, AT A MINIMUM, BE PROTECTED WITH PERIMETER SEDIMENT CONTROLS. SOIL STOCKPILES SHALL NOT BE PLACED IN FLOOD PROTECTION AREAS OR THEIR BUFFERS.

15. EARTHEN EMBANKMENT SIDE SLOPES SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL BLANKET.

16. STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY APPROPRIATE SEDIMENT CONTROL MEASURES.

17. THE CONTRACTOR SHALL EITHER REMOVE OR REPLACE ANY EXISTING DRAIN TILES AND INCORPORATE THEM INTO THE DRAINAGE PLAN FOR THE DEVELOPMENT. DRAIN TILES CANNOT BE TRIBUTARY TO A SANITARY OR COMBINED SEWER. DRAIN TILES ALLOWED IN COMBINED SEWER AREA FOR GREEN INFRASTRUCTURE PRACTICES.

18. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. DEWATERING SYSTEMS SHOULD BE INSPECTED DAILY DURING OPERATIONAL PERIODS. THE SITE INSPECTOR MUST BE PRESENT AT THE COMMENCEMENT OF DEWATERING ACTIVITIES.

19. THE CONTRCTOR SHALL BE RESPONSIBLE FOR TRENCH DEWATERING AND EXCAVATION FOR THE INSTALLATION OF SANITARY SEWERS, STORM SEWERS, WATERMAINS AS WELL AS THEIR SERVICES AND OTHER APPURTENANCES. ANY TRENCH DEWATERING, WHICH CONTAINS SEDIMENT SHALL PASS THROUGH A SEDIMENT SETTLING POND OR EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE. ALTERNATIVES MAY INCLUDE DEWATERING INTO A SUMP PIT, FILTER BAG OR EXISTING VEGETATED UPSLOPE AREA. SEDIMENT LADEN WATERS SHALL NOT BE DISCHARGE TO WATERWAYS, FLOOD PROTECTION AREAS OR THE COMBINED SEWER SYSTEM.

20. ALL PERMANENT EROSION CONTROL PRACTICES SHALL BE INITIATED WITHIN SEVEN (7) DAYS FOLLOWING THE COMPLETION OF SOIL DISTURBING ACTIVITIES.

21. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AS NEEDED ON A YEAR-ROUND BASIS DURING CONSTRUCTION AND ANY PERIODS OF CONSTRUCTION SHUTDOWN UNTIL PERMANENT STABILIZATION IS ACHIEVED.

22. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER PERMANENT SITE STABILIZATION.

23. THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER, SITE INSPECTOR, OR MWRD.

TECHNICAL GUIDANCE MANUAL	10/13/2022
MWRD GENERAL NOTES	STD. DWG. NO.18
	PAGE NO. 19

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GENERAL NOTES

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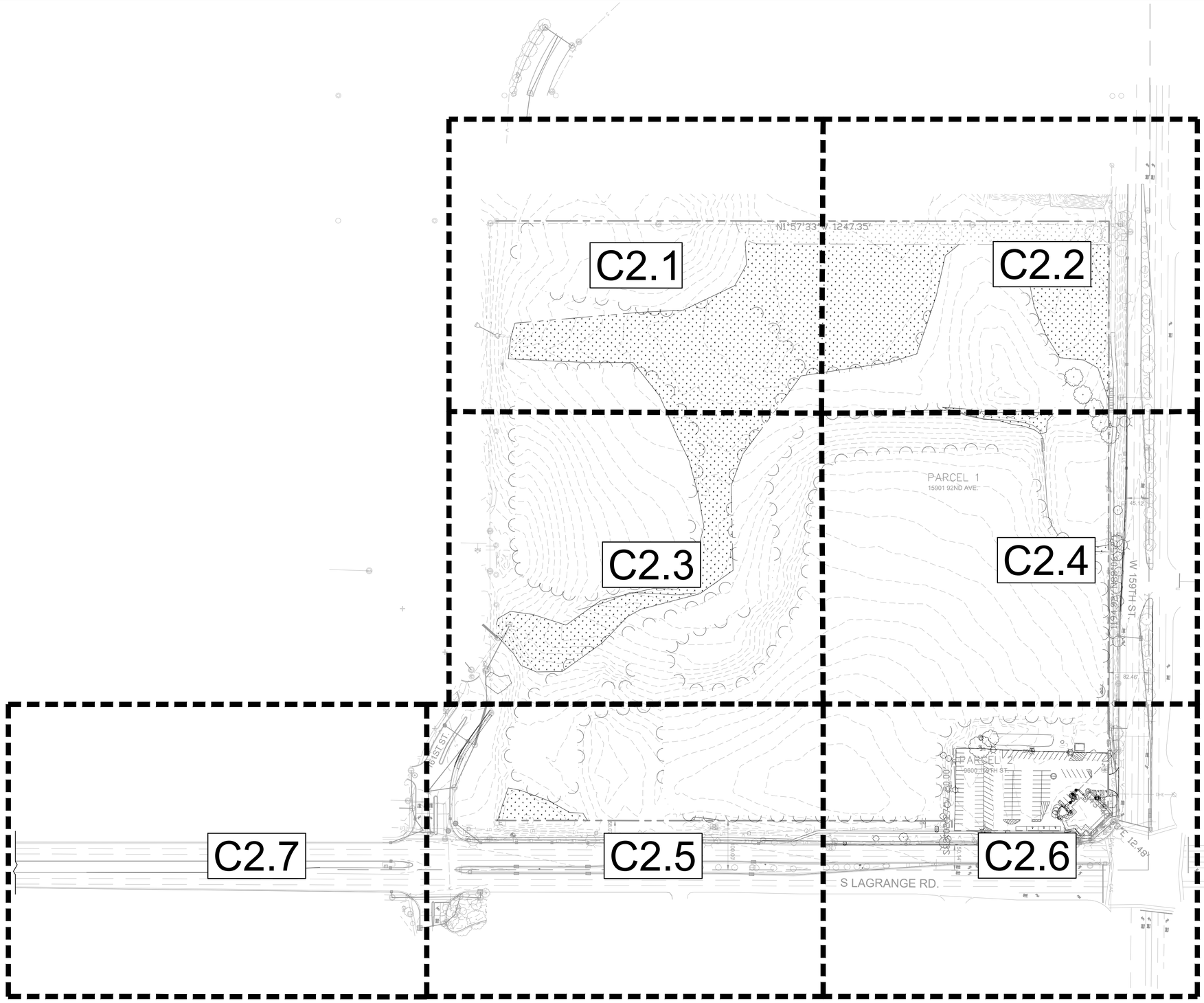

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DEMOLITION NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED.
2. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
3. THE GENERAL CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT. CONTRACTOR SHALL NOT DEMOLISH ANYTHING OUTSIDE THE OWNERS LEASE/PROPERTY LINE UNLESS SPECIFICALLY MENTIONED ON THIS SHEET.
4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
5. IF DEMOLITION OR CONSTRUCTION ON SITE WILL INTERFERE WITH THE ADJACENT PROPERTY OWNER'S TRAFFIC FLOW, THE CONTRACTOR SHALL COORDINATE WITH ADJACENT PROPERTY OWNER, TO MINIMIZE THE IMPACT ON TRAFFIC FLOW. TEMPORARY RE-ROUTING OF TRAFFIC IS TO BE ACCOMPLISHED BY USING IDOT APPROVED TRAFFIC BARRICADES, BARRELS, AND/OR CONES. TEMPORARY SIGNAGE AND FLAGMEN MAY BE ALSO NECESSARY.
6. QUANTITIES DEPICTED ON THIS SHEET SHALL SERVE AS A GUIDE ONLY. CONTRACTOR TO VERIFY ALL DEMOLITION QUANTITIES.
7. REFER TO GEOTECHNICAL REPORT PROVIDED BY OTHERS FOR ALL SUBSURFACE INFORMATION.
8. CONTRACTOR SHALL BEGIN CONSTRUCTION OF ANY LIGHT POLE BASES FOR RELOCATED LIGHT FIXTURES AND RELOCATION OF ELECTRICAL SYSTEM AS SOON AS DEMOLITION BEGINS. CONTRACTOR SHALL BE AWARE THAT INTERRUPTION OF POWER TO ANY LIGHT POLES OR SIGNS SHALL NOT EXCEED 24 HOURS.
9. EROSION CONTROL MUST BE ESTABLISHED PRIOR TO ANY WORK ON SITE INCLUDING DEMOLITION.
10. THE EXTENT OF SITE DEMOLITION WORK IS AS SHOWN ON THE CONTRACT DOCUMENTS AND AS SPECIFIED HEREIN.
11. CONTRACTOR MUST RECEIVE APPROVAL FROM CIVIL ENGINEER AND GEOTECHNICAL ENGINEER FOR THE MATERIAL TYPE AND USE IF CONTRACTOR DESIRES TO REUSE DEMOLISHED SITE PAVEMENT AS STRUCTURAL FILL.
12. EXISTING UTILITIES, WHICH DO NOT SERVICE STRUCTURES BEING DEMOLISHED, ARE TO BE KEPT IN SERVICE AND PROTECTED AGAINST DAMAGE DURING DEMOLITION OPERATIONS. CONTRACTOR SHALL ARRANGE FOR SHUT-OFF OF UTILITIES SERVING STRUCTURES TO BE DEMOLISHED. CONTRACTOR IS RESPONSIBLE FOR TURNING OFF, DISCONNECTING, AND SEALING INDICATED UTILITIES BEFORE STARTING DEMOLITION OPERATIONS. EXISTING UTILITIES TO BE ABANDONED ARE TO BE CAPPED AT BOTH ENDS AND FILLED WITH FA-1 OR APPROVED EQUAL. ALL UNDERGROUND UTILITIES TO BE REMOVED ARE TO BE BACKFILLED WITH ENGINEERED FILL OR SELECT EXCAVATED MATERIAL, AS APPROVED BY THE GEOTECHNICAL ENGINEER, TO 95% OF MODIFIED PROCTOR DENSITY WITHIN PAVED AREAS AND TO 90% OF MODIFIED PROCTOR DENSITY FOR GREEN SPACE AREAS, IN ACCORDANCE WITH THE EARTHWORK SPECIFICATIONS. ALL PRIVATE UTILITIES (ELECTRIC, CABLE, TELEPHONE, FIBER OPTIC, GAS) SHALL BE REMOVED AND RELOCATED PER THE UTILITY OWNER AND THE LOCAL MUNICIPALITY'S REQUIREMENTS.
13. UNDERGROUND UTILITIES SHOWN ARE BASED ON ATLASES AND AVAILABLE INFORMATION PRESENTED AT THE TIME OF SURVEY. CONTRACTOR SHOULD CALL 'JULIE' (1-800-892-0123) TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY. CONTRACTOR SHALL LOCATE AND PROTECT EXISTING UNDERGROUND AND OVERHEAD UTILITIES DURING CONSTRUCTION. UTILITY PROTECTION SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY OWNER AND AS DIRECTED BY THE GOVERNING MUNICIPALITY. DAMAGED CABLES/CONDUITS SHALL BE REPLACED IMMEDIATELY. ALL EXISTING STRUCTURES TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PROCESS. ALL DAMAGED STRUCTURES SHALL BE REPLACED IN-KIND AND THEIR REPLACEMENT COST SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. PROPER NOTIFICATION TO THE OWNERS OF THE EXISTING UTILITIES SHALL BE MADE AT LEAST 48 HOURS BEFORE CONSTRUCTION COMMENCES.
14. USE WATER SPRINKLING, TEMPORARY ENCLOSURES, AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING IN THE AIR TO THE LOWEST LEVEL. COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION. SEE EROSION CONTROL SHEETS FOR FURTHER EROSION CONTROL REQUIREMENTS.
15. COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION OF STRUCTURES TO THE FINAL LINES AND GRADES SHOWN ON THE CONTRACT DOCUMENTS. BACKFILL MATERIAL SHALL BE IDOT APPROVED CRUSHED LIMESTONE (CA-6) OR APPROVED EQUAL. USE SATISFACTORY SOIL MATERIALS CONSISTING OF STONE, GRAVEL AND SAND, FREE FROM DEBRIS, TRASH, FROZEN MATERIALS, ROOTS AND OTHER ORGANIC MATTER. PRIOR TO PLACEMENT OF FILL MATERIALS, ENSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROST, FROZEN MATERIAL, TRASH AND DEBRIS. PLACE FILL MATERIALS IN HORIZONTAL LAYERS NOT EXCEEDING 9" IN LOOSE DEPTH. COMPACT EACH LAYER AT OPTIMUM MOISTURE CONTENT OF FILL MATERIAL TO 95% OF MODIFIED PROCTOR DENSITY UNLESS SUBSEQUENT EXCAVATION FOR NEW WORK IS REQUIRED.

WARNING: CONTRACTOR TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

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OVERALL EXISTING CONDITIONS & DEMOLITION PLAN

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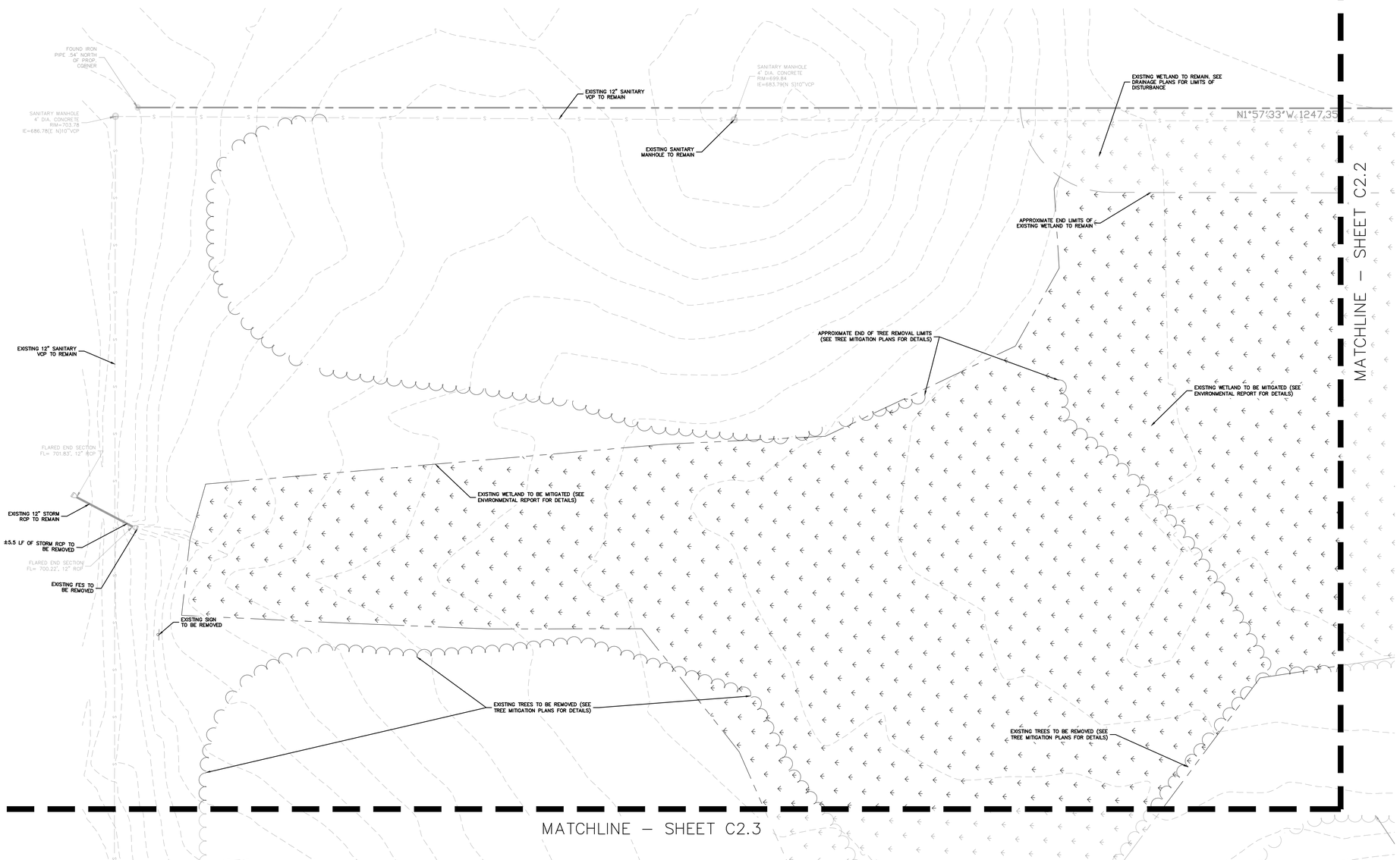

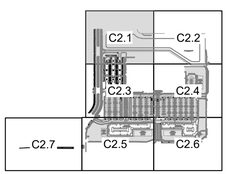

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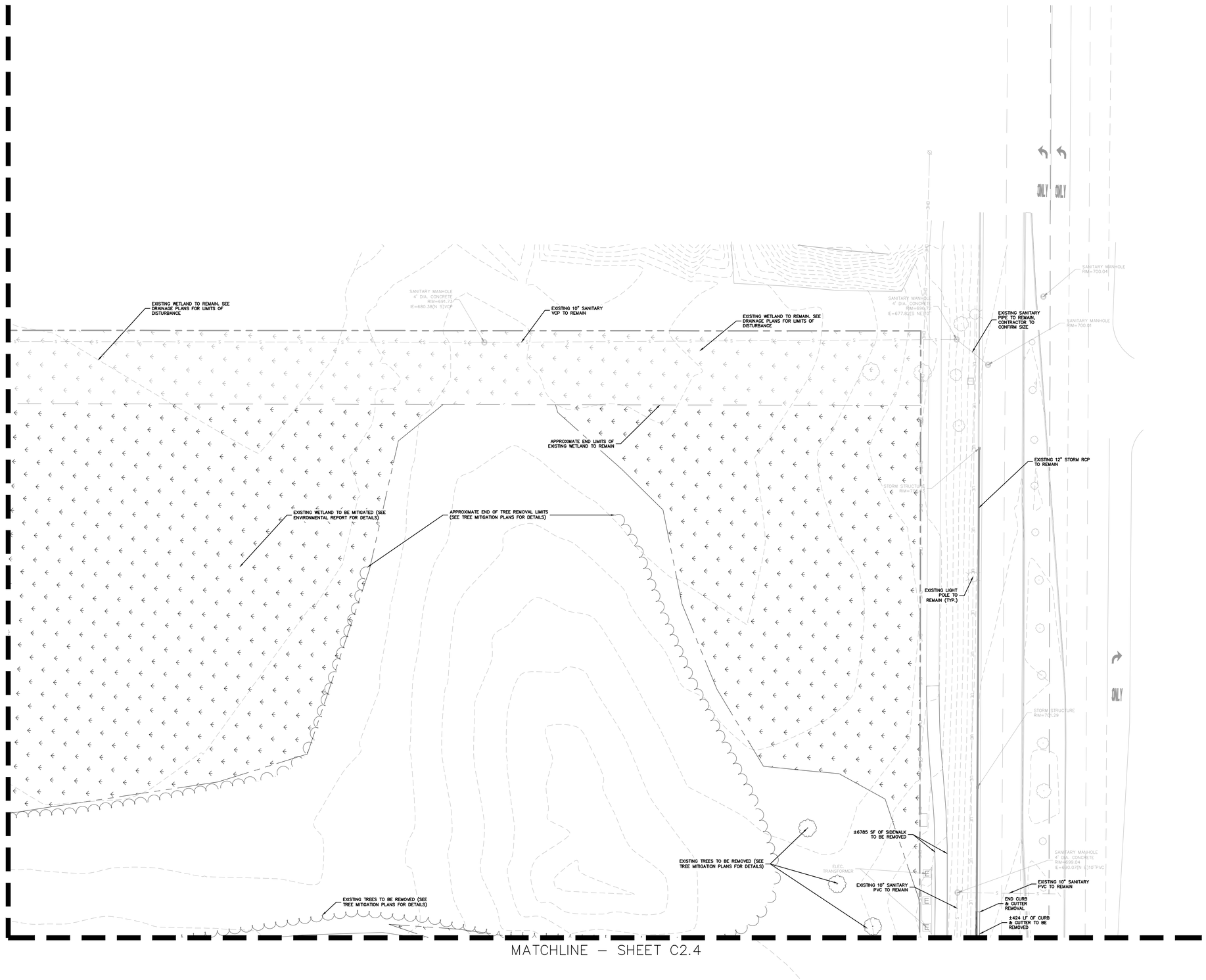

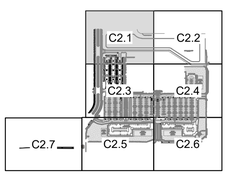

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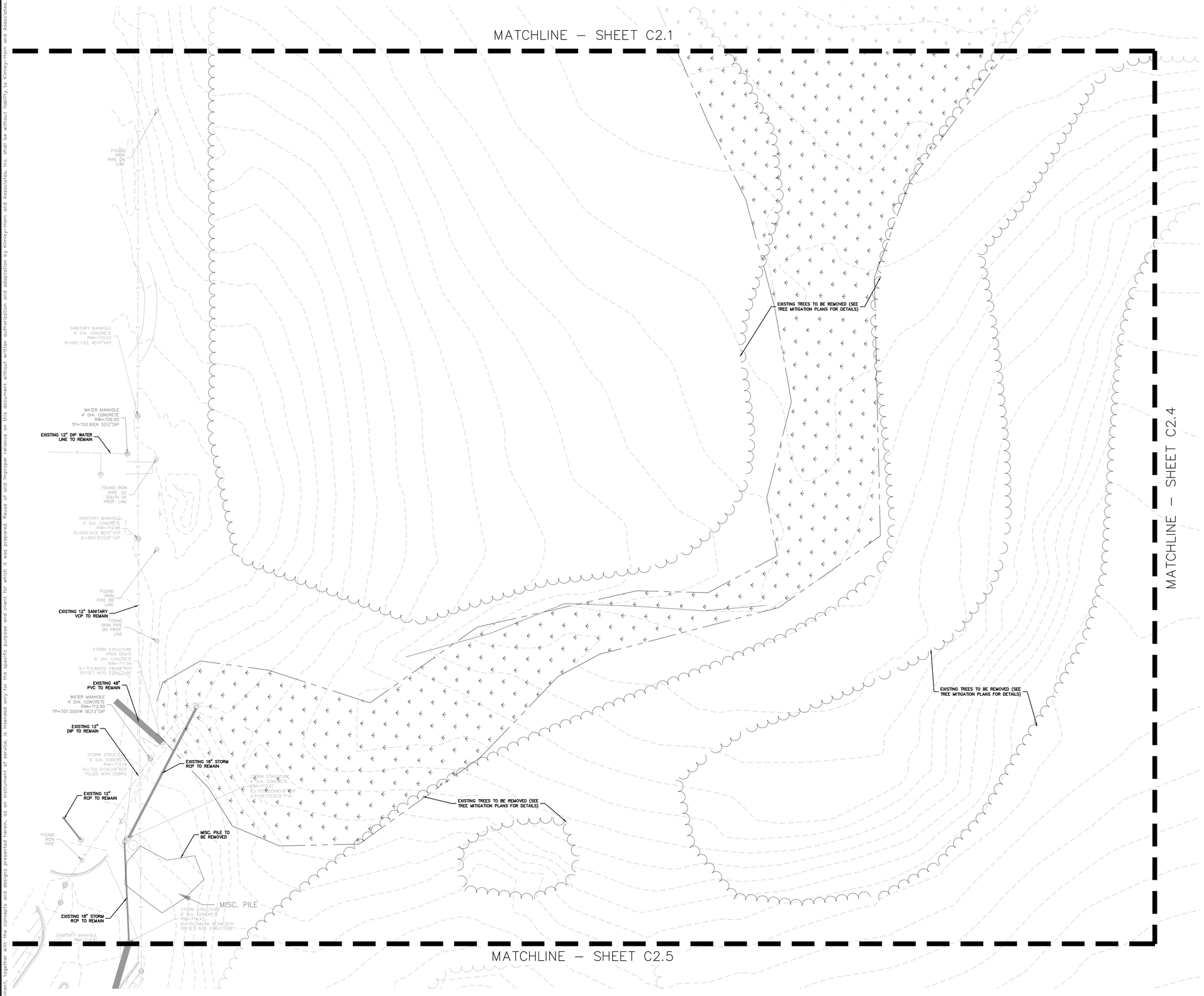

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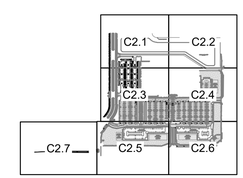

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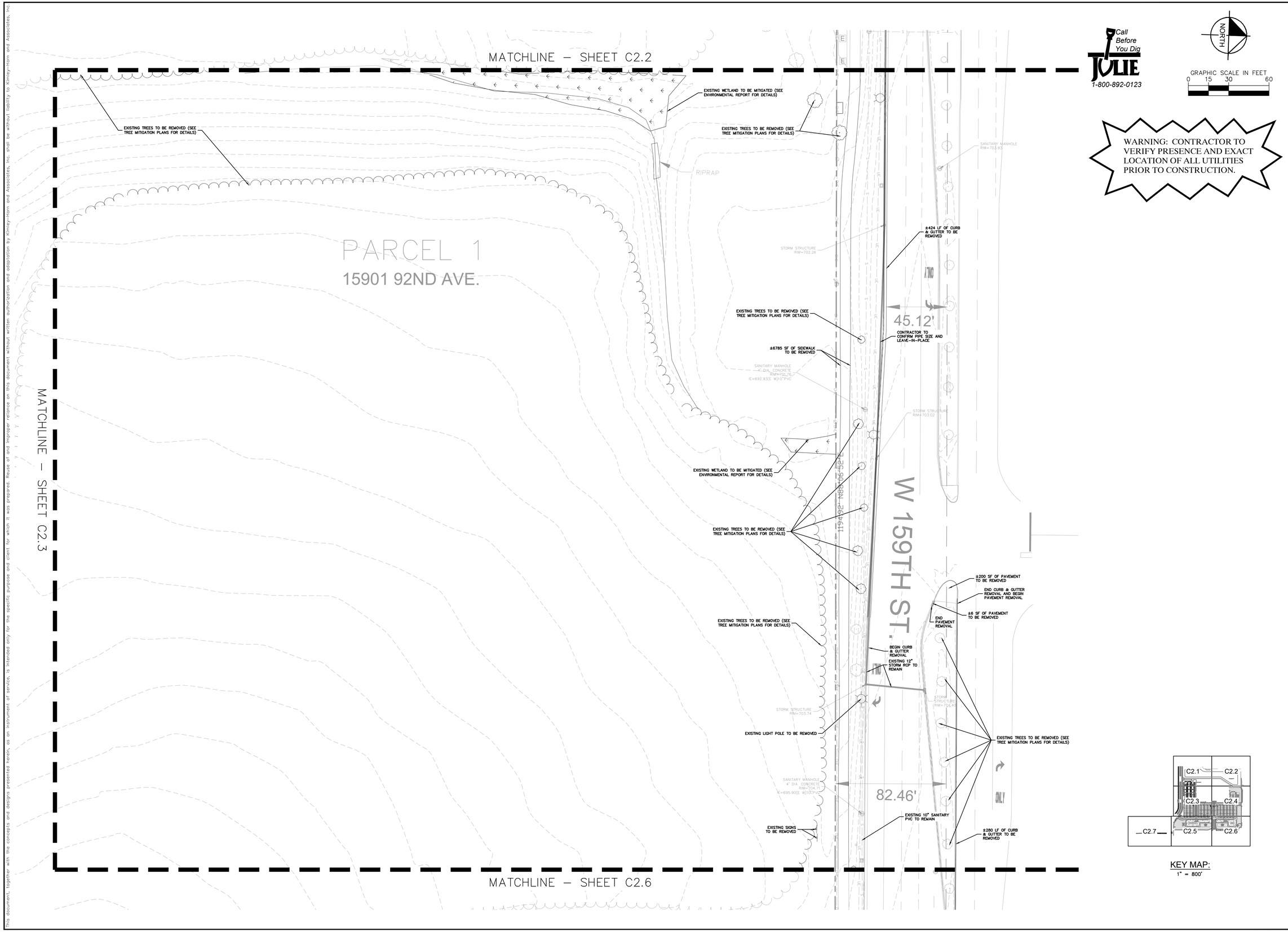

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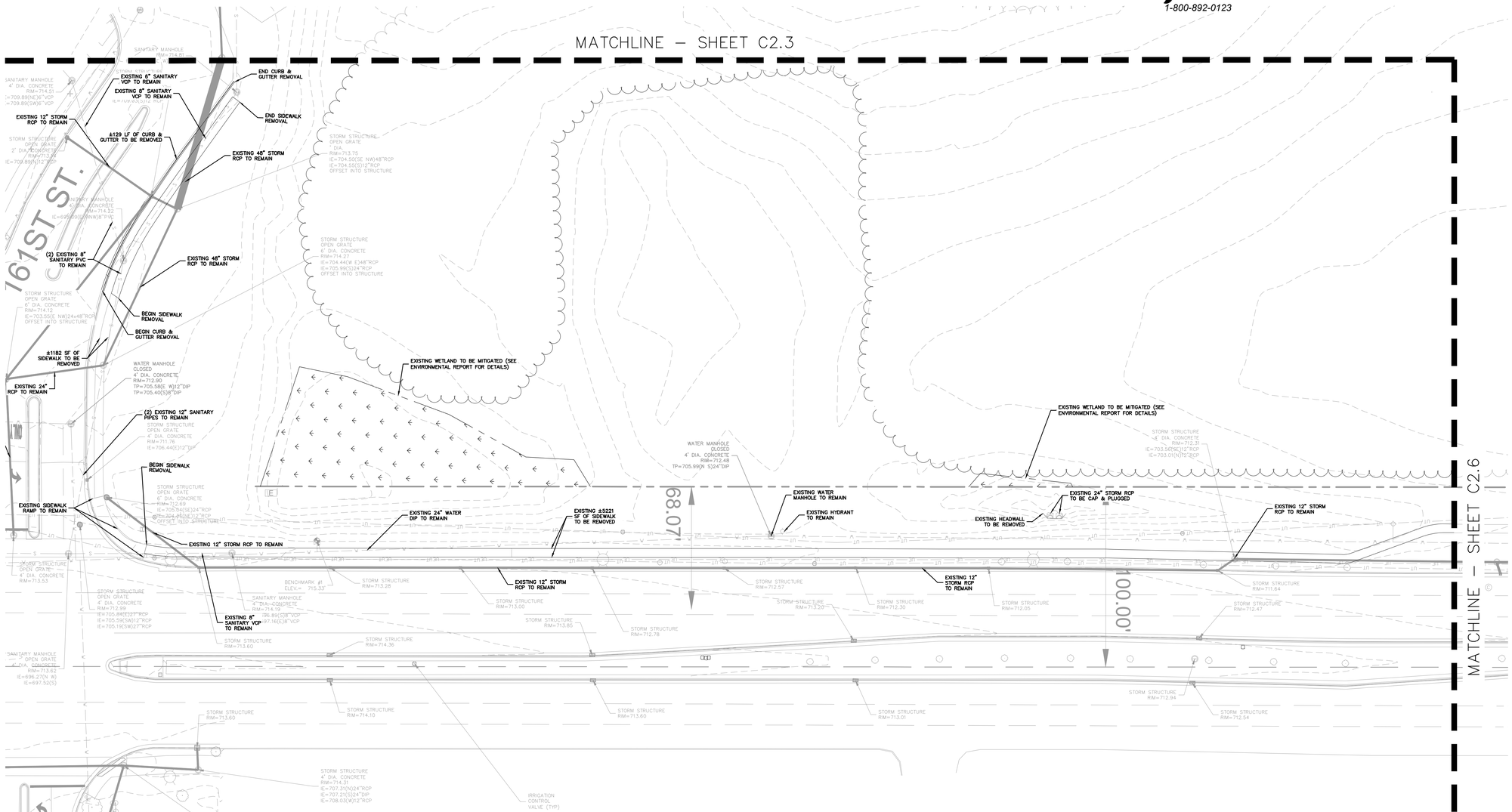

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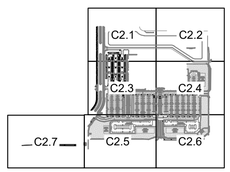

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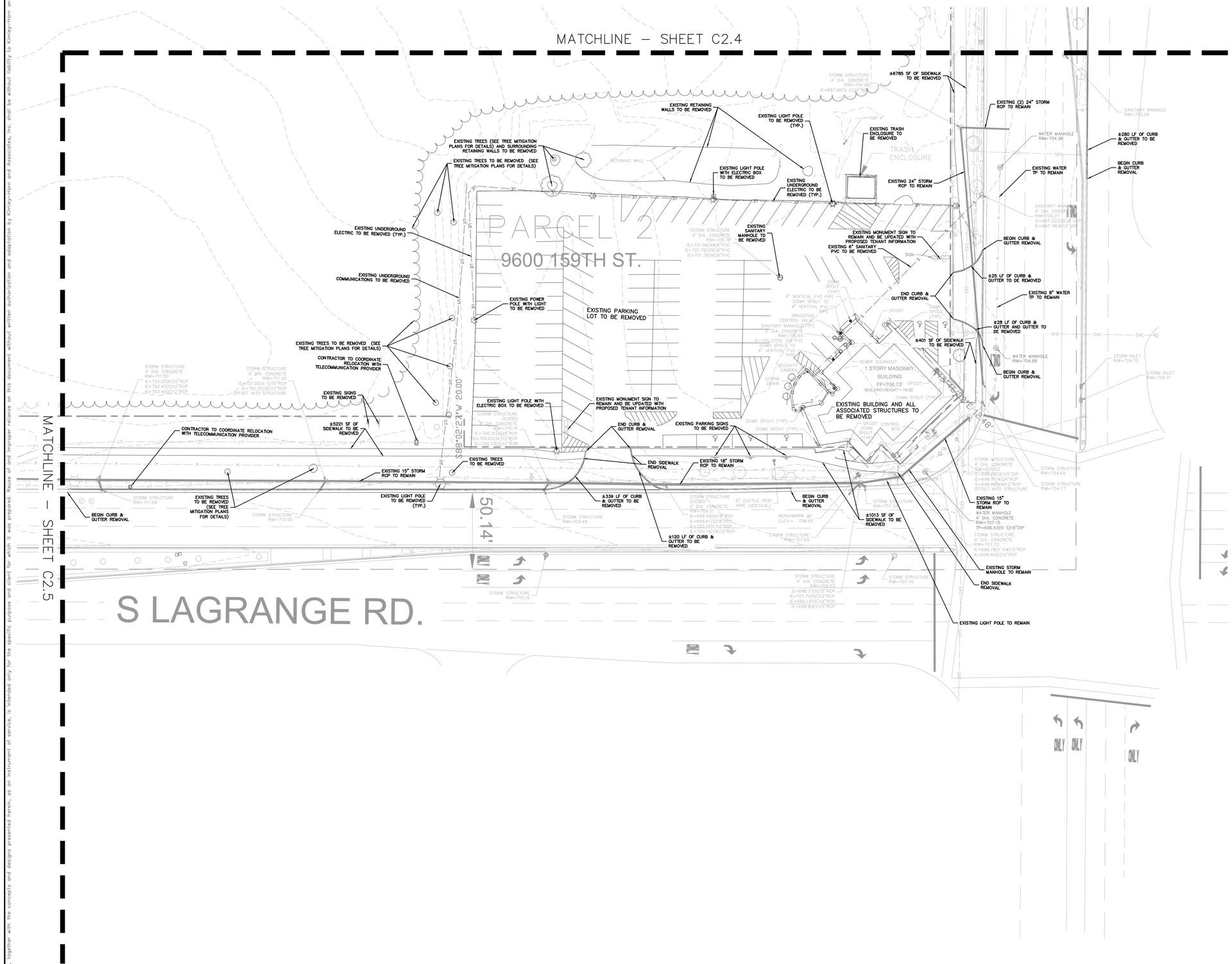

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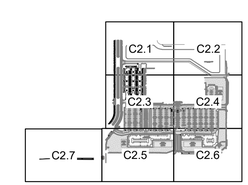

KEY MAP:
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EXISTING CONDITIONS & DEMOLITION PLAN

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

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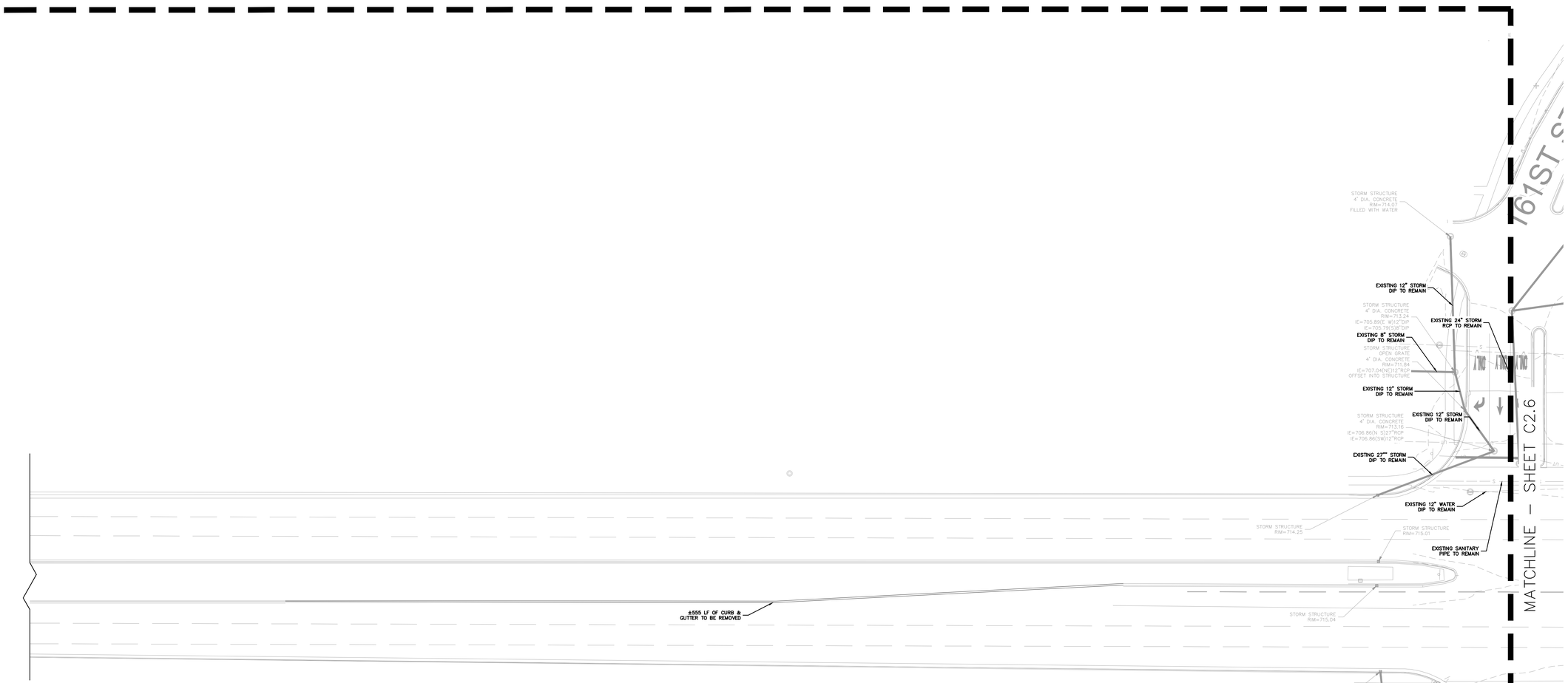

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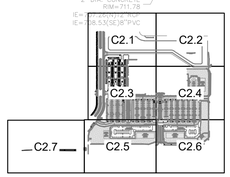

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EXISTING CONDITIONS & DEMOLITION PLAN

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

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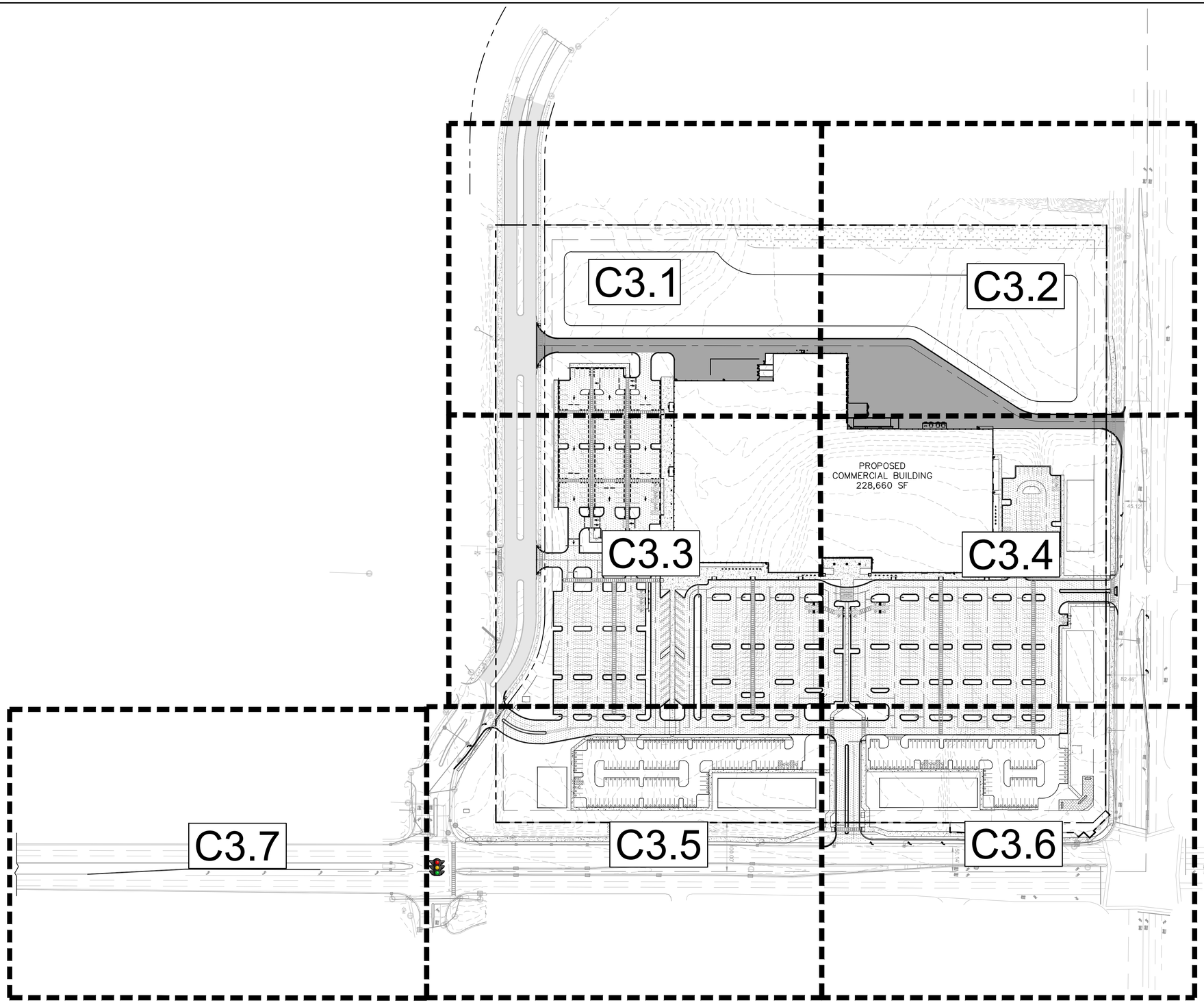

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5. ALL PROPOSED ON-SITE STRIPING SHALL BE PAINTED UNLESS OTHERWISE NOTED.

SITE DATA TABLE

SITE INFORMATION			
TOTAL SITE AREA	=	35.05 AC	(1,526,540 SF)
TOTAL DEVELOPMENT AREA	=	34.24 AC	(1,491,367 SF)
IMPERVIOUS AREA	=	21.07 AC 63%	(917,809 SF) OF DEVELOPMENT AREA
PERVIOUS AREA	=	10.38 AC 31%	(452,153 SF) OF DEVELOPMENT AREA
BIORETENTION AREA	=	3.60 AC 11%	(156,578 SF) OF DEVELOPMENT AREA

ZONING
EXISTING ZONING: COR MIXED USE DISTRICT
PROPOSED ZONING: COR MIXED USE DISTRICT

EXISTING LAND USE: VACANT
PROPOSED LAND USE: COMMERCIAL

BUILDING SETBACKS:	REQUIRED	PROVIDED
LaGRANGE ROAD:	25 FT	507.4 FT
159th STREET:	25 FT	234.8 FT
RAVINIA AVENUE:	15 FT	359.1 FT
REAR:	30 FT	265.8 FT

PARKING DIMENSION: 9' X 18'
DRIVE AISLE WIDTH: 24' MIN.

PARKING SUMMARY

FLOOR AREA	=	228,660 SF
PARKING REQUIRED (1 SPACE PER 250 SF)	=	922 SPACES
PARKING PROVIDED	=	844 SPACES
STANDARD PARKING PROVIDED	=	814 SPACES
ADA PARKING REQUIRED	=	17 SPACES
ADA PARKING PROVIDED	=	30 SPACES

PAVING AND CURB LEGEND

- STANDARD DUTY ASPHALT PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- CONCRETE CURB AND GUTTER

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OVERALL SITE DIMENSION PLAN

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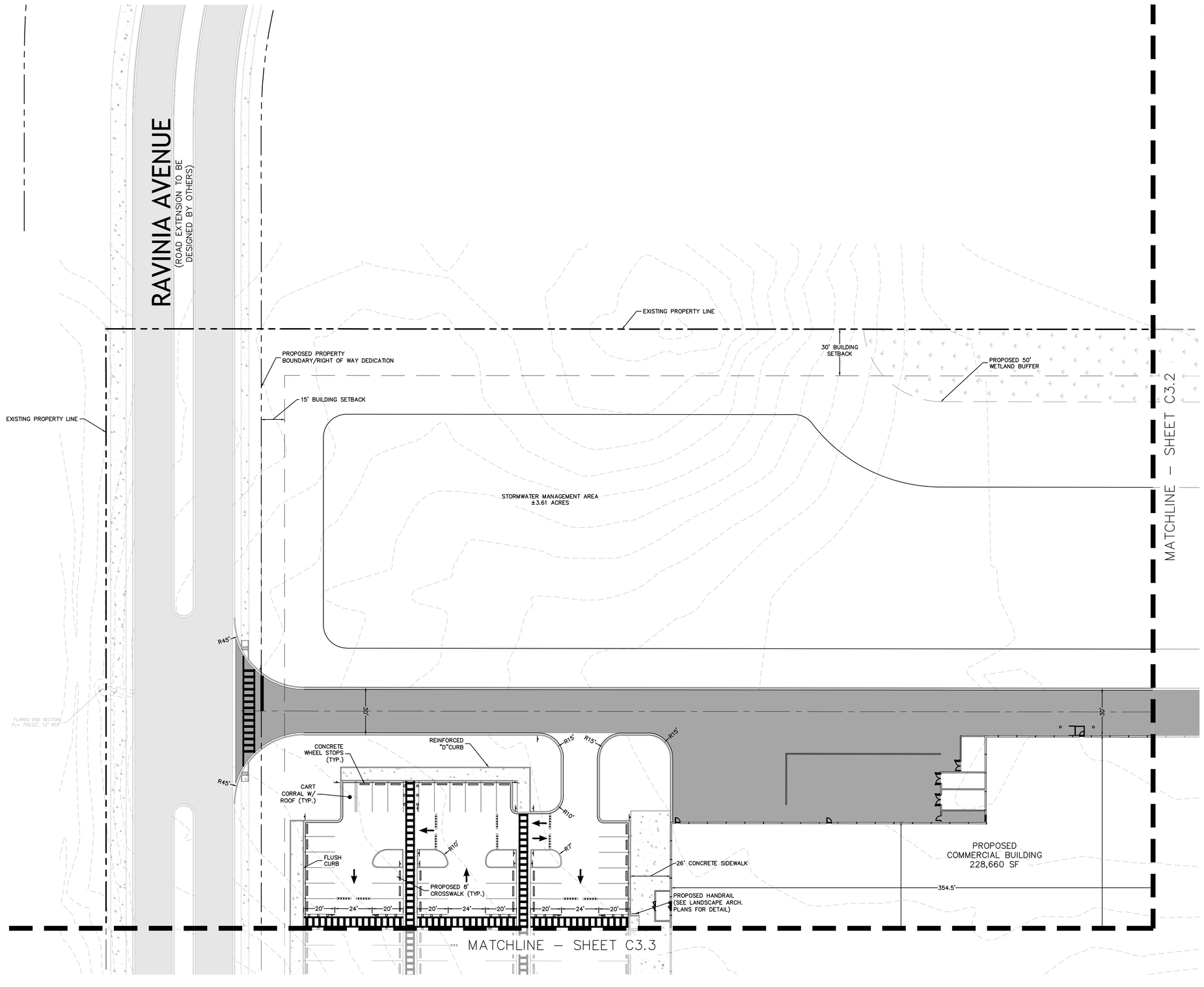

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LEGEND:

- LANDSCAPE BUFFER
- BUILDING SETBACK
- PROPERTY BOUNDARY

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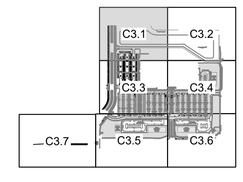

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SITE DIMENSION PLAN

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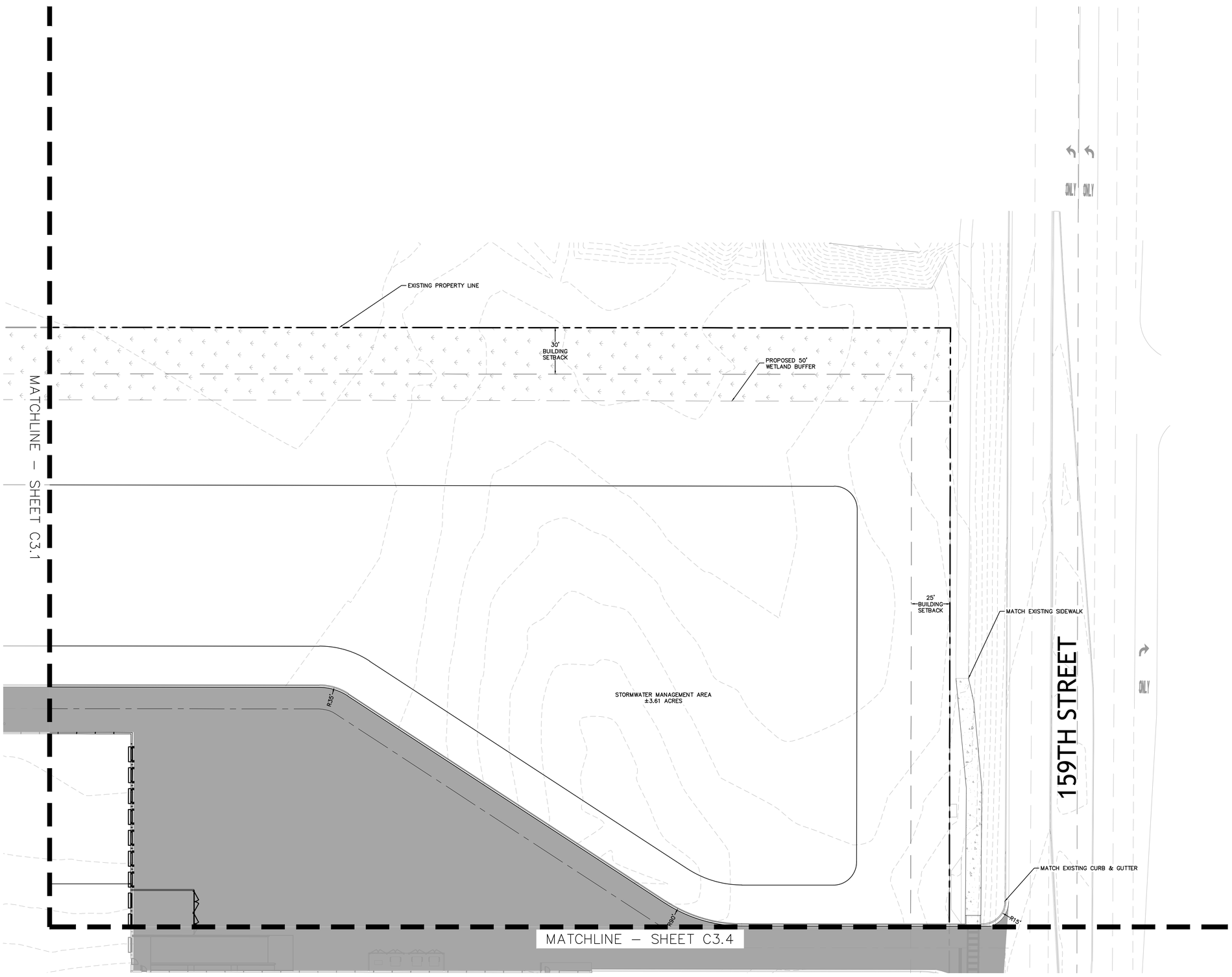

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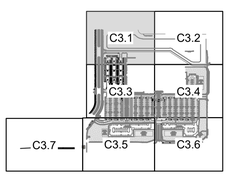

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SITE DIMENSION PLAN

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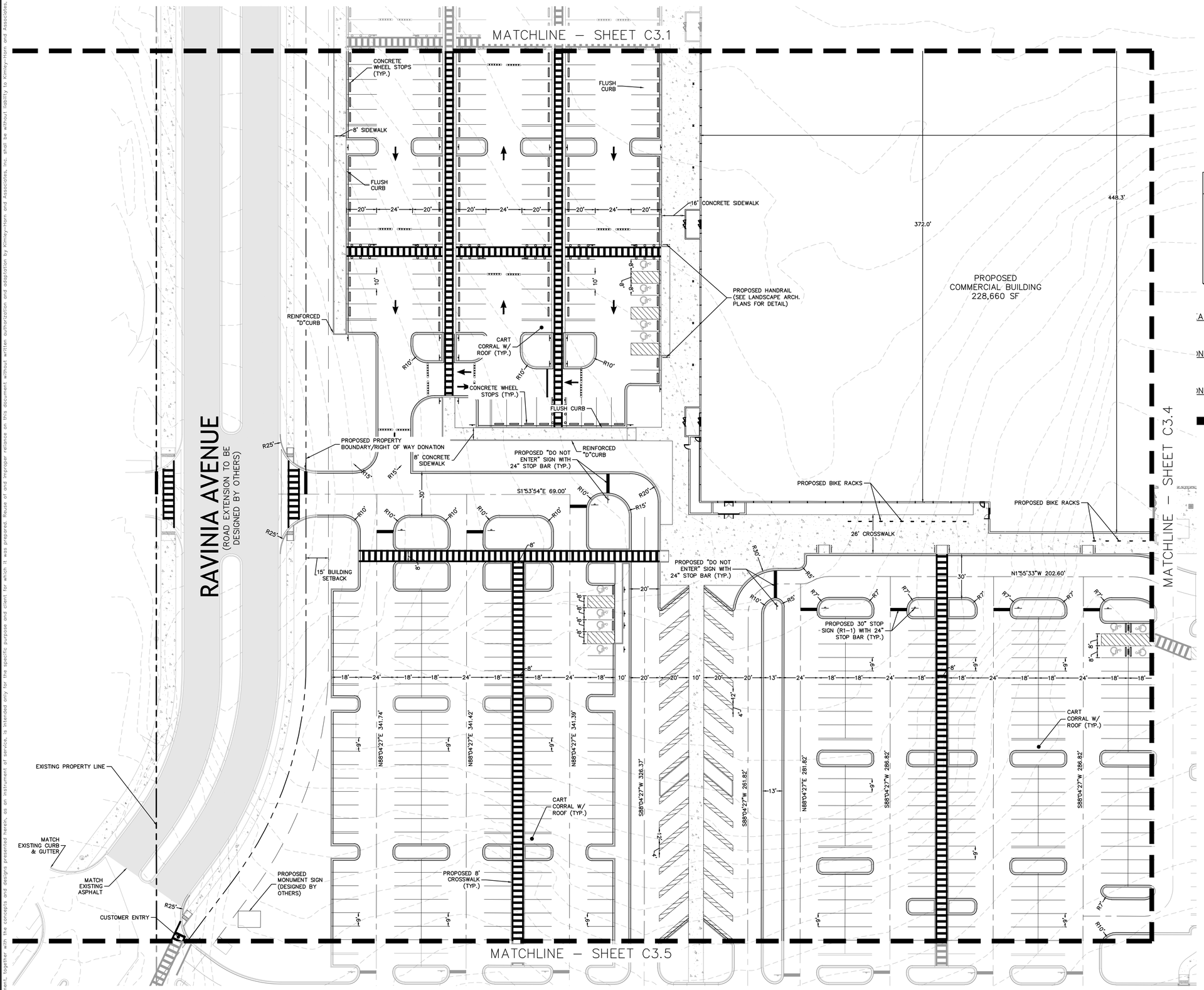

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LEGEND:

- LANDSCAPE BUFFER
- BUILDING SETBACK
- PROPERTY BOUNDARY

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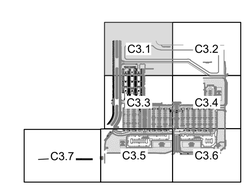

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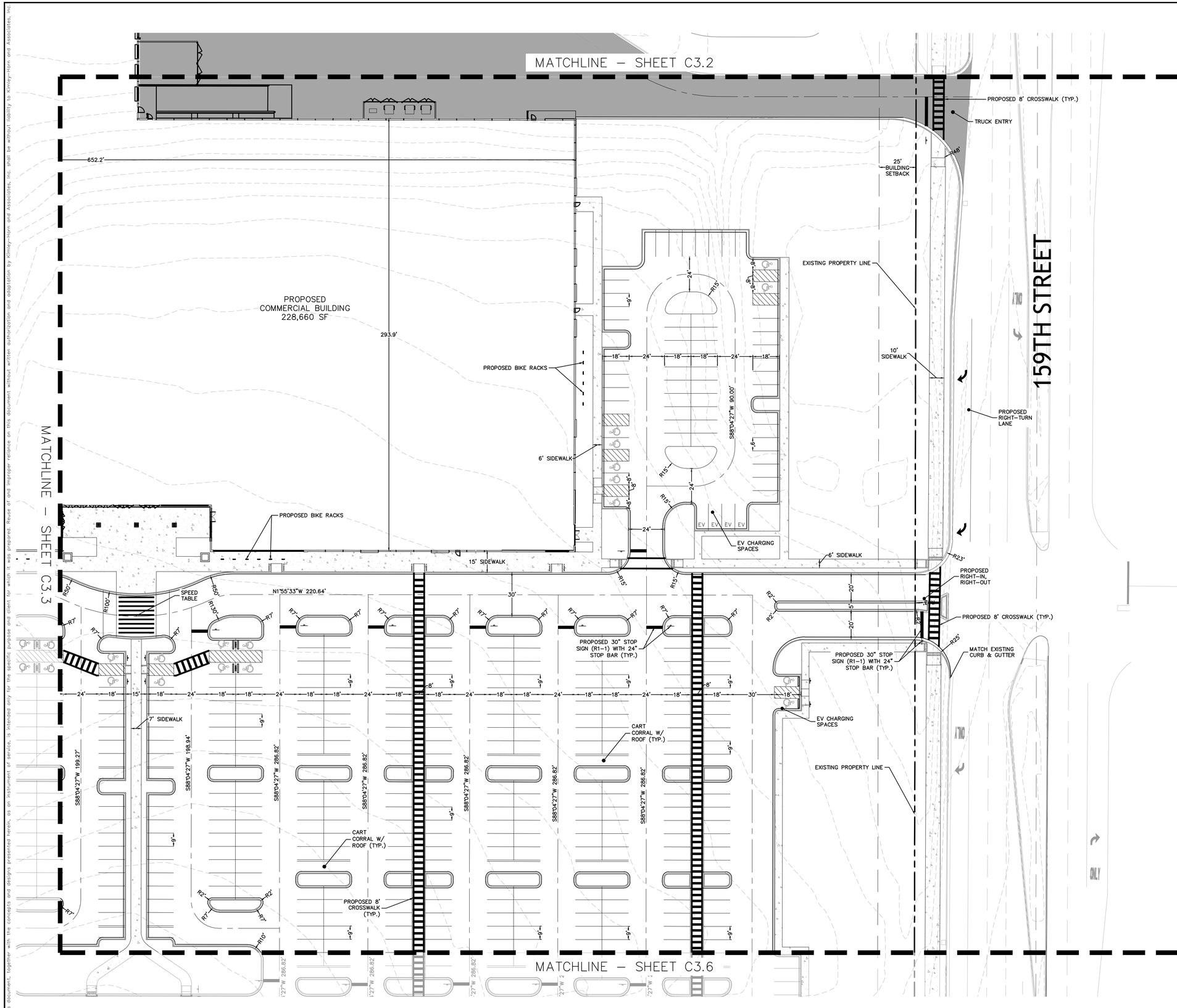

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LEGEND:
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- BUILDING SETBACK
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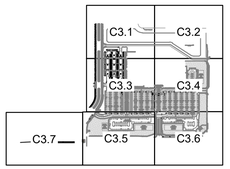

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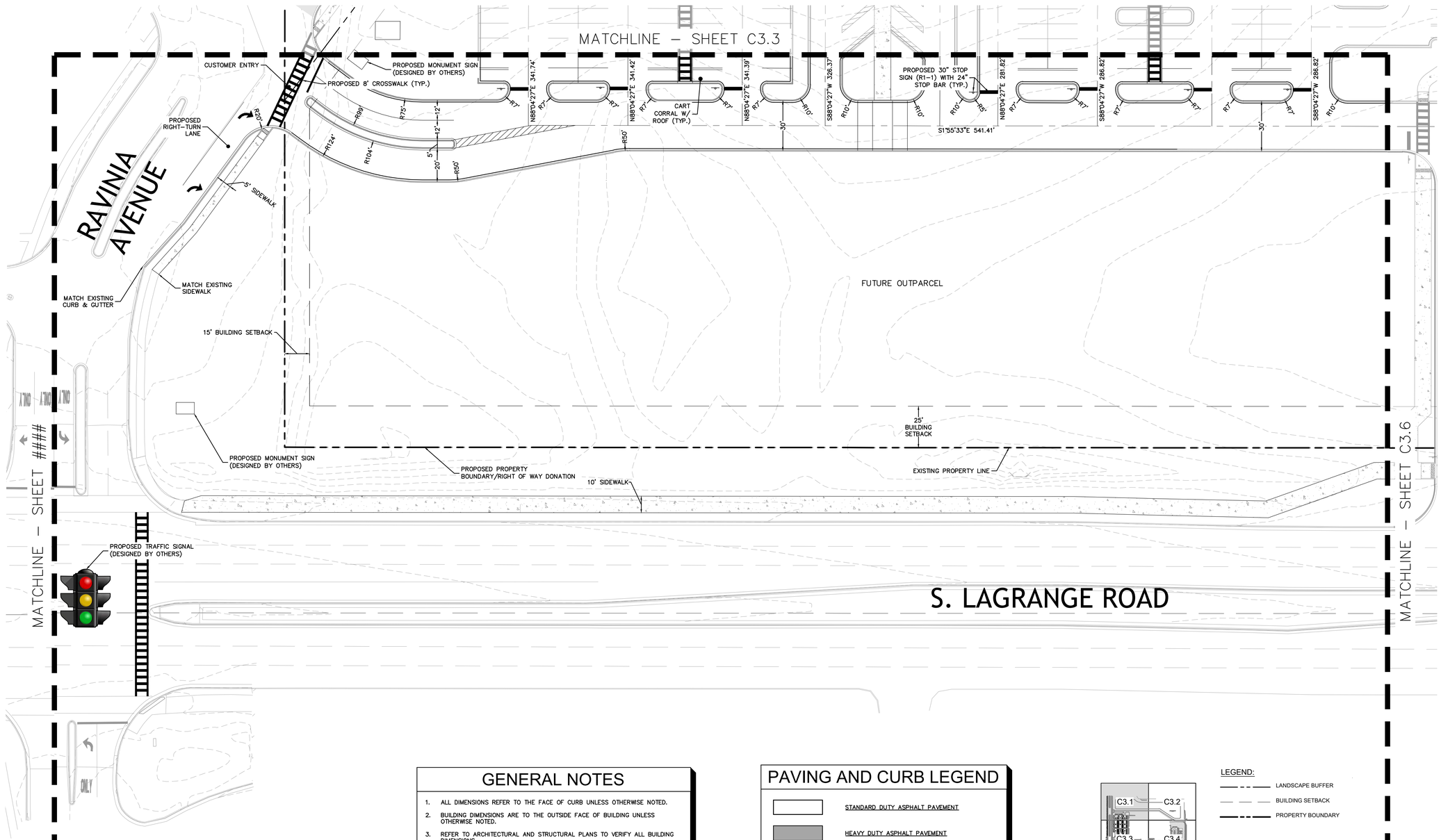

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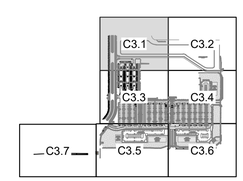

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LEGEND:
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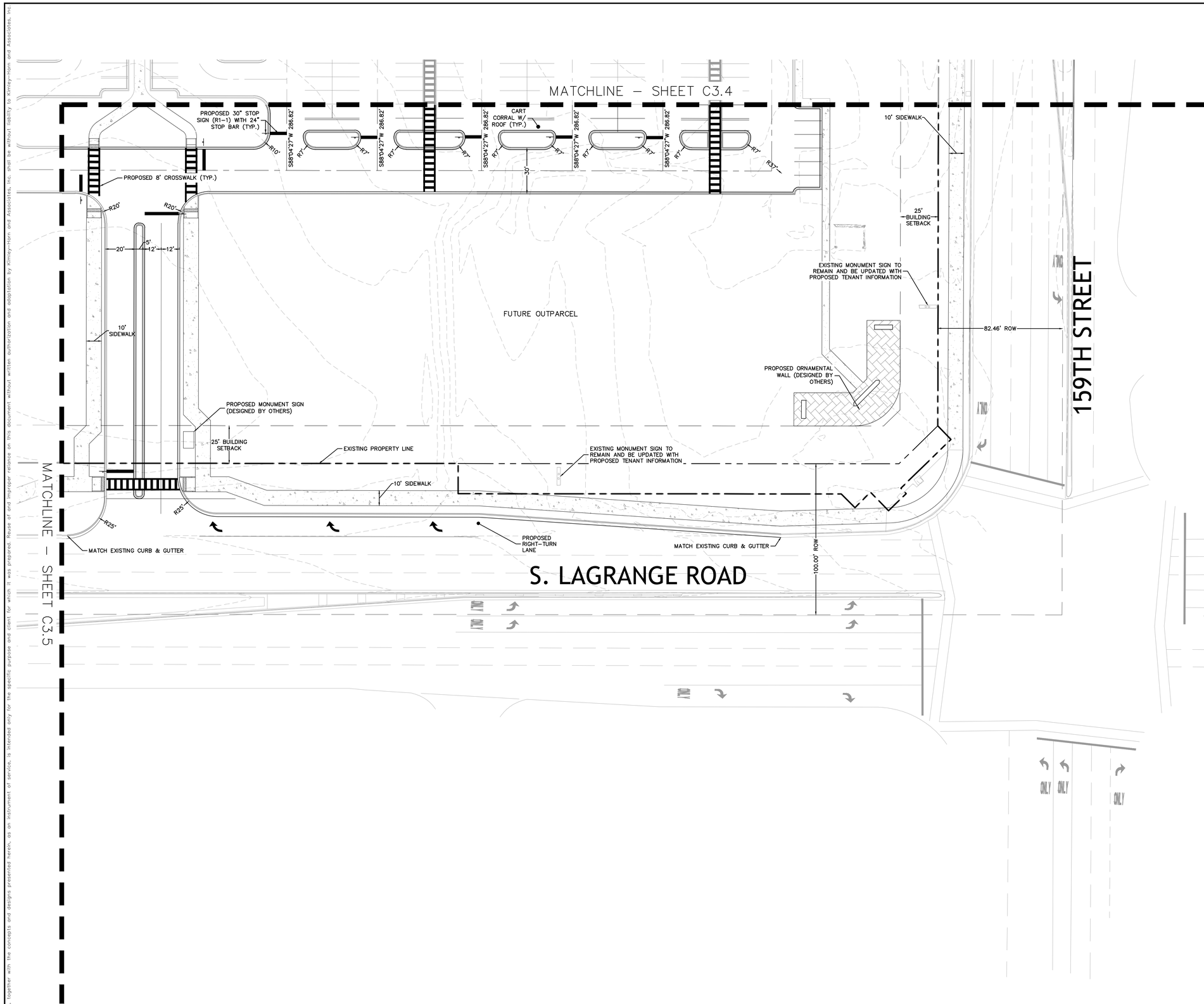

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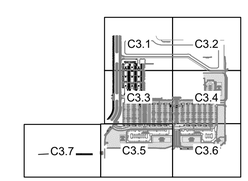

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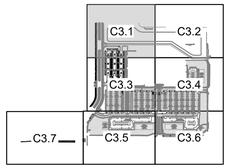

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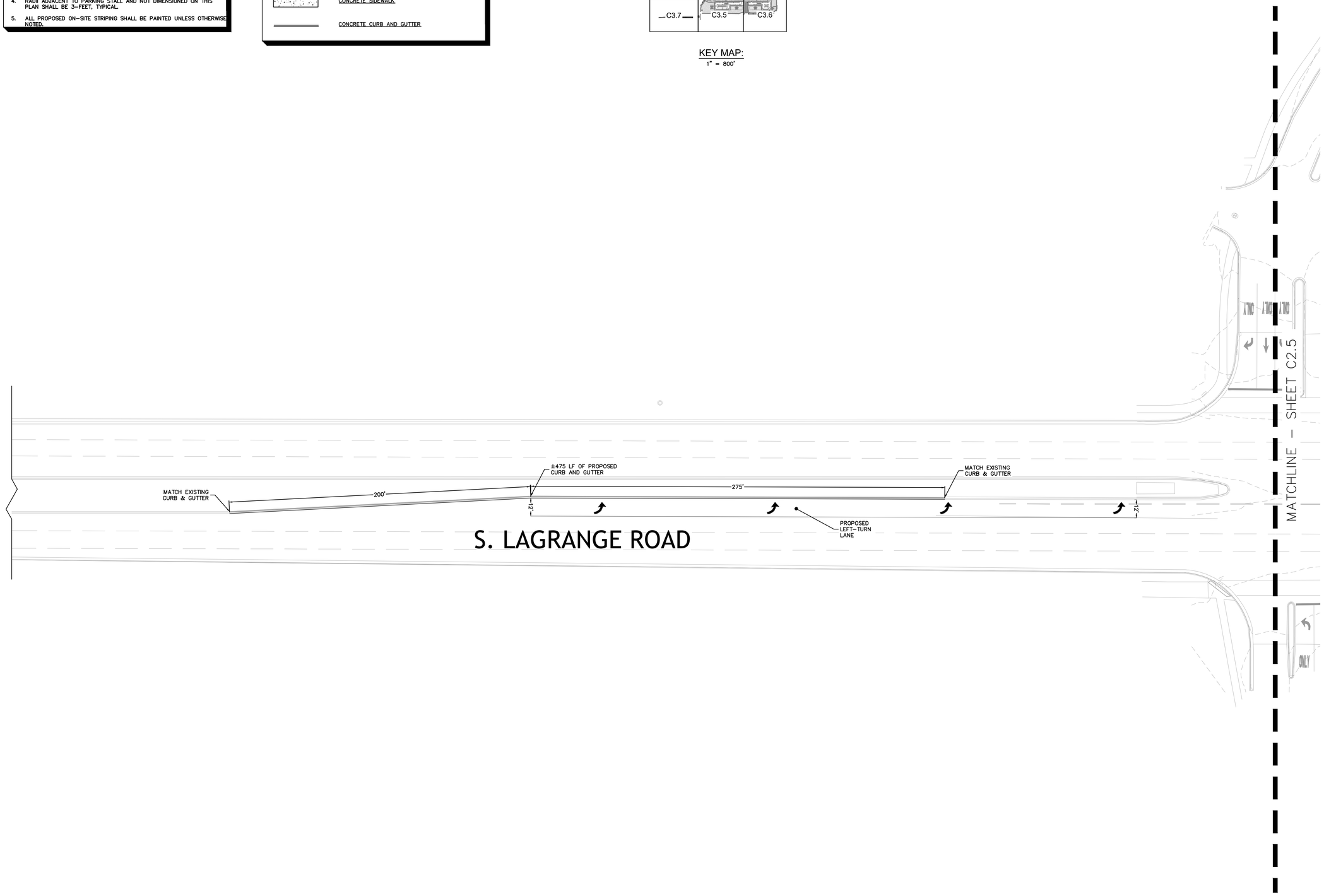

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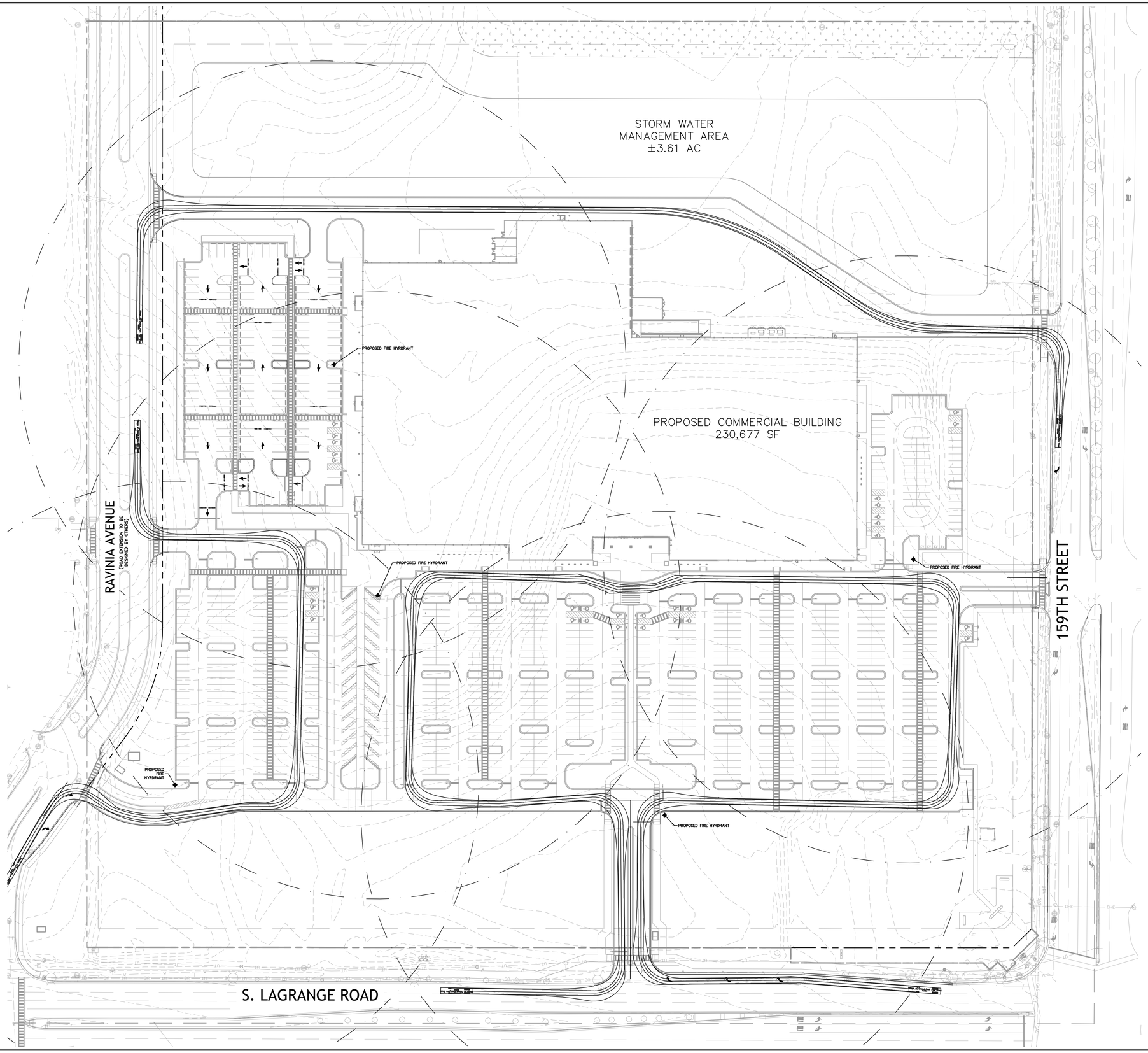

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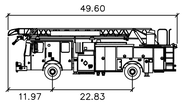

Village of Orland Park Fire Truck

	feet
Width	: 8.00
Track	: 6.91
Lock to Lock Time	: 6.0
Steering Angle	: 35.4

FIRE TRUCK PLAN LEGEND

- 400' FIRE HOSE LAY
- PROPOSED FIRE HYDRANT
- —— W —— PROPOSED WATER LINE

No.	REVISIONS	DATE	BY

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630-487-5550
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FIRE TRUCK PLAN

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

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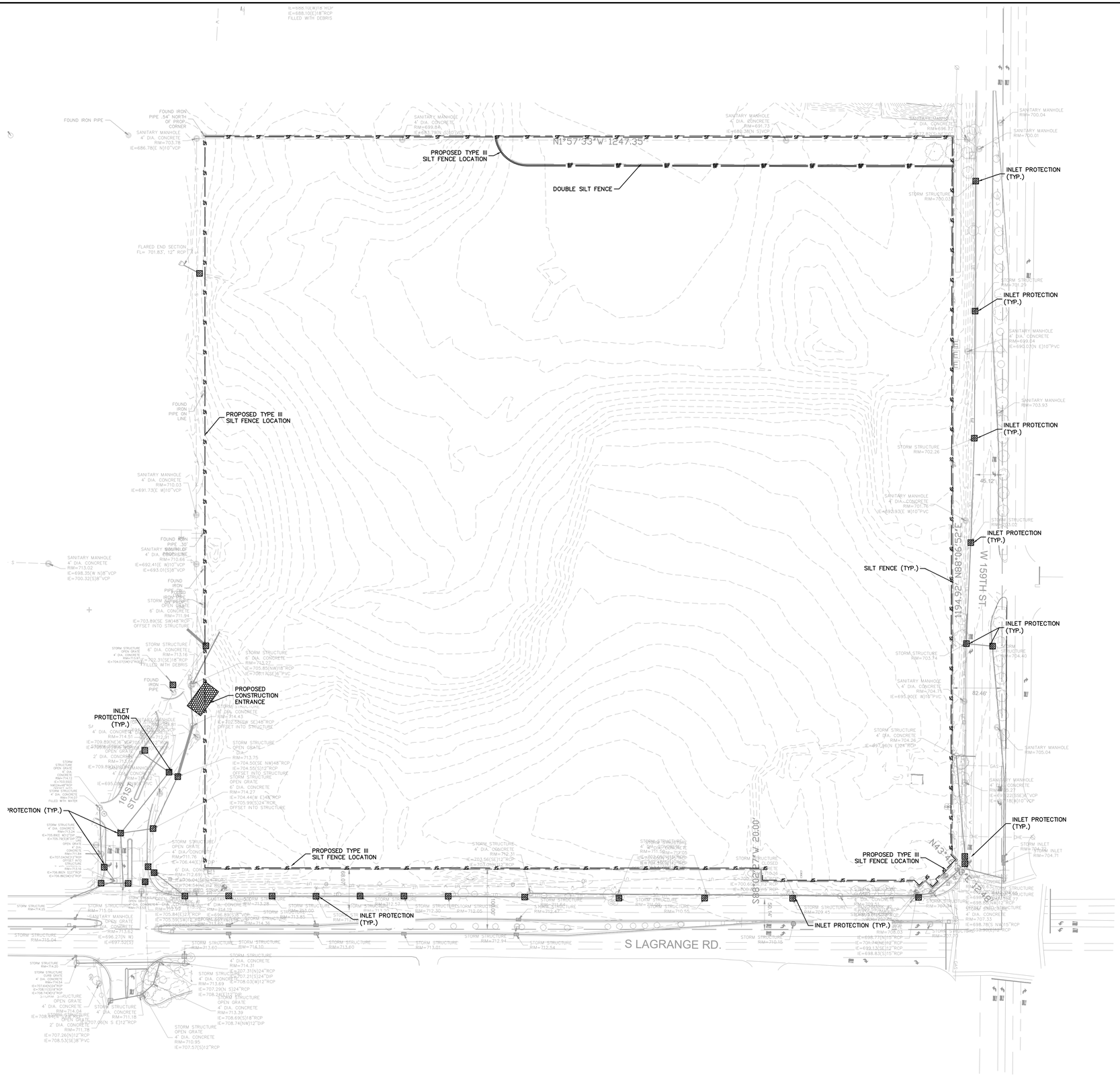

EROSION CONTROL NOTES

1. CONSTRUCTION ENTRANCE SHALL BE LOCATED SO AS TO PROVIDE THE LEAST AMOUNT OF DISTURBANCE TO THE FLOW OF TRAFFIC IN AND OUT OF THE SITE. ADDITIONALLY, CONSTRUCTION ENTRANCE SHALL BE LOCATED TO COINCIDE WITH THE PHASING OF THE PAVEMENT REPLACEMENT.
2. POST CONSTRUCTION STORM WATER POLLUTION CONTROL MEASURES INCLUDE STABILIZATION BY PERMANENT PAVING, DRAINAGE SYSTEM STRUCTURE, OR LANDSCAPING.
3. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE CIVIL AND LANDSCAPE PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY LANDSCAPING, THE BUILDING(S), AND SITE PAVING.
4. BMP'S HAVE BEEN LOCATED AS INDICATED ON THIS PLAN IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF.
5. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN.
6. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST, OR ARBORIST AS APPROPRIATE. MAJOR REVISIONS MUST BE APPROVED BY THE PLANNING AND DEVELOPMENT DEPARTMENT AND THE DRAINAGE UTILITY DEPARTMENT. MINOR CHANGES OR ADDITIONAL CONTROL MEASURES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES AT NO ADDITIONAL COST TO THE OWNER.
7. CONTRACTOR SHALL PLACE EROSION CONTROL BLANKET (NORTH AMERICAN GREEN S150BN OR APPROVED EQUAL) ON ALL SITE AREAS WITH SLOPES GREATER THAN 4:1, AND IN THE BOTTOM AND SIDE SLOPES OF ALL SWALES.
8. PRIOR TO FINAL ACCEPTANCE, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
9. PERMANENT, FINAL PLANT COVERING OR STRUCTURES SHALL BE INSTALLED PRIOR TO FINAL ACCEPTANCE.
10. ALL CONTROL DEVICES THAT FUNCTION SIMILARLY TO SILT FENCE OR FIBER ROLLS MUST BE REPAIRED, REPLACED OR SUPPLEMENTED WITH EFFECTIVE CONTROLS WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES ONE-THIRD THE HEIGHT OF THE DEVICE. THESE REPAIRS MUST BE MADE WITHIN 24 HOURS OF THE RAINFALL EVENT OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
11. ALL SEDIMENT DELTAS AND DEPOSITS MUST BE REMOVED FROM SURFACE WATERS, DRAINAGE WAYS, CATCH BASINS AND OTHER DRAINAGE SYSTEMS. ALL AREAS WHERE SEDIMENT REMOVAL RESULTED IN EXPOSED SOIL MUST BE RESTABILIZED. THE REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS AFTER THE RAINFALL EVENT UNLESS PRECLUDED BY LEGAL, REGULATORY OR PHYSICAL ACCESS CONSTRAINTS. ALL REASONABLE EFFORTS MUST BE USED TO OBTAIN ACCESS. ONCE ACCESS IS OBTAINED, REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS LATER. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL APPROPRIATE AUTHORITIES AND RECEIVING THE APPLICABLE PERMITS PRIOR TO CONDUCTING ANY WORK.
12. ACCUMULATIONS OF TRACKED AND DEPOSITED SEDIMENT MUST BE REMOVED FROM OFF-SITE PAVED SURFACES WITHIN 24 HOURS OR SOONER IF REQUIRED. SEDIMENT TRACKING MUST BE MINIMIZED BY THE APPROPRIATE MANAGEMENT PRACTICE, LIKE A DEDICATED SITE EXIT WITH AN AGGREGATE SURFACE OR DESIGNATED OFFSITE PARKING AREA. CONTRACTOR IS RESPONSIBLE FOR STREET SWEEPING AND/OR SCRAPING IF YOUR PRACTICES ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED FROM THE SITE.
13. SURFACE WATERS, DRAINAGE DITCHES AND CONVEYANCE SYSTEMS MUST BE INSPECTED FOR SEDIMENT DEPOSITS.
14. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL MEASURES AS INDICATED ON THIS SHEET IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED BY KIMLEY-HORN AND ASSOCIATES, INC. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THE PROVISIONS INDICATED IN THE SWPPP, INCLUDING EROSION CONTROL MEASURES AND INSPECTION FREQUENCY, AS REQUIRED BY THE IEPA NPDES PHASE II PERMIT PROGRAM REQUIREMENTS.
15. PUMPING SEDIMENT LADEN WATER INTO ANY STORMWATER FACILITY THAT IS NOT DESIGNATED TO BE A SEDIMENT TRAP, DRAINAGEWAY, OR OFFSITE AREA EITHER DIRECTLY OR INDIRECTLY WITHOUT FILTRATION IS PROHIBITED.
16. SOIL STOCKPILES SHALL NOT BE LOCATED IN A DRAINAGEWAY, FLOOD PLAIN AREA OR A DESIGNATED BUFFER, UNLESS OTHERWISE APPROVED, UNDER SPECIFIC CONDITIONS TO BE ESTABLISHED BY THE DIRECTOR OR ADMINISTRATOR.
17. STOCKPILES TO REMAIN IN PLACE FOR MORE THAN THREE DAYS SHALL BE PROVIDED WITH SESC MEASURES. MATERIAL IS TO BE HAULED OFF IMMEDIATELY AND LEGALLY IF NO STOCKPILE IS TO REMAIN IN PLACE.
18. ALL TEMPORARY SESC MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED.TRAPPED SEDIMENT AND OTHER DISTURBED SOILS RESULTING FROM TEMPORARY MEASURES SHALL BE PROPERLY DISPOSED OF PRIOR TO PERMANENT STABILIZATION.
19. WATER REMOVED FROM TRAPS, BASINS, AND OTHER WATER HOLDING DEPRESSIONS OR EXCAVATIONS MUST FIRST PASS THROUGH A SEDIMENT CONTROL AND/OR FILTRATION DEVICE. WHEN DEWATERING DEVICES ARE USED, DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION.
20. SITE STABILIZATION REQUIREMENTS ARE AS FOLLOWS:
    - 20.1. WHERE THE INITIATION OF STABILIZATION MEASURE BY THE 7TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASES ON A PORTION OF THE SITE IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURE SHALL BE INITIATED AS SOON AS PRACTICABLE.
    - 20.2. WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 14 DAYS FROM WHEN ACTIVITIES CEASED, (E.G. THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN 14 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE 7TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASED.

EROSION CONTROL LEGEND

TS	TEMPORARY SEEDING (SEE EROSION CONTROL DETAILS)
CE	CONSTRUCTION ENTRANCE (SEE EROSION CONTROL DETAILS)
SF	SILT FENCE (SEE EROSION CONTROL DETAILS)
IP	INLET PROTECTION (SEE EROSION CONTROL DETAILS)
CW	CONCRETE WASHOUT (SEE EROSION CONTROL DETAILS) (TO BE DETERMINED BY CONTRACTOR)
RR	RIP RAP (SEE DETAILS)
SS	TEMPORARY SOIL STOCKPILE
LD	LIMITS OF DISTURBANCE
	EXISTING CONTOURS
	PROPOSED CONTOURS

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OVERALL EROSION CONTROL PLAN

159TH & LAGRANGE RETAIL

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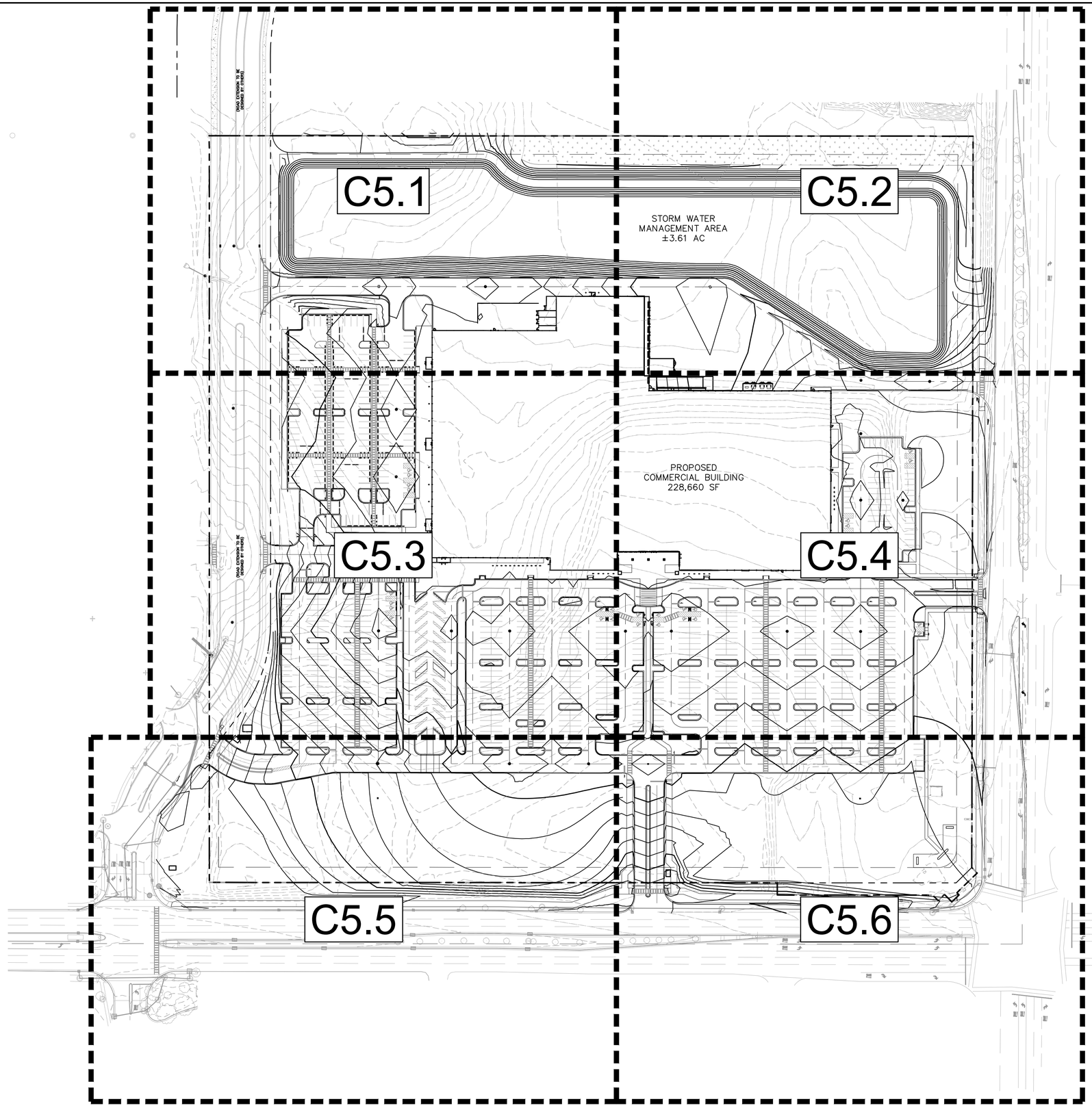

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GRADING NOTES

1. ALL PAVEMENT SPOT GRADE ELEVATIONS AND RIM ELEVATIONS WITHIN OR ALONG CURB AND GUTTER REFER TO FLOW LINE ELEVATIONS UNLESS OTHERWISE NOTED.
2. ALL ELEVATIONS SHOWN DEPICT FINISHED GRADE UNLESS OTHERWISE NOTED. GENERAL CONTRACTOR TO COORDINATE WITH EXCAVATION, LANDSCAPE, AND PAVING SUBCONTRACTORS REGARDING TOPSOIL THICKNESS FOR LANDSCAPE AREAS AND PAVEMENT SECTION THICKNESS FOR PAVED AREAS TO PROPERLY ENSURE ADEQUATE CUT TO ESTABLISH SUBGRADE ELEVATIONS.
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——XXX——	PROPOSED CONTOUR
– – XXX – –	EXISTING CONTOUR
RIDGE	RIDGE LINE
X.XX%	SLOPE AND FLOW DIRECTION
←	100–YEAR OVERLAND OVERFLOW ROUTE
——· · ·←	PROPOSED SWALE
	RIP RAP (SEE DETAILS)
	PROPOSED OPEN LID STORM STRUCTURE
	PROPOSED OPEN LID STORM STRUCTURE
	PROPOSED CATCH BASIN
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OVERALL PAVING & GRADING PLAN

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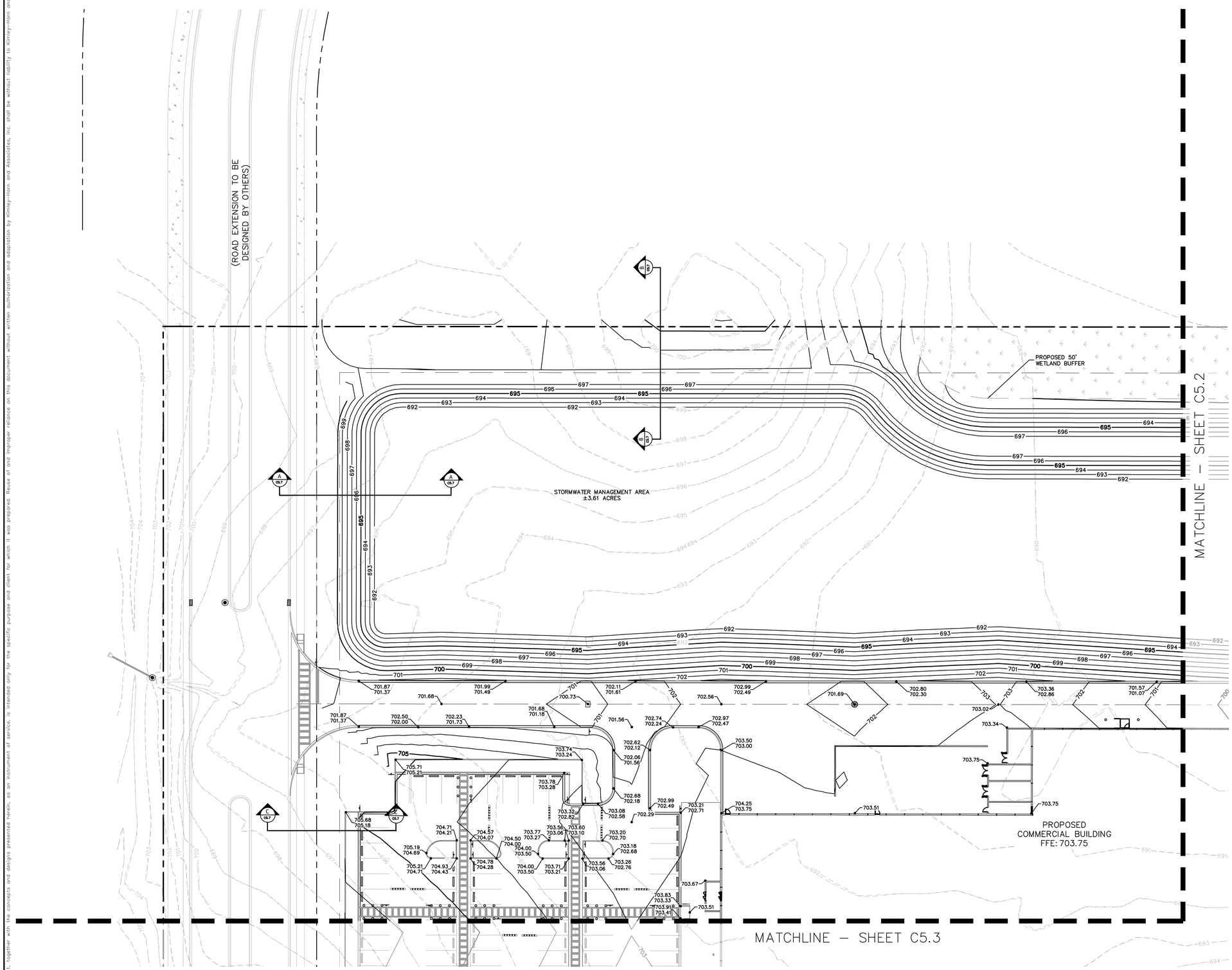

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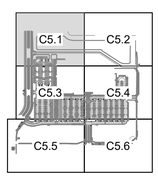

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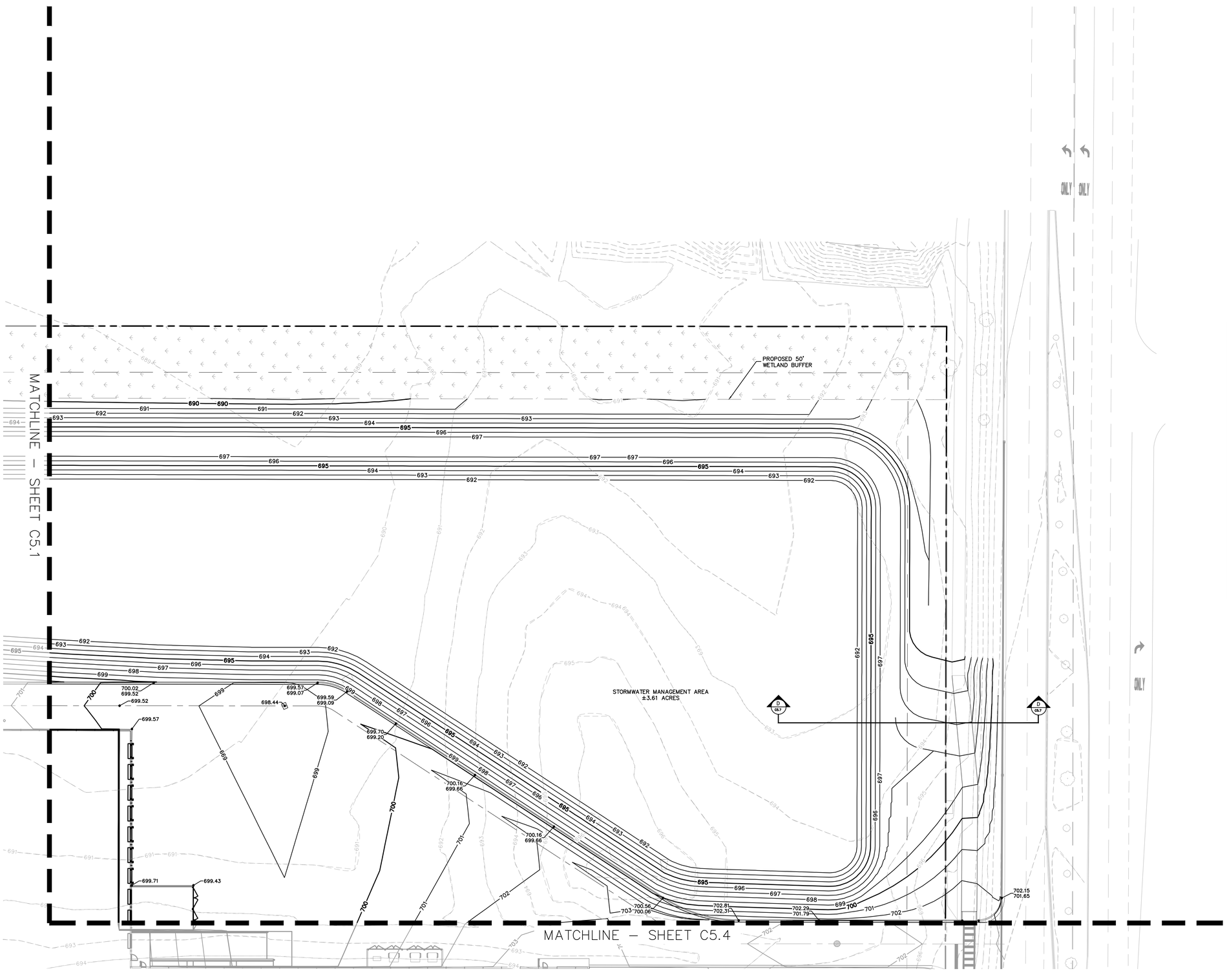

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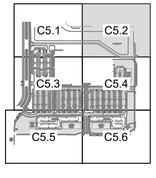

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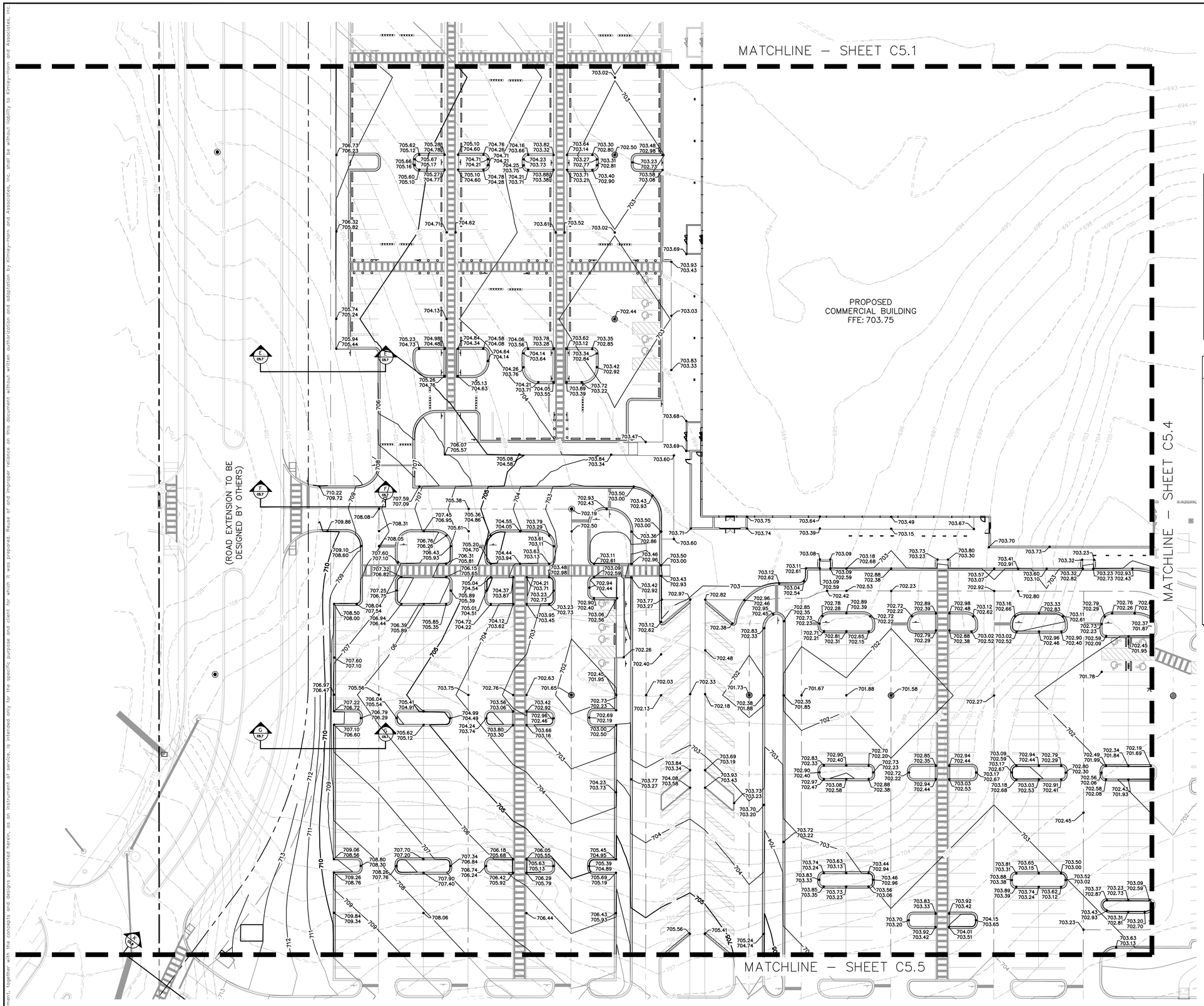

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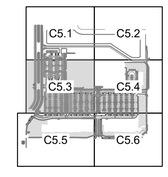

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PAVING & GRADING PLAN

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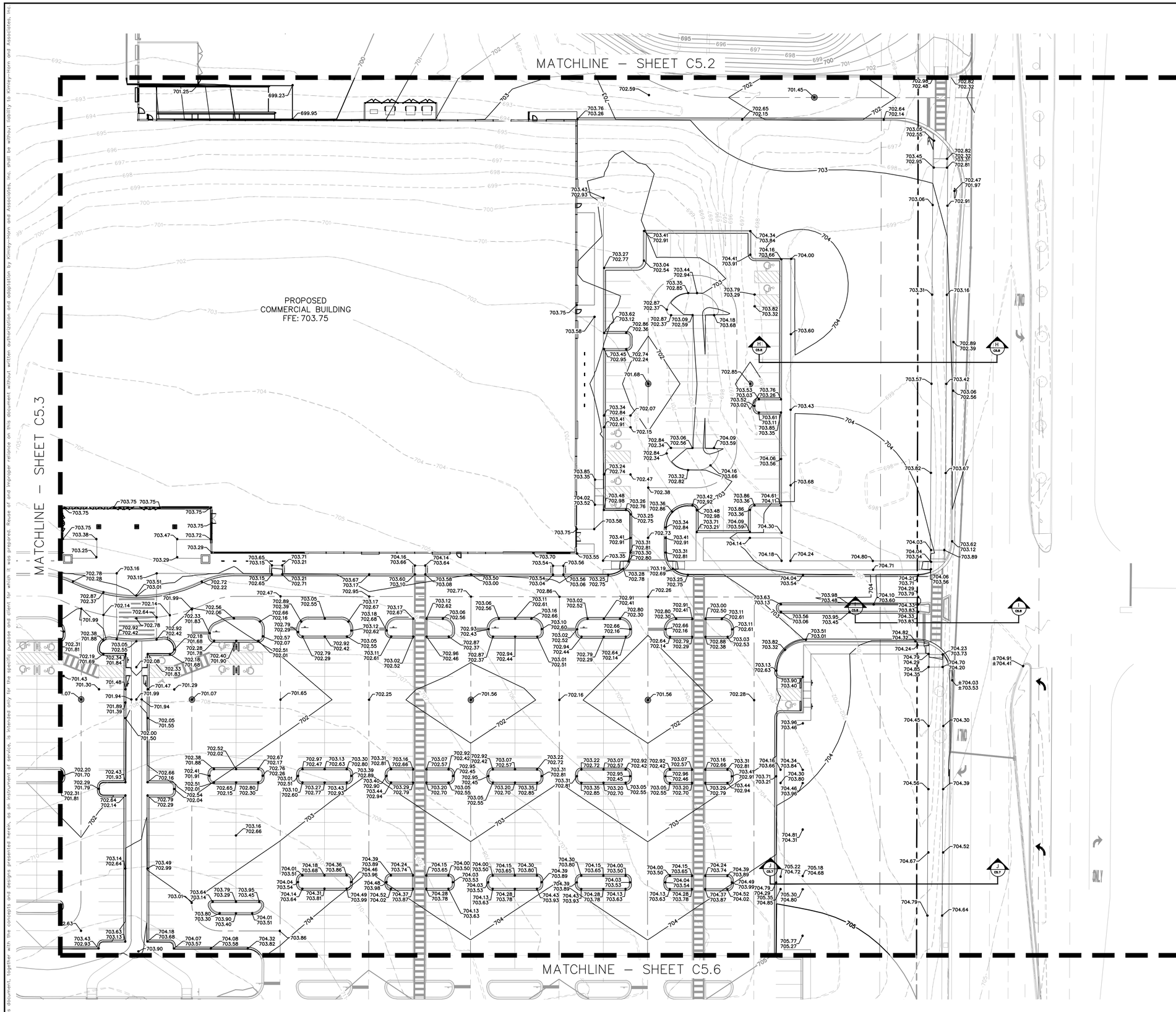

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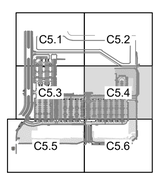
5. MAXIMUM RUNNING SLOPE SHALL NOT EXCEED 5% AND CROSS SLOPE SHALL NOT EXCEED 2% ON ALL SIDEWALKS AND ACCESSIBLE ROUTES.
6. MATCH EXISTING ELEVATIONS AT THE PROPERTY LIMITS.

GRADING LEGEND

	FL = FLOW LINE
	TC = TOP OF CURB
	ME = MATCH ELEVATION
	R = RIM ELEVATION
	TW = TOP OF WALL
	FG = FINISHED GRADE
—XXX—	PROPOSED CONTOUR
- - XXX - -	EXISTING CONTOUR
RIDGE	RIDGE LINE
X.XX%	SLOPE AND FLOW DIRECTION
	100–YEAR OVERLAND OVERFLOW ROUTE
	PROPOSED SWALE
	RIP RAP (SEE DETAILS)
	PROPOSED OPEN LID STORM STRUCTURE
	PROPOSED OPEN LID STORM STRUCTURE
	PROPOSED CATCH BASIN
	PROPOSED 2' INLET



KEY MAP:
1" = 800'

No.	REVISIONS	DATE	BY

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ILLINOIS LICENSE NUMBER
XXXX
DATE: 11/14/2025

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DATE
11/14/2025
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DESIGNED BY XXX
DRAWN BY XXX
CHECKED BY XXX

PAVING & GRADING PLAN

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
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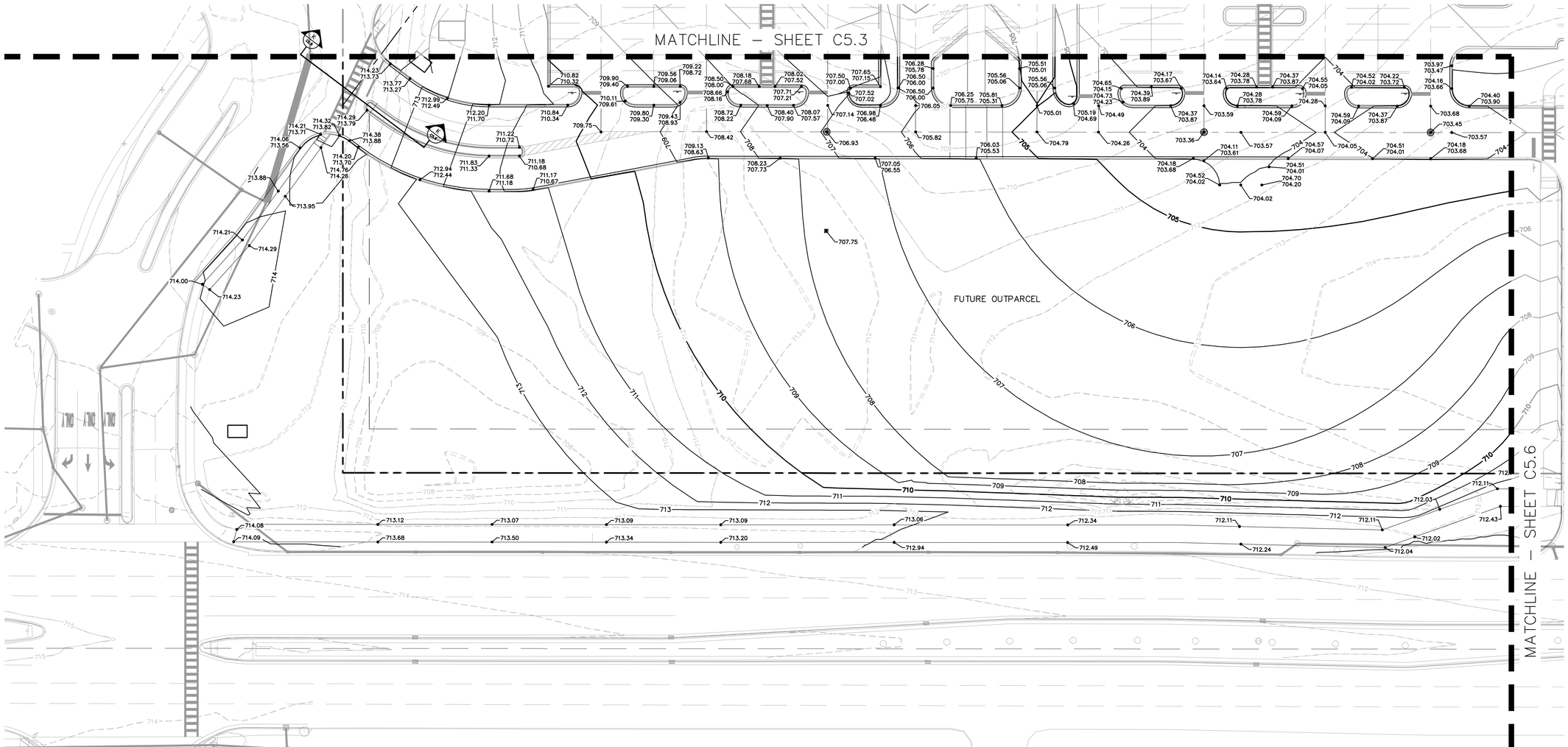
NORTH



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	PROPOSED OPEN LID STORM STRUCTURE
	PROPOSED CATCH BASIN
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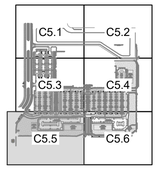

KEY MAP:
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PAVING & GRADING PLAN

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

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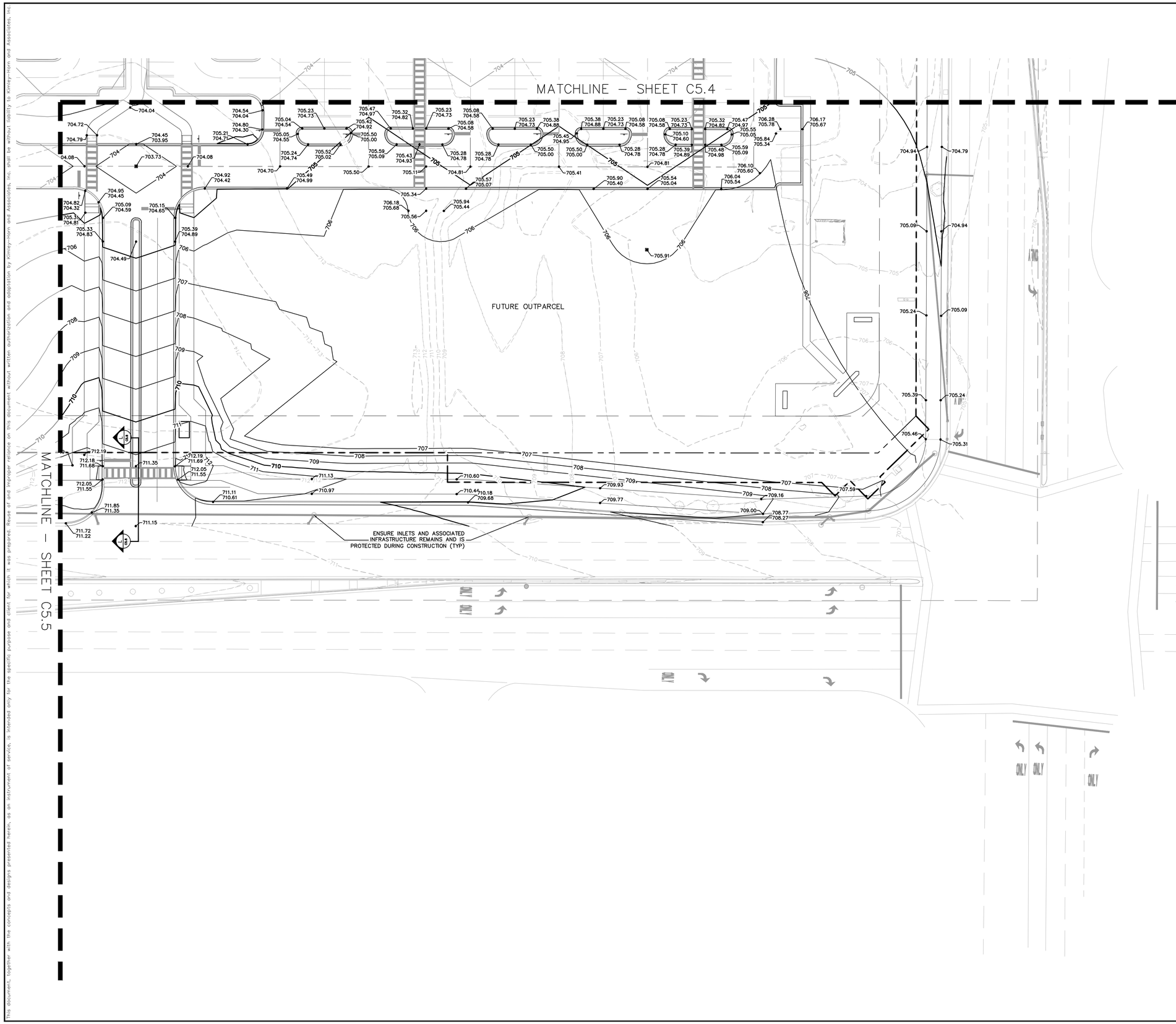

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XXX	EXISTING CONTOUR
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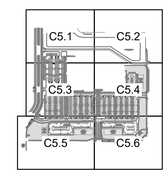
X.XX%	SLOPE AND FLOW DIRECTION
	100-YEAR OVERLAND OVERFLOW ROUTE
	PROPOSED SWALE
	RIP RAP (SEE DETAILS)
	PROPOSED OPEN LID STORM STRUCTURE
	PROPOSED OPEN LID STORM STRUCTURE
	PROPOSED CATCH BASIN
	PROPOSED 2' INLET



KEY MAP:
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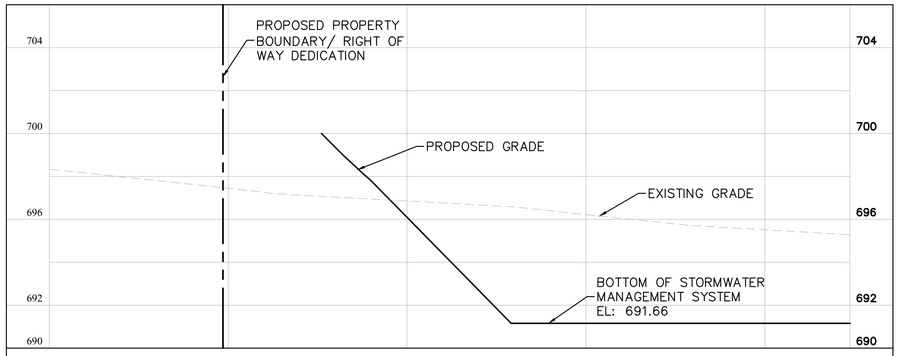

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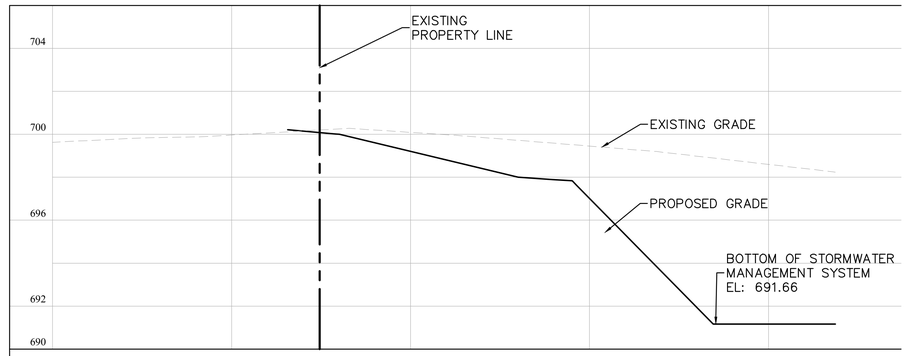

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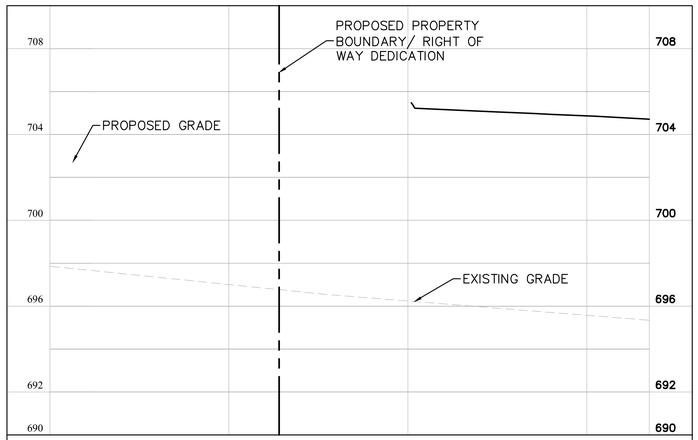

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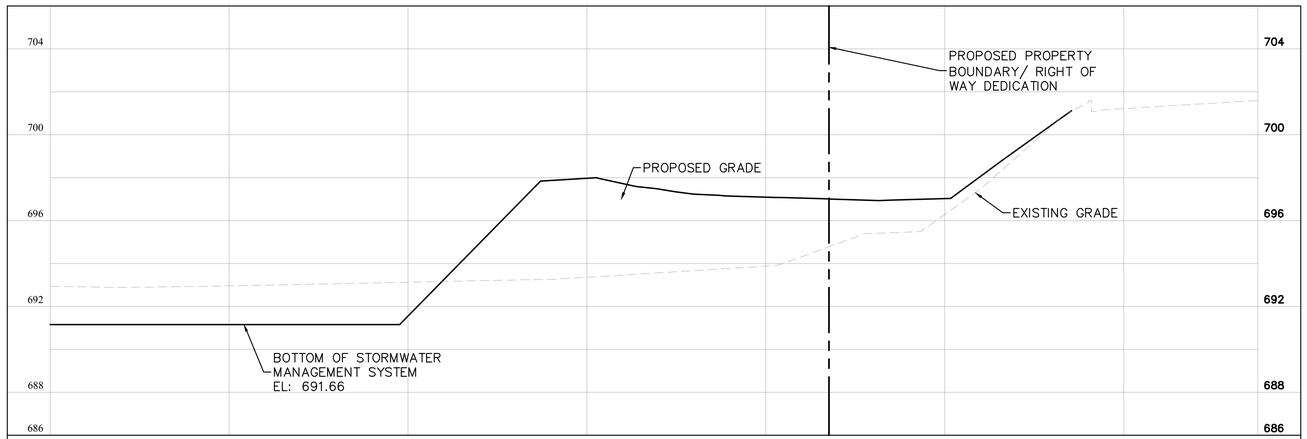

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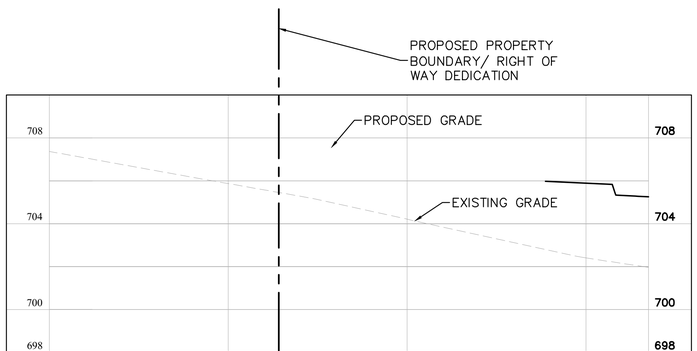

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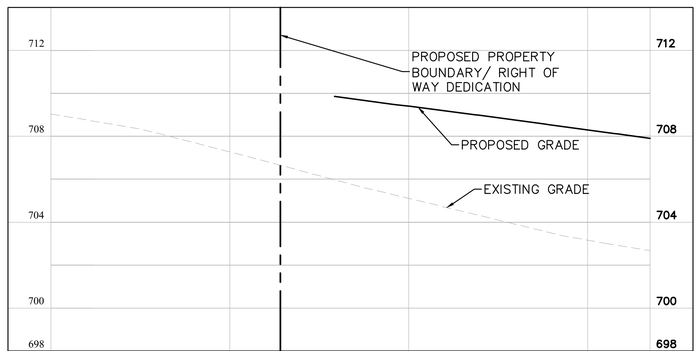

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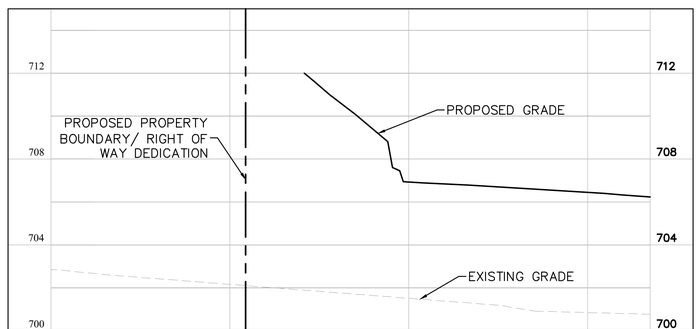

SECTION G–G

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CROSS SECTIONS

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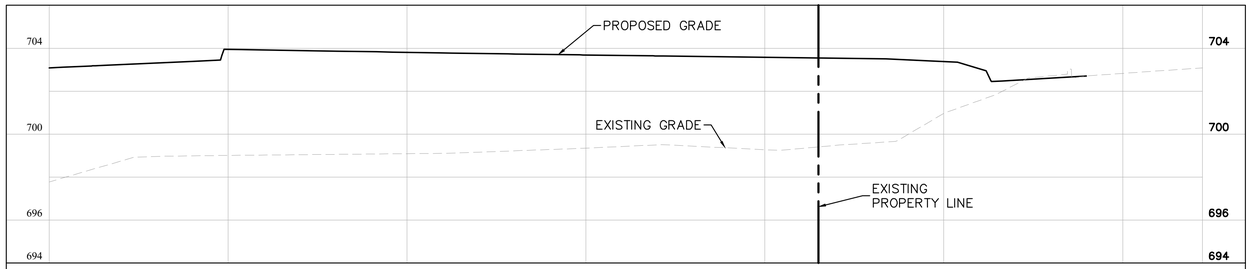

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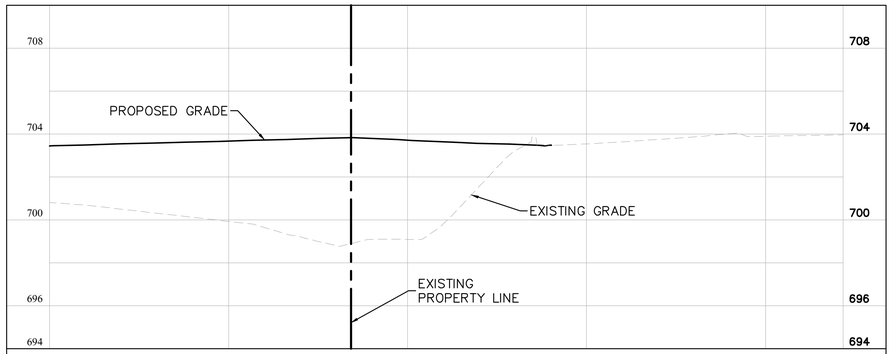

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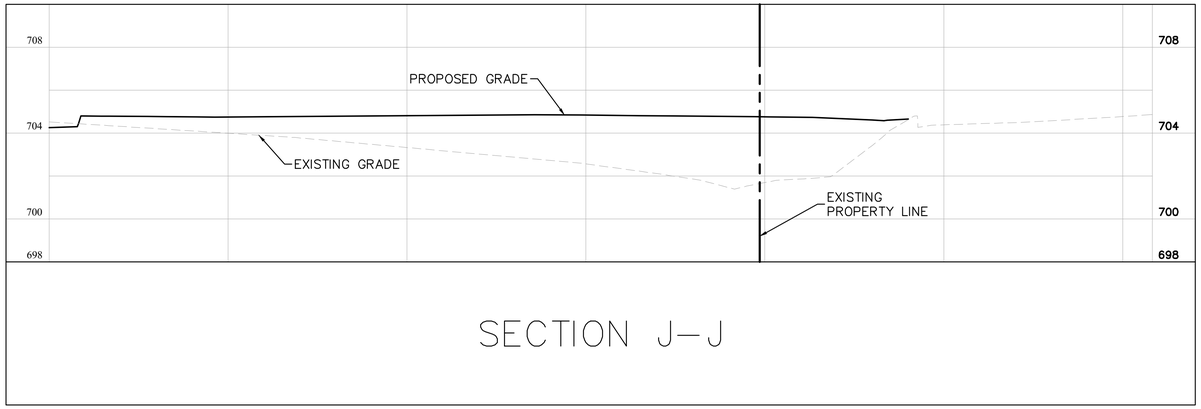

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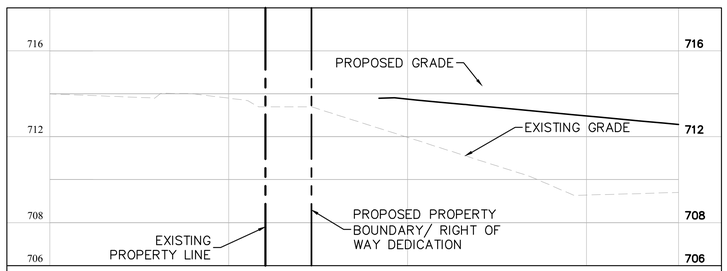
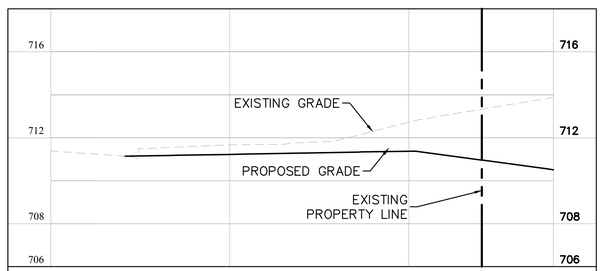


SECTION K–K



SECTION L–L

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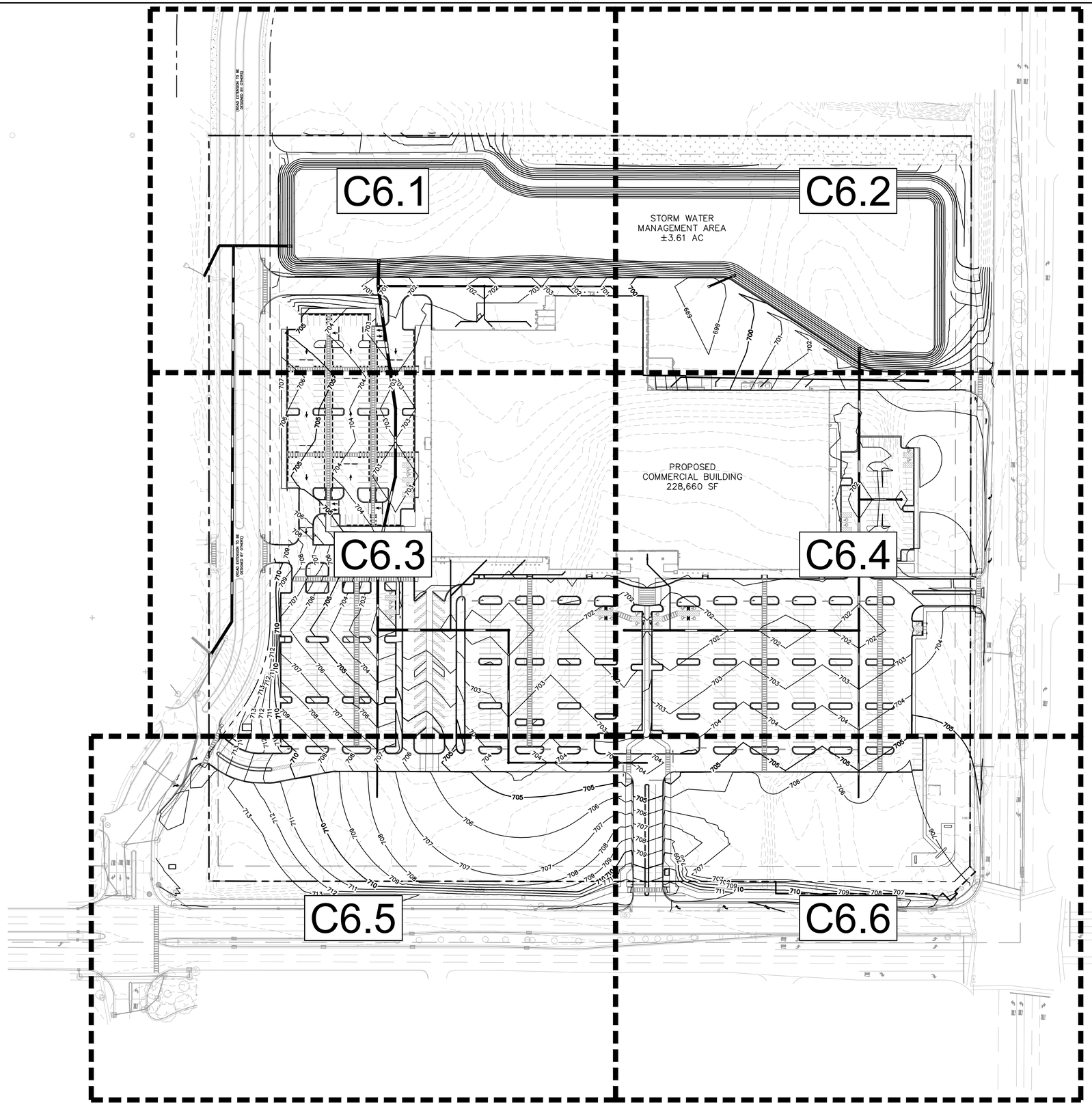

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NORTH

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DRAINAGE LEGEND

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– – XXX – –	EXISTING CONTOUR
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—·····→	PROPOSED SWALE
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	PROPOSED CATCH BASIN
	PROPOSED 2' INLET

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OVERALL DRAINAGE PLAN

159TH & LAGRANGE RETAIL

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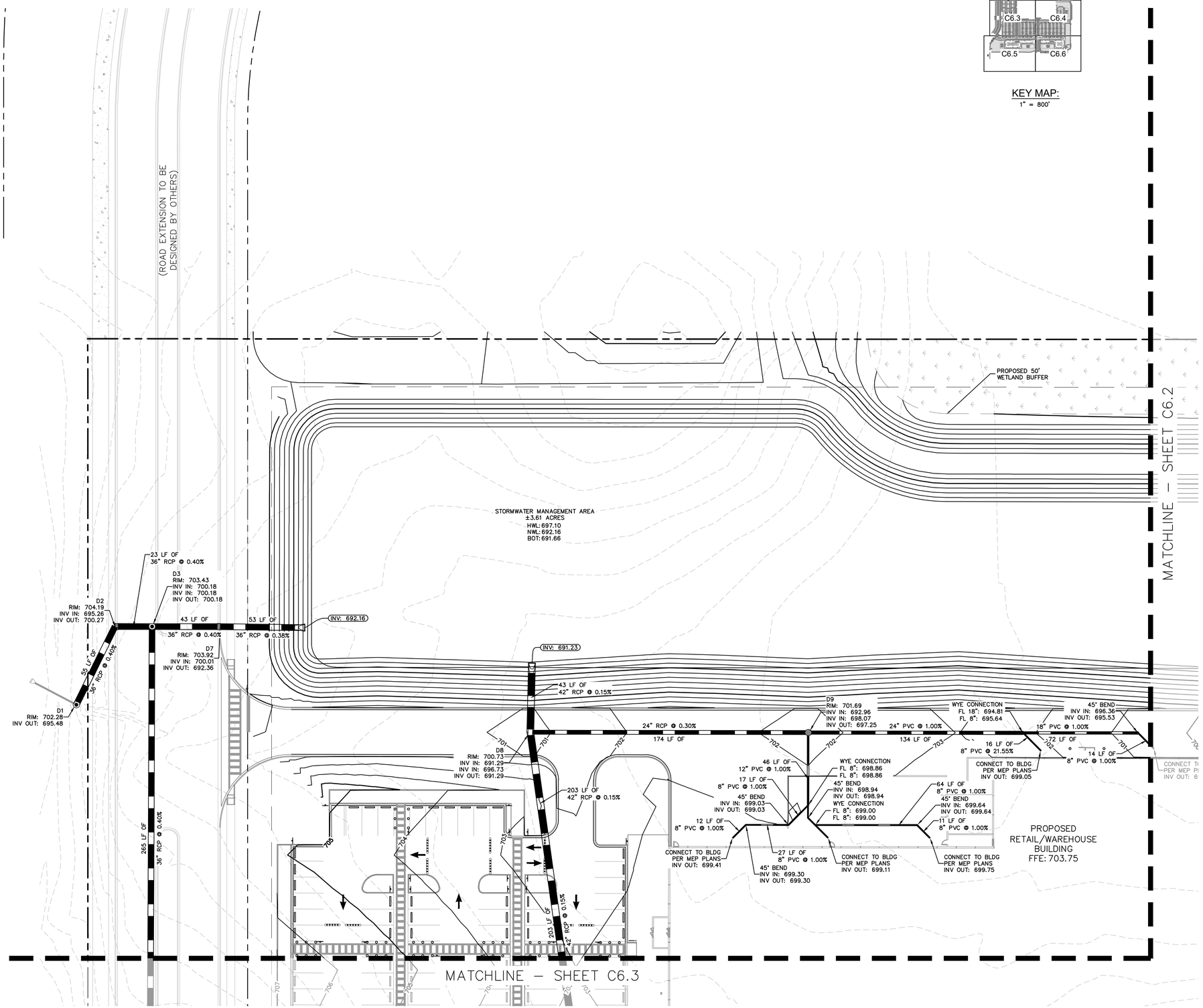

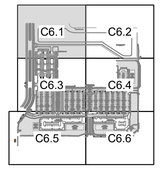

KEY MAP:
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NORTH

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- PROPOSED CATCH BASIN
- PROPOSED 2' INLET

STORM STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
D1	CLOSED LID MANHOLE RIM: 702.28 INV OUT: 695.48 (NW, 36")
D2	2' CURB INLET RIM: 704.19 INV IN: 695.26 (SE, 36") INV OUT: 700.27 (N, 36")
D3	CLOSED LID MANHOLE RIM: 703.43 INV IN: 700.18 (E, 36") INV IN: 700.18 (S, 36") INV OUT: 700.18 (N, 36")
D7	2' CURB INLET RIM: 703.92 INV IN: 700.01 (S, 36") INV OUT: 692.36 (N, 36")
D8	CATCH BASIN RIM: 700.73 INV IN: 691.29 (E, 42") INV IN: 696.73 (N, 24") INV OUT: 691.29 (W, 42")
D9	OPEN LID MANHOLE RIM: 701.69 INV IN: 692.96 (N, 24") INV IN: 698.07 (E, 12") INV OUT: 697.25 (S, 24")

STORM STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
FES 1	FLARED END SECTION INV IN: 692.16 (S, 36")
FES 2	FLARED END SECTION INV IN: 691.23 (E, 42")

No.	REVISIONS	DATE	BY

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CHECKED BY XXX

DRAINAGE PLAN

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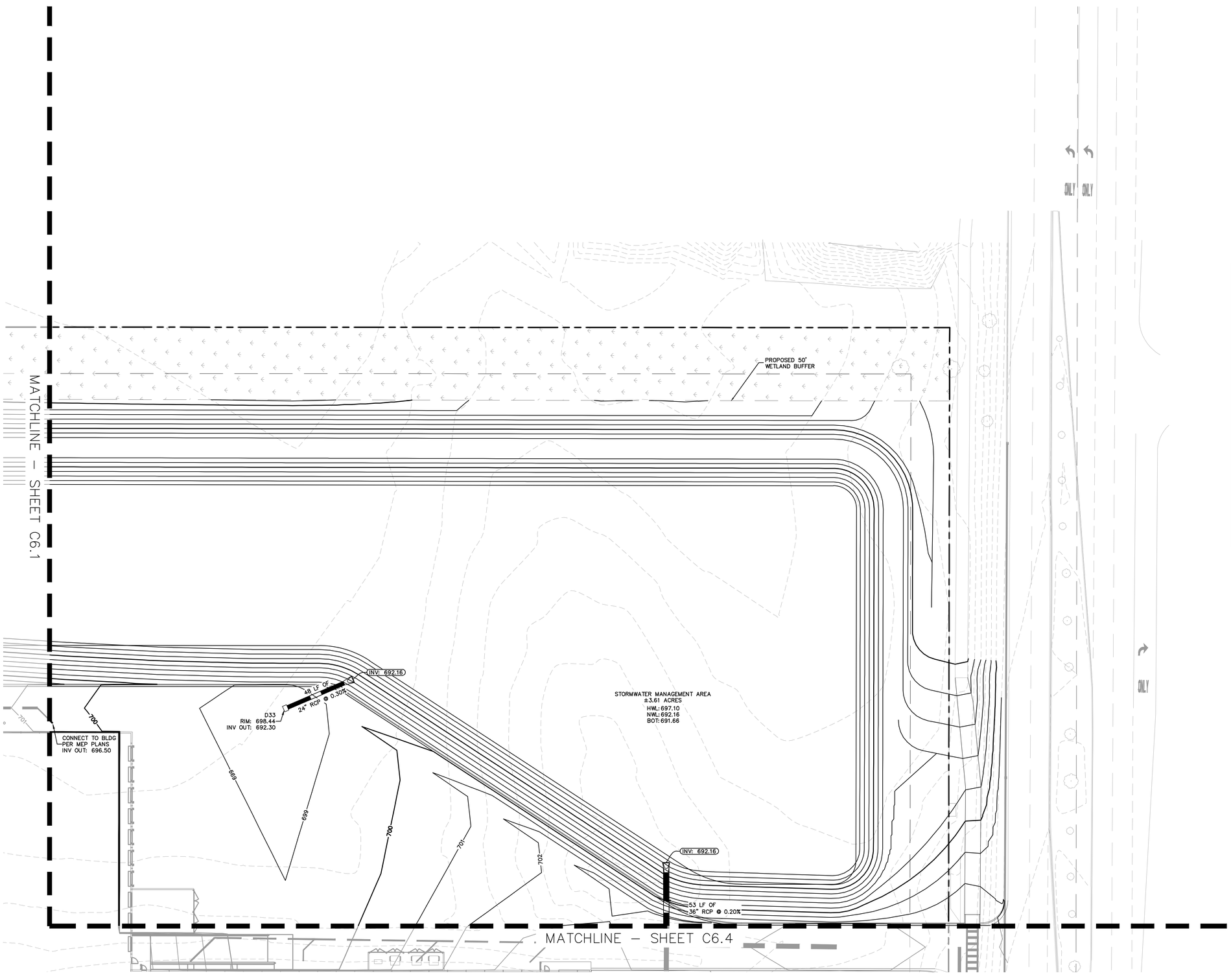

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NORTH

GRAPHIC SCALE IN FEET
0 15 30 60

DRAINAGE NOTES

1. ALL PAVEMENT SPOT GRADE ELEVATIONS AND RIM ELEVATIONS WITHIN OR ALONG CURB AND GUTTER REFER TO FLOW LINE ELEVATIONS UNLESS OTHERWISE NOTED.
2. ALL ELEVATIONS SHOWN DEPICT FINISHED GRADE UNLESS OTHERWISE NOTED. GENERAL CONTRACTOR TO COORDINATE WITH EXCAVATION, LANDSCAPE AND PAVING SUBCONTRACTORS REGARDING TOPSOIL THICKNESS FOR LANDSCAPE AREAS AND PAVEMENT SECTION THICKNESS FOR PAVED AREAS TO PROPERLY ENSURE ADEQUATE CUT TO ESTABLISH SUBGRADE ELEVATIONS.
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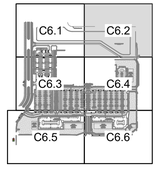
- X.XX% — SLOPE AND FLOW DIRECTION
- 100-YEAR OVERLAND OVERFLOW ROUTE
- PROPOSED SWALE
- RIP RAP (SEE DETAILS)
- PROPOSED STORM SEWER LINE
- PROPOSED OPEN LID STORM STRUCTURE (PAVEMENT USE NEENAH R-2540) (GRASS USE NEENAH R-4340-B BEEHIVE)
- PROPOSED CLOSED LID STORM STRUCTURE (PAVEMENT USE NEENAH R-1772) (GRASS USE NEENAH R-1786)
- PROPOSED CATCH BASIN
- PROPOSED 2' INLET

STORM STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
D33	CATCH BASIN RIM: 698.44 INV OUT: 692.30 (NW, 24")

STORM STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
FES 3	FES INV IN: 692.16 (SE, 24")
FES 4	FES INV IN: 692.16 (E, 36")



KEY MAP:
1" = 800'

No.	REVISIONS	DATE	BY

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DATE 11/14/2025
SCALE AS SHOWN
DESIGNED BY XXX
DRAWN BY XXX
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DRAINAGE PLAN

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
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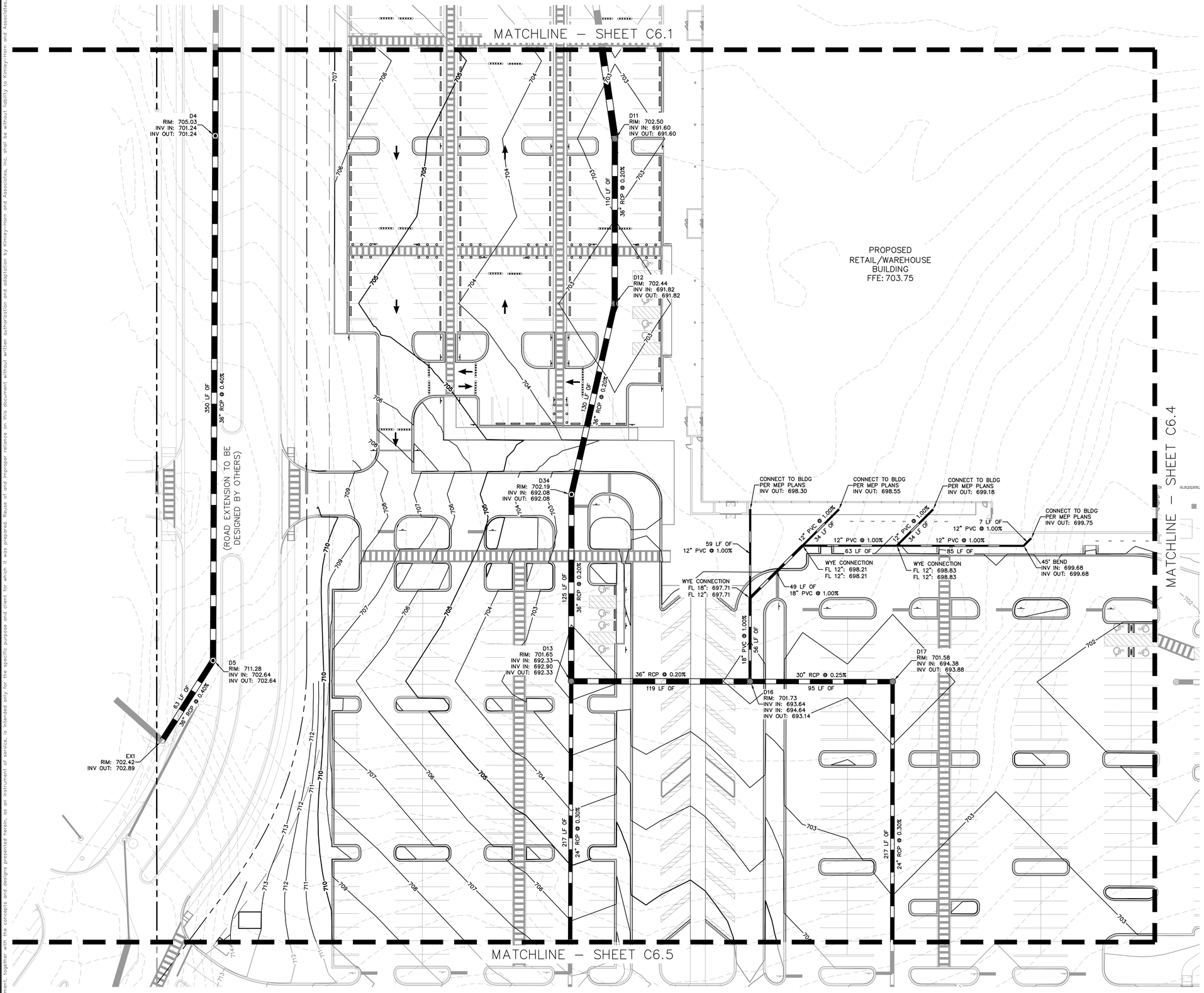

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GRAPHIC SCALE IN FEET
0 15 30 60

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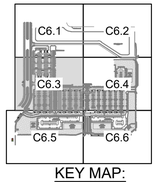
PROPOSED CATCH BASIN
PROPOSED 2' INLET

STORM STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
D4	CLOSED LID MANHOLE RIM: 705.03 INV IN: 701.24 (E, 36") INV OUT: 701.24 (W, 36")
D5	CLOSED LID MANHOLE RIM: 711.28 INV IN: 702.64 (SE, 36") INV OUT: 702.64 (W, 36")
D11	OPEN LID MANHOLE RIM: 702.50 INV IN: 691.60 (E, 36") INV OUT: 691.60 (W, 42")
D12	OPEN LID MANHOLE RIM: 702.44 INV IN: 691.82 (E, 36") INV OUT: 691.82 (W, 36")
D13	OPEN LID MANHOLE RIM: 701.65 INV IN: 692.33 (E, 24") INV IN: 692.90 (N, 36") INV OUT: 692.33 (W, 36")
D16	OPEN LID MANHOLE RIM: 701.73 INV IN: 693.64 (N, 30") INV IN: 694.64 (W, 18") INV OUT: 693.14 (S, 36")
D17	OPEN LID MANHOLE RIM: 701.58 INV IN: 694.38 (E, 24") INV OUT: 693.88 (S, 30")
D34	MH – CLOSED LID RIM: 702.19 INV IN: 692.08 (E, 36") INV OUT: 692.08 (W, 36")
EX1	CONNECT TO EXISTING STORM INLET #3771 RIM: 702.42 INV OUT: 702.89 (NW, 36")



KEY MAP:
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DRAINAGE PLAN

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

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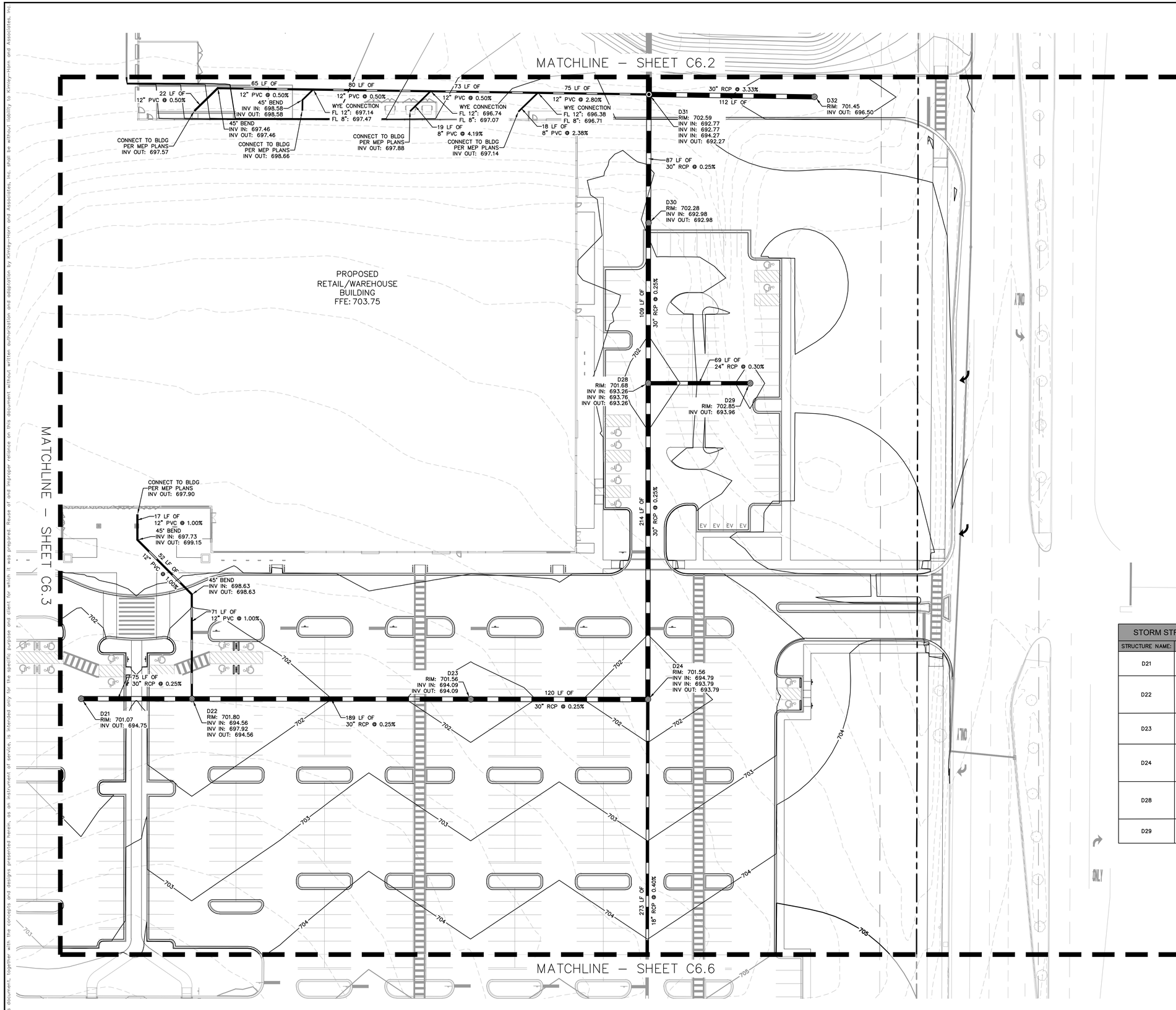

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DRAINAGE NOTES

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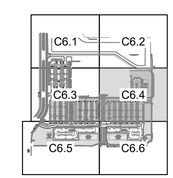
PROPOSED CATCH BASIN
PROPOSED 2' INLET

STORM STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
D21	OPEN LID MANHOLE RIM: 701.07 INV OUT: 694.75 (N, 30")
D22	OPEN LID MANHOLE RIM: 701.80 INV IN: 694.56 (S, 30") INV IN: 697.92 (W, 12") INV OUT: 694.56 (N, 30")
D23	OPEN LID MANHOLE RIM: 701.56 INV IN: 694.09 (S, 30") INV OUT: 694.09 (N, 30")
D24	OPEN LID MANHOLE RIM: 701.56 INV IN: 694.79 (E, 18") INV IN: 693.79 (S, 30") INV OUT: 693.79 (W, 30")
D28	OPEN LID MANHOLE RIM: 701.68 INV IN: 693.26 (E, 30") INV IN: 693.76 (N, 24") INV OUT: 693.26 (W, 30")
D29	OPEN LID MANHOLE RIM: 702.85 INV OUT: 693.96 (S, 24")

STORM STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
D30	OPEN LID MANHOLE RIM: 702.28 INV IN: 692.98 (E, 30") INV OUT: 692.98 (W, 30")
D31	MH – CLOSED LID RIM: 702.59 INV IN: 692.77 (E, 30") INV IN: 692.77 (N, 30") INV IN: 694.27 (S, 12") INV OUT: 692.27 (W, 36")
D32	OPEN LID MANHOLE RIM: 701.45 INV OUT: 696.50 (S, 30")



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DRAINAGE PLAN

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
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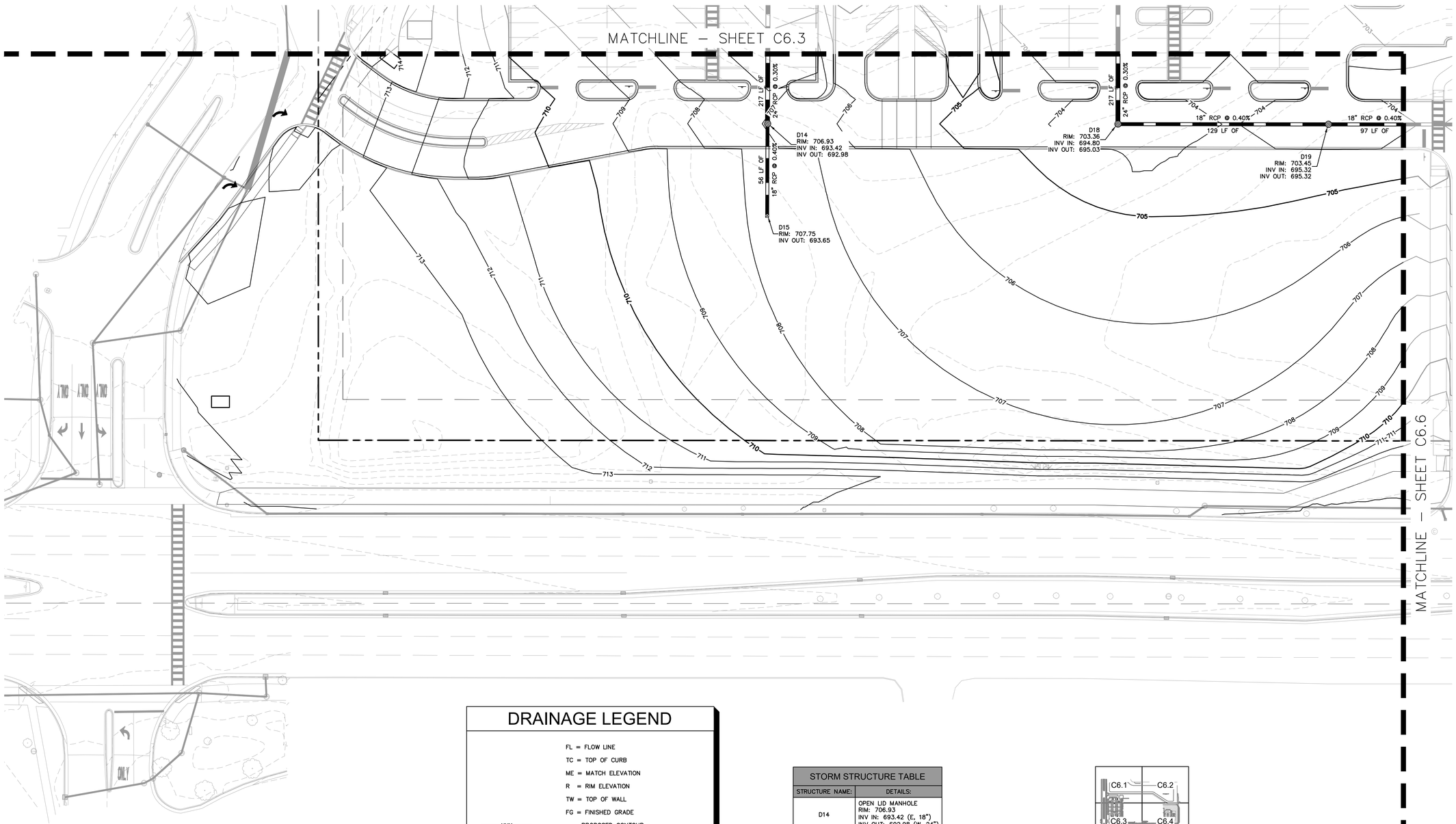

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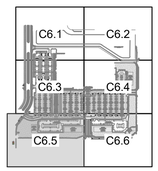
PROPOSED CATCH BASIN
PROPOSED 2' INLET

STORM STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
D14	OPEN LID MANHOLE RIM: 706.93 INV IN: 693.42 (E, 18") INV OUT: 692.98 (W, 24")
D15	2' INLET RIM: 707.75 INV OUT: 693.65 (W, 18")
D18	OPEN LID MANHOLE RIM: 703.36 INV IN: 694.80 (N, 18") INV OUT: 695.03 (W, 24")
D19	OPEN LID MANHOLE RIM: 703.45 INV IN: 695.32 (N, 18") INV OUT: 695.32 (S, 18")



KEY MAP:
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DRAINAGE PLAN

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
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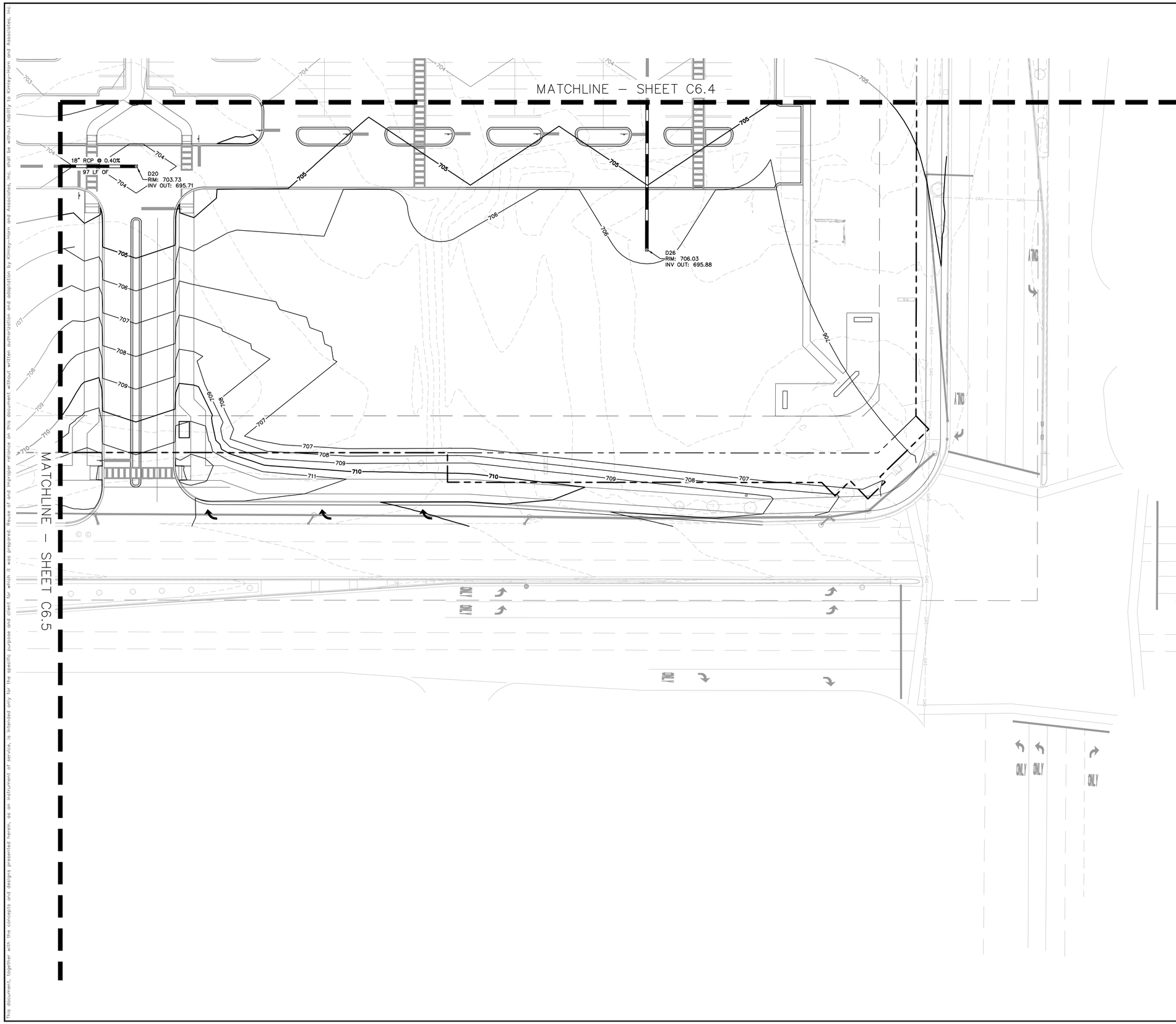

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NORTH

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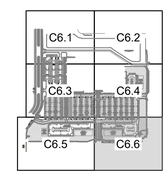
STORM STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
D20	2' INLET RIM: 703.73 INV OUT: 695.71 (S, 18")
D26	2' INLET RIM: 706.03 INV OUT: 695.88 (W, 18")



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DRAINAGE PLAN

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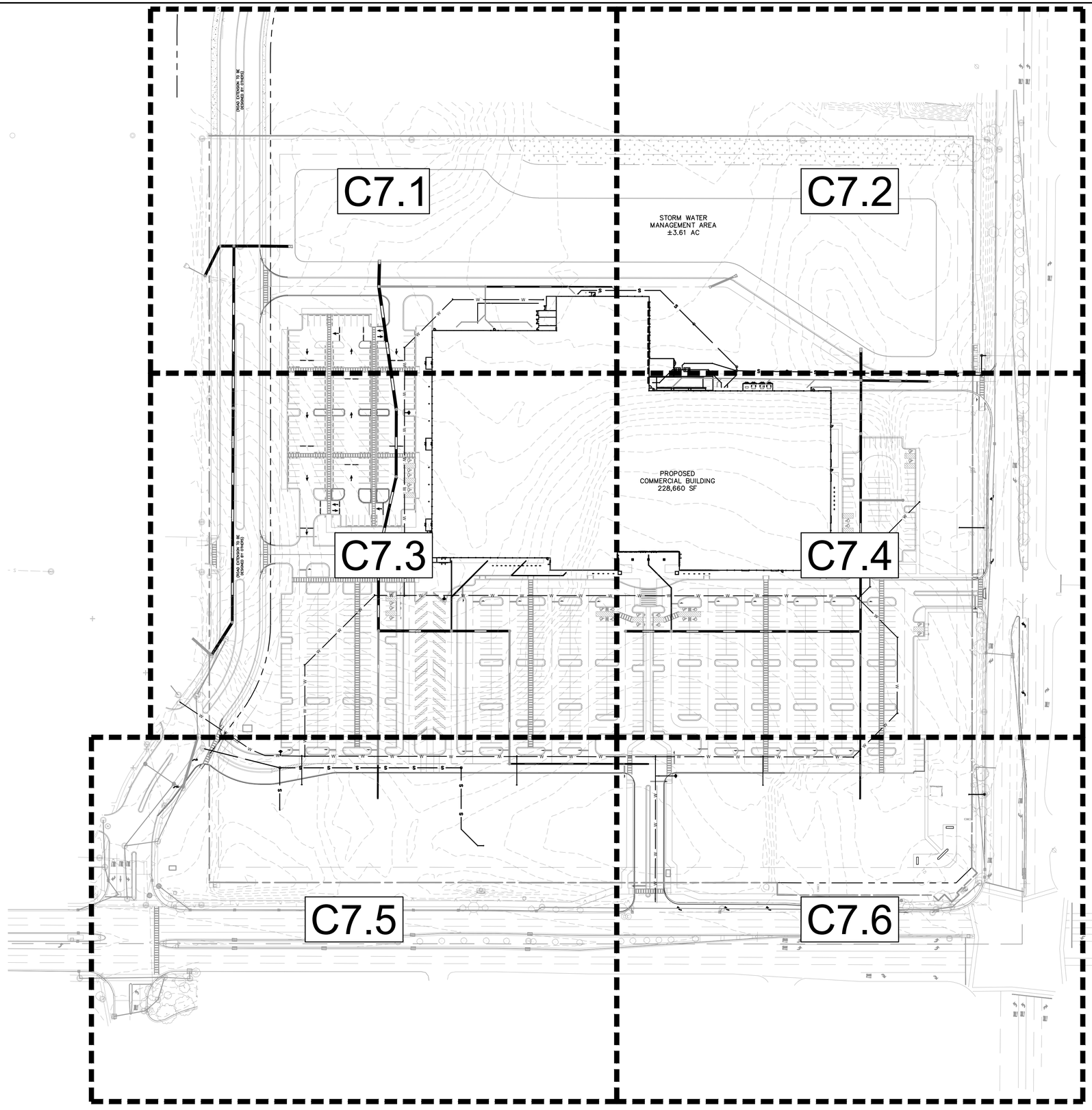

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NORTH

GRAPHIC SCALE IN FEET
0 40 80 160

UTILITY NOTES

1. ALL WATER LINES ≥ 3" SHALL BE DUCTILE IRON PIPE, CLASS 52.
2. ALL SANITARY SEWER LINES SHALL BE PVC MEETING, ASTM D-3034 SDR 26 EXCEPT FOR SANITARY SEWER THAT CROSSES ABOVE WATER MAIN, THIS PIPE SHALL BE AWWA C900 (UNLESS WATER MAIN CASING IS UTILIZED). PROVIDE 42" MINIMUM COVER.
3. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.
4. ALL ELECTRIC AND TELEPHONE EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.
5. CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED BY THE ENGINEER FROM THE APPROPRIATE GOVERNING AUTHORITY AND CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER.
6. CONTRACTOR TO CALL "JULIE" (1-800-892-0123) TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.
7. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OTHER UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE ENGINEER AND THE OWNER/DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION. THE MUNICIPALITY SHALL BE NOTIFIED OF ANY AND ALL CHANGES TO THE DESIGN PLANS.
8. CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE, BUT NOT LIMITED FOR ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS REQUIRED BY OSHA.
9. CONTRACTOR TO AVOID DISRUPTION OF ANY ADJACENT TENANT'S TRAFFIC OPERATIONS DURING INSTALLATION OF UTILITIES.
10. ALL DIMENSIONS ARE TO CENTERLINE OF PIPE OR CENTER OF MANHOLE UNLESS NOTED OTHERWISE.
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UTILITY LEGEND

- EX. WATER LINE
- EX. TRAFFIC MANHOLE
- EX. SANITARY SEWER LINE
- EX. SANITARY SEWER MANHOLE
- EX. STORM DRAIN LINE
- EX. STORM MANHOLE
- EX. STORM STRUCTURE/INLET
- EX. GAS LINE
- UTILITY POLE
- EX. OVERHEAD TRANSMISSION LINE
- EX. UNDERGROUND TELEPHONE LINE
- EX. TELEPHONE MANHOLE
- PROPOSED STORM SEWER LINE
- PROPOSED OPEN LID STORM STRUCTURE (PAVEMENT USE NEENAH R-2540) (GRASS USE NEENAH R-4340-B BEEHIVE)
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- PROPOSED WATER LINE
- PROPOSED VALVE VAULT
- PROPOSED VALVE BOX
- PROPOSED FIRE HYDRANT
- PROPOSED LIGHT POLE
- RIP RAP (SEE DETAILS)

No.	REVISIONS	DATE	BY

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WARRENVILLE, ILLINOIS 60555
630-487-5550
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KHA PROJECT 149621089
DATE 11/14/2025
SCALE AS SHOWN
DESIGNED BY XXX
DRAWN BY XXX
CHECKED BY XXX

OVERALL UTILITY PLAN

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
C7.0

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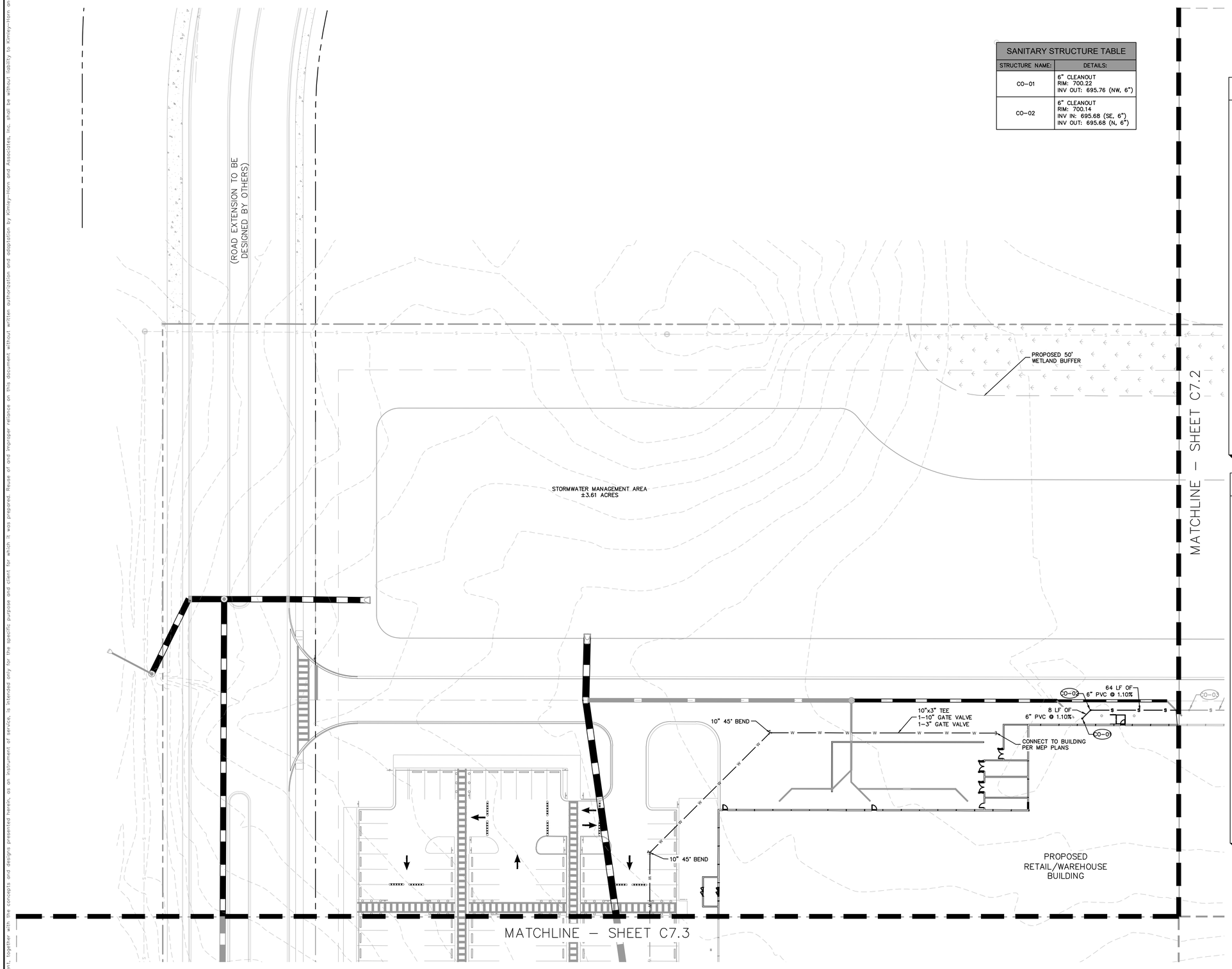

SANITARY STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
CO-01	6" CLEANOUT RIM: 700.22 INV OUT: 695.76 (NW, 6")
CO-02	6" CLEANOUT RIM: 700.14 INV IN: 695.68 (SE, 6") INV OUT: 695.68 (N, 6")

Call Before You Dig
JULIE
1-800-892-0123

NORTH

GRAPHIC SCALE IN FEET
0 15 30 60

UTILITY NOTES

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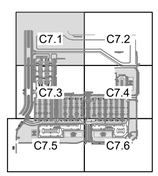

KEY MAP:
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UTILITY PLAN

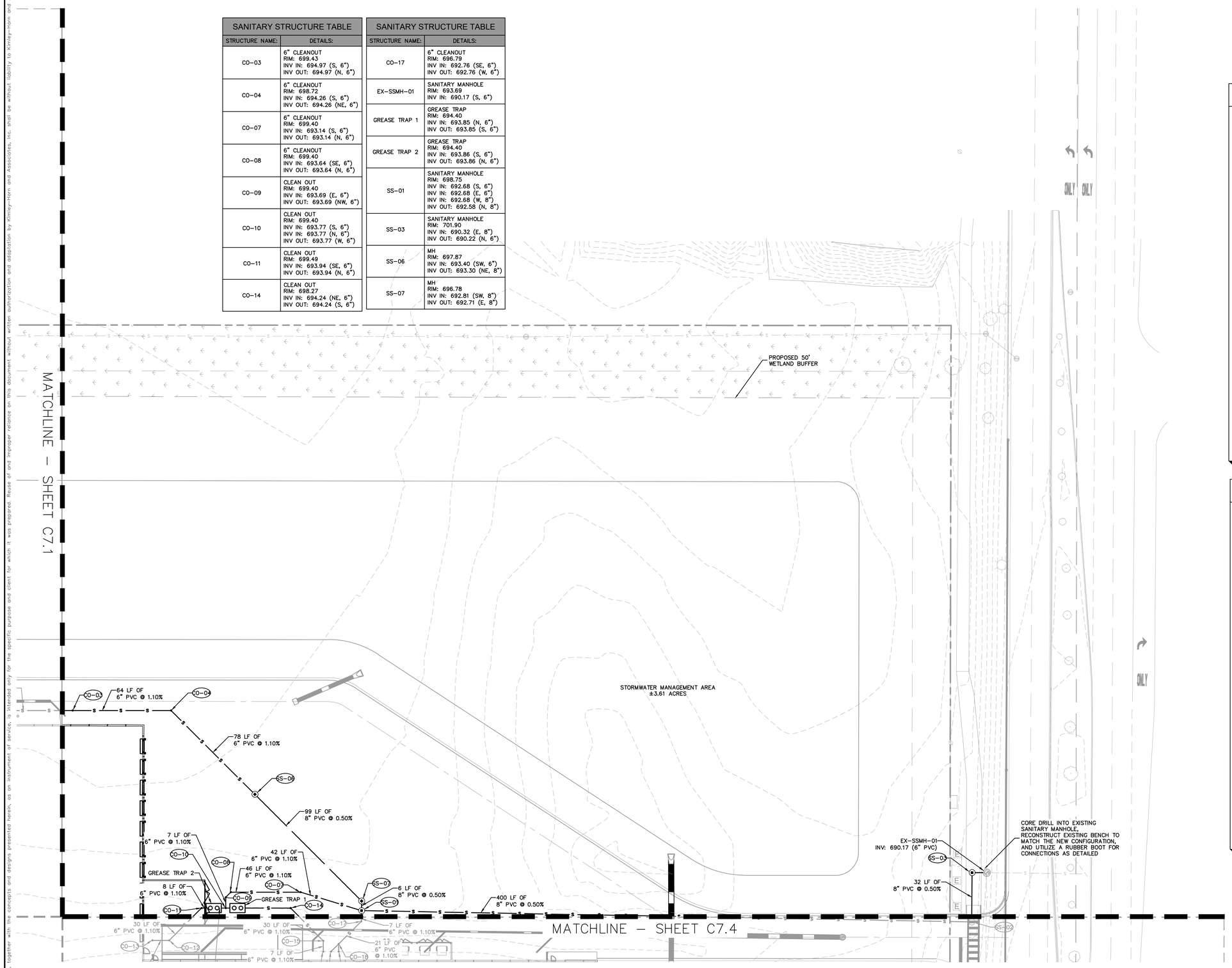
159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
C7.1

SANITARY STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
CO-03	6" CLEANOUT RIM: 699.43 INV IN: 694.97 (S, 6") INV OUT: 694.97 (N, 6")
CO-04	6" CLEANOUT RIM: 698.72 INV IN: 694.26 (S, 6") INV OUT: 694.26 (NE, 6")
CO-07	6" CLEANOUT RIM: 699.40 INV IN: 693.14 (S, 6") INV OUT: 693.14 (N, 6")
CO-08	6" CLEANOUT RIM: 699.40 INV IN: 693.64 (SE, 6") INV OUT: 693.64 (N, 6")
CO-09	CLEAN OUT RIM: 699.40 INV IN: 693.69 (E, 6") INV OUT: 693.69 (NW, 6")
CO-10	CLEAN OUT RIM: 699.40 INV IN: 693.77 (S, 6") INV IN: 693.77 (N, 6") INV OUT: 693.77 (W, 6")
CO-11	CLEAN OUT RIM: 699.49 INV IN: 693.94 (SE, 6") INV OUT: 693.94 (N, 6")
CO-14	CLEAN OUT RIM: 698.27 INV IN: 694.24 (NE, 6") INV OUT: 694.24 (S, 6")

SANITARY STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
CO-17	6" CLEANOUT RIM: 696.79 INV IN: 692.76 (SE, 6") INV OUT: 692.76 (W, 6")
EX-SSMH-01	SANITARY MANHOLE RIM: 693.69 INV IN: 690.17 (S, 6")
GREASE TRAP 1	GREASE TRAP RIM: 694.40 INV IN: 693.85 (N, 6") INV OUT: 693.85 (S, 6")
GREASE TRAP 2	GREASE TRAP RIM: 694.40 INV IN: 693.86 (S, 6") INV OUT: 693.86 (N, 6")
SS-01	SANITARY MANHOLE RIM: 698.75 INV IN: 692.68 (S, 6") INV IN: 692.68 (E, 6") INV IN: 692.68 (W, 8") INV OUT: 692.58 (N, 8")
SS-03	SANITARY MANHOLE RIM: 701.90 INV IN: 690.32 (E, 8") INV OUT: 690.22 (N, 6")
SS-06	MH RIM: 697.87 INV IN: 693.40 (SW, 6") INV OUT: 693.30 (NE, 8")
SS-07	MH RIM: 696.78 INV IN: 692.81 (SW, 8") INV OUT: 692.71 (E, 8")



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NORTH

GRAPHIC SCALE IN FEET
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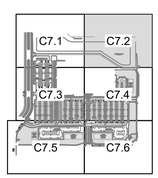

KEY MAP:
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UTILITY PLAN

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
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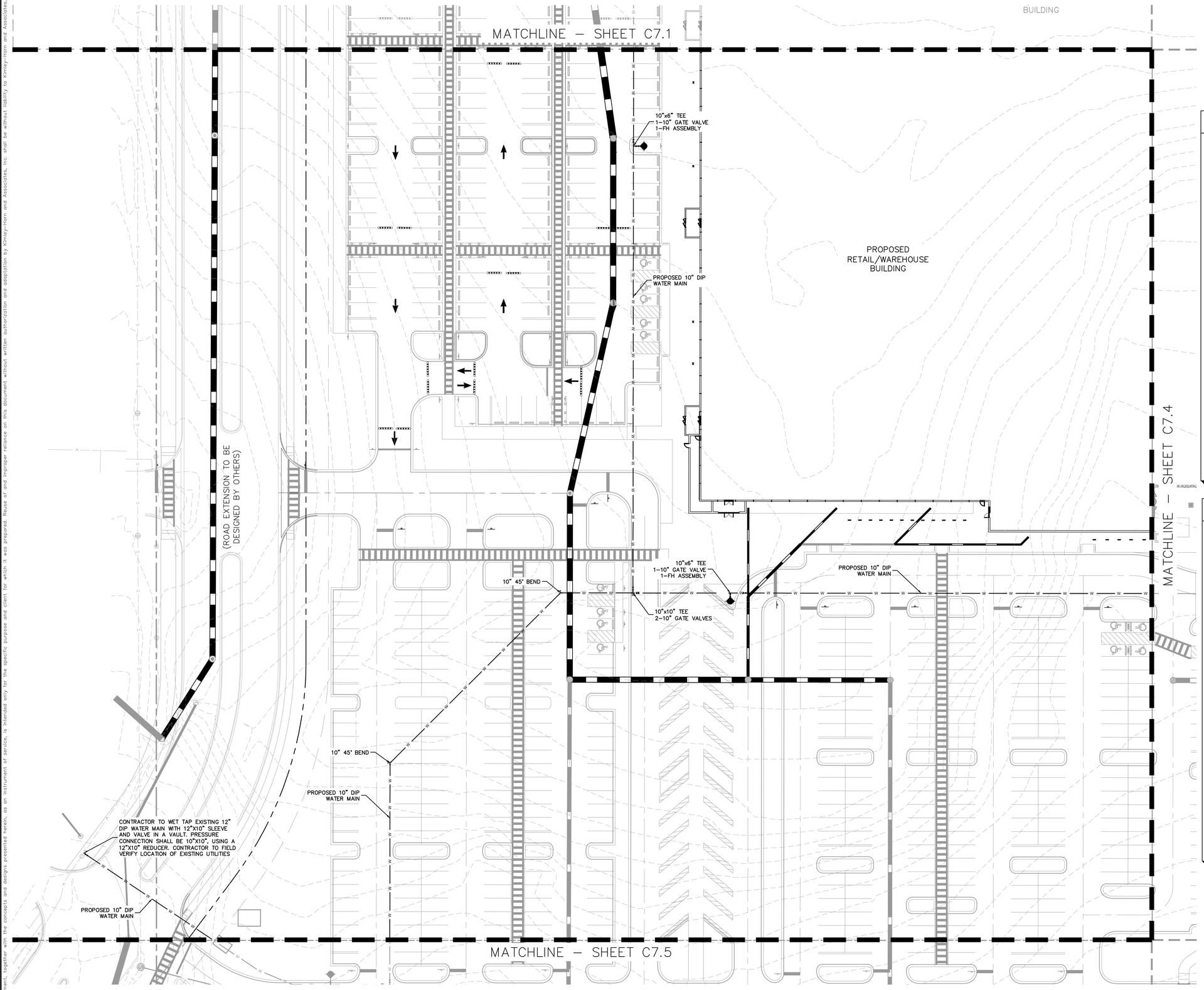

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1-800-892-0123

NORTH

GRAPHIC SCALE IN FEET
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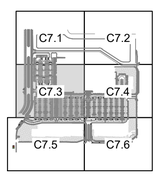

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UTILITY PLAN

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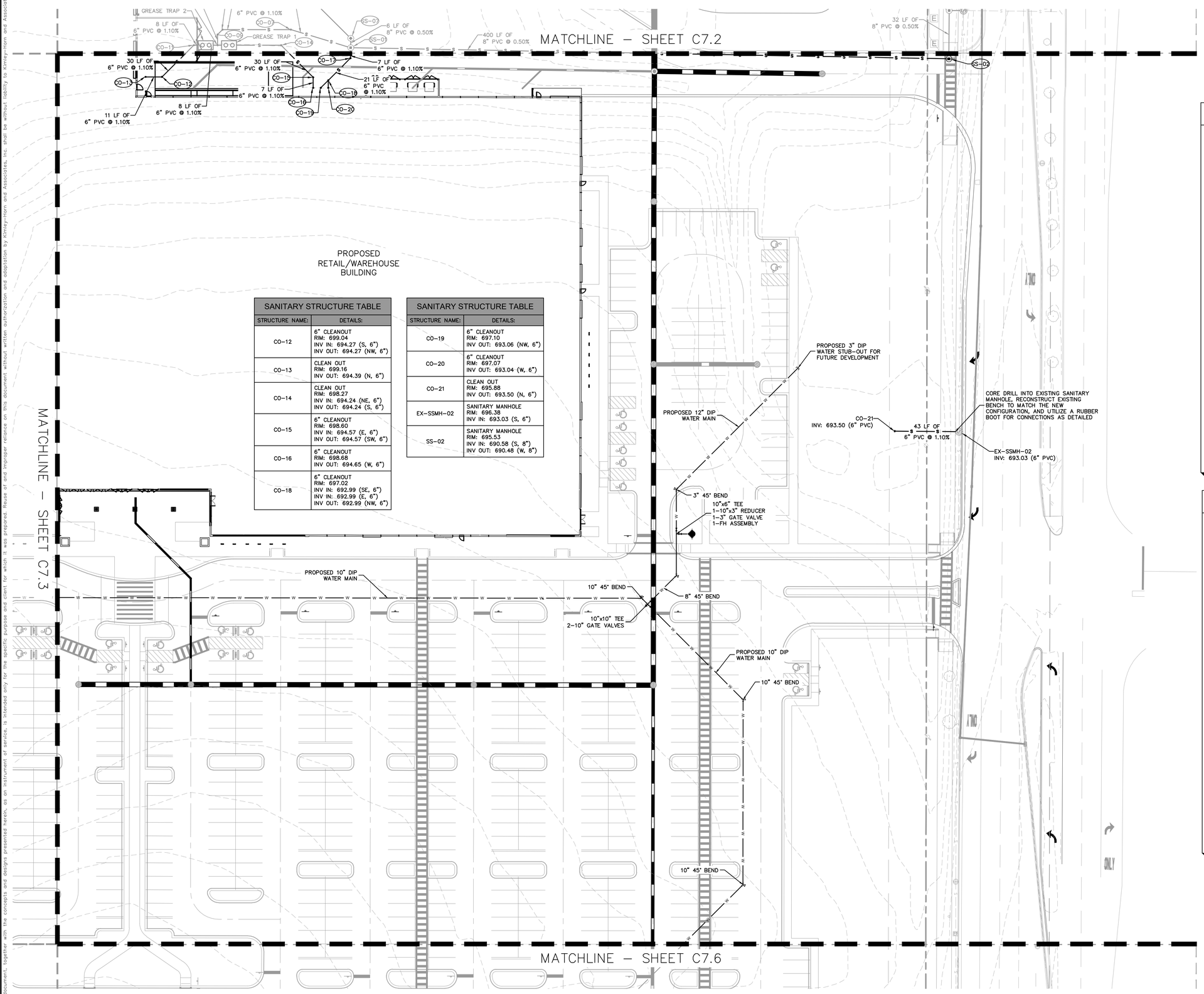

SANITARY STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
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CO-13	CLEAN OUT RIM: 699.16 INV OUT: 694.39 (N, 6")
CO-14	CLEAN OUT RIM: 698.27 INV IN: 694.24 (NE, 6") INV OUT: 694.24 (S, 6")
CO-15	6" CLEANOUT RIM: 698.60 INV IN: 694.57 (E, 6") INV OUT: 694.57 (SW, 6")
CO-16	6" CLEANOUT RIM: 698.68 INV OUT: 694.65 (W, 6")
CO-18	6" CLEANOUT RIM: 697.02 INV IN: 692.99 (SE, 6") INV IN: 692.99 (E, 6") INV OUT: 692.99 (NW, 6")

SANITARY STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
CO-19	6" CLEANOUT RIM: 697.10 INV OUT: 693.06 (NW, 6")
CO-20	6" CLEANOUT RIM: 697.07 INV OUT: 693.04 (W, 6")
CO-21	CLEAN OUT RIM: 695.88 INV OUT: 693.50 (N, 6")
EX-SSMH-02	SANITARY MANHOLE RIM: 696.38 INV IN: 693.03 (S, 6")
SS-02	SANITARY MANHOLE RIM: 695.53 INV IN: 690.58 (S, 8") INV OUT: 690.48 (W, 8")

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10. ALL DIMENSIONS ARE TO CENTERLINE OF PIPE OR CENTER OF MANHOLE UNLESS NOTED OTHERWISE.
11. LIGHT POLES SHOWN FOR COORDINATION PURPOSES ONLY AND DO NOT REPRESENT ACTUAL SIZE. SEE SITE LIGHTING PLANS BY OTHERS FOR MORE INFORMATION.

UTILITY LEGEND

- EX. WATER LINE
- EX. TRAFFIC MANHOLE
- EX. SANITARY SEWER LINE
- EX. SANITARY SEWER MANHOLE
- EX. STORM DRAIN LINE
- EX. STORM MANHOLE
- EX. STORM STRUCTURE/INLET
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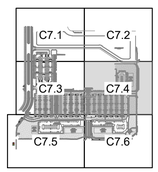
- PROPOSED SANITARY SEWER LINE
- PROPOSED SANITARY MANHOLE
- PROPOSED STORM/SANITARY CLEANOUT
- PROPOSED WATER LINE
- PROPOSED VALVE VAULT
- PROPOSED VALVE BOX
- PROPOSED FIRE HYDRANT
- PROPOSED LIGHT POLE
- RIP RAP (SEE DETAILS)



KEY MAP:
1" = 800'

No.	REVISIONS	DATE	BY

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WARRENVILLE, IL 60555
630-487-5550
WWW.KIMLEY-HORN.COM

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KHA PROJECT 149621089
DATE 11/14/2025
SCALE AS SHOWN
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DRAWN BY XXX
CHECKED BY XXX

UTILITY PLAN

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
C7.4

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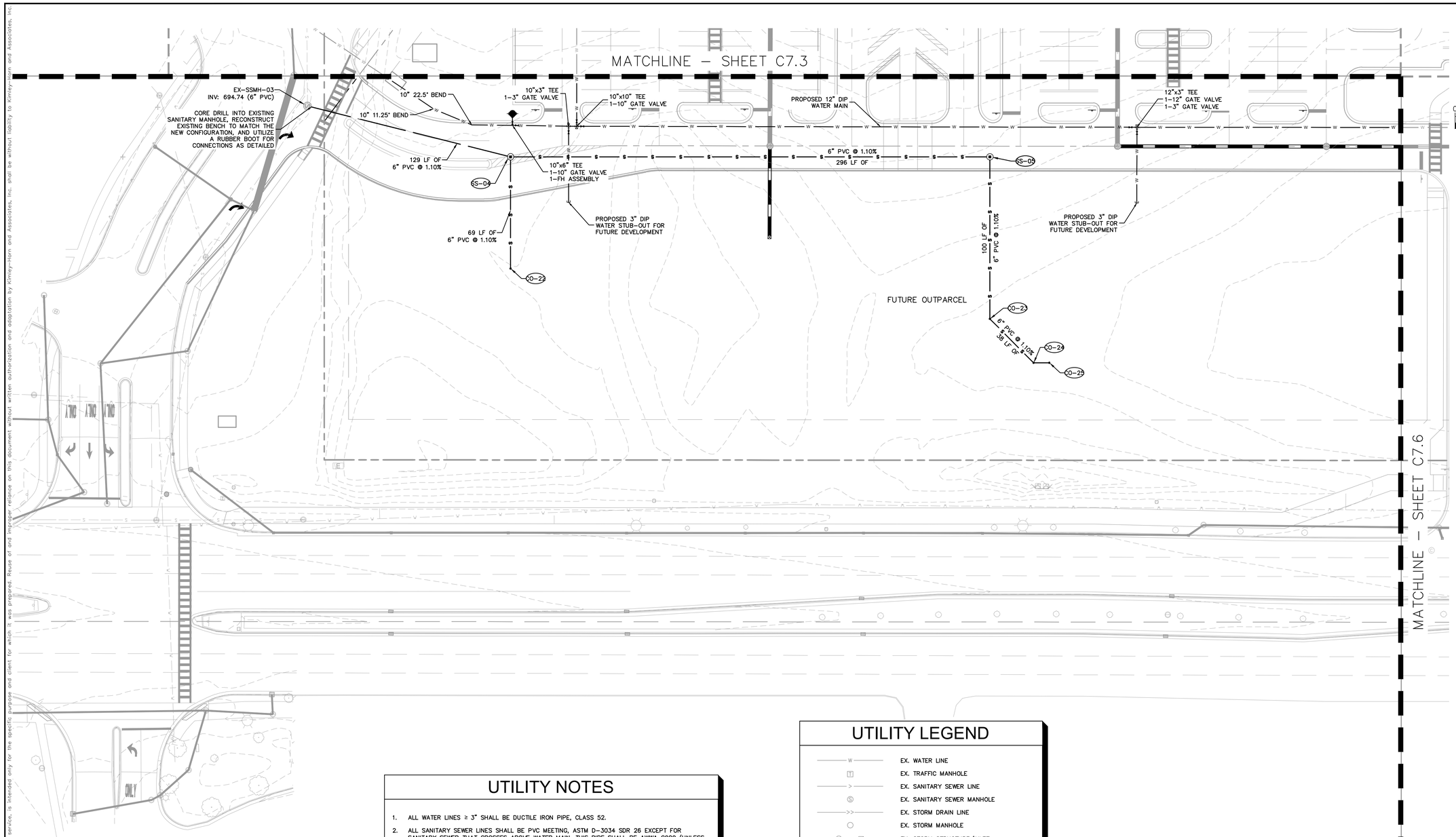

SANITARY STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:
CO-22	CLEAN OUT RIM: 711.62 INV OUT: 697.09 (W, 6")
CO-23	CLEAN OUT RIM: 706.24 INV IN: 700.69 (NE, 6") INV OUT: 700.69 (W, 6")
CO-24	CLEAN OUT RIM: 706.39 INV IN: 701.11 (N, 6") INV OUT: 701.11 (SW, 6")
CO-25	CLEAN OUT RIM: 706.34 INV OUT: 701.22 (S, 6")
EX-SSMH-03	SANITARY MANHOLE RIM: 698.37 INV IN: 694.74 (N, 6")
SS-04	SANITARY MANHOLE RIM: 710.65 INV IN: 696.33 (N, 6") INV IN: 696.33 (E, 6") INV OUT: 696.16 (S, 6")
SS-05	SANITARY MANHOLE RIM: 704.64 INV IN: 699.59 (E, 6") INV OUT: 699.59 (S, 6")

UTILITY NOTES

1. ALL WATER LINES ≥ 3" SHALL BE DUCTILE IRON PIPE, CLASS 52.
2. ALL SANITARY SEWER LINES SHALL BE PVC MEETING, ASTM D-3034 SDR 26 EXCEPT FOR SANITARY SEWER THAT CROSSES ABOVE WATER MAIN, THIS PIPE SHALL BE AWWA C900 (UNLESS WATER MAIN CASING IS UTILIZED). PROVIDE 42" MINIMUM COVER.
3. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.
4. ALL ELECTRIC AND TELEPHONE EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.
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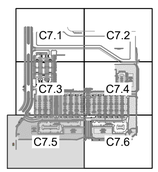

KEY MAP:
1" = 800'

Call Before You Dig
JULIE
1-800-892-0123

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630-487-5550
WWW.KIMLEY-HORN.COM

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XXXX
ILLINOIS LICENSE NUMBER
XXXX
DATE: 11/14/2025

KHA PROJECT 149621089
DATE 11/14/2025
SCALE AS SHOWN
DESIGNED BY XXX
DRAWN BY XXX
CHECKED BY XXX

UTILITY PLAN

159TH & LAGRANGE RETAIL
CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
C7.5

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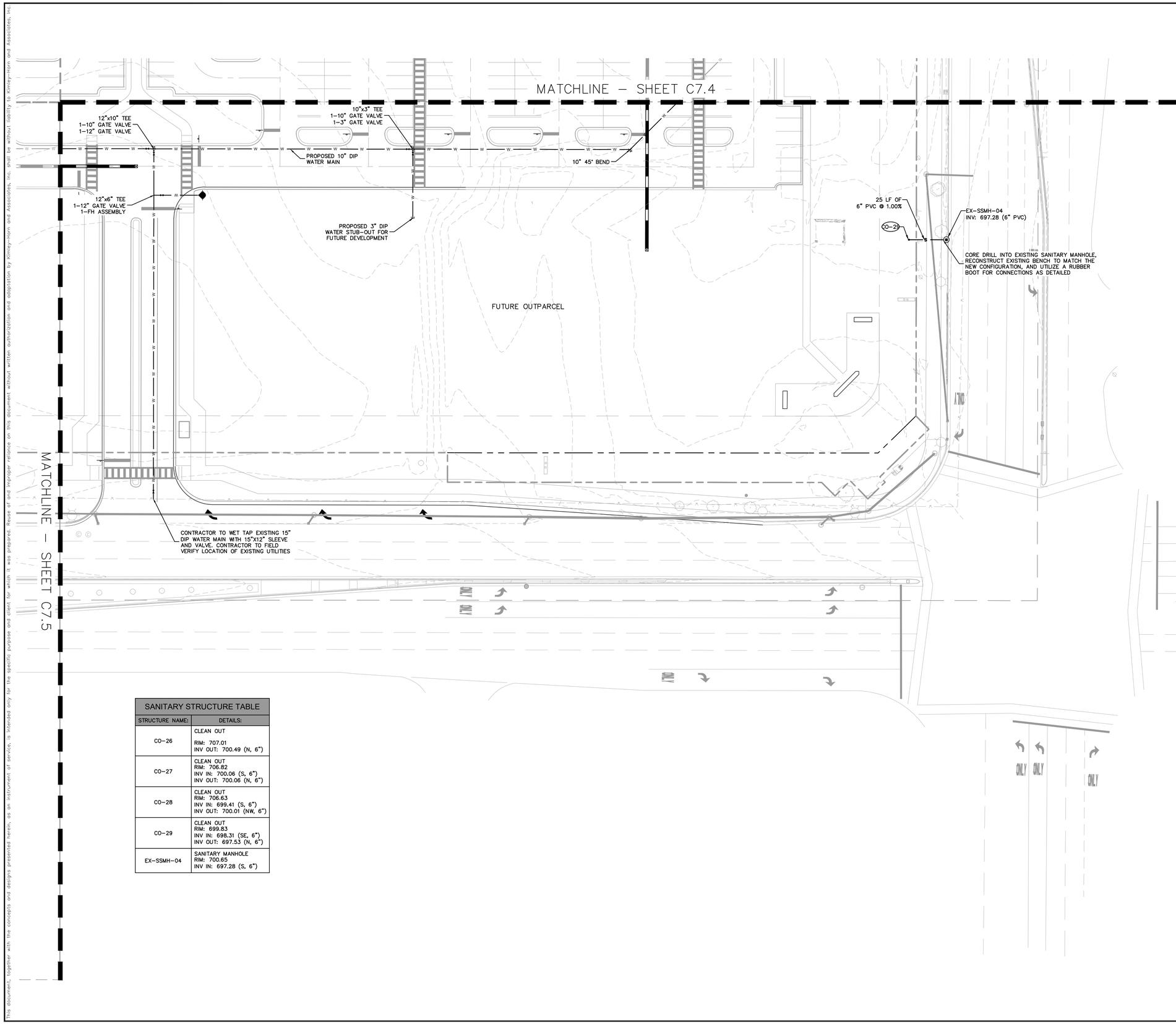

Call Before You Dig
JULIE
1-800-892-0123

NORTH

GRAPHIC SCALE IN FEET
0 15 30 60

SANITARY STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
CO–26	CLEAN OUT RIM: 707.01 INV OUT: 700.49 (N, 6")
CO–27	CLEAN OUT RIM: 706.82 INV IN: 700.06 (S, 6") INV OUT: 700.06 (N, 6")
CO–28	CLEAN OUT RIM: 706.63 INV IN: 699.41 (S, 6") INV OUT: 700.01 (NW, 6")
CO–29	CLEAN OUT RIM: 699.83 INV IN: 698.31 (SE, 6") INV OUT: 697.53 (N, 6")
EX–SSMH–04	SANITARY MANHOLE RIM: 700.65 INV IN: 697.28 (S, 6")

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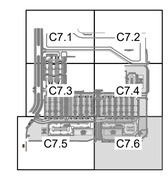

KEY MAP:
1" = 800'

No.	REVISIONS	DATE	BY

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WARRENVILLE, ILLINOIS 60555
630–487–5550
WWW.KIMLEY–HORN.COM

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XXXX
ILLINOIS LICENSE NUMBER
XXXX
DATE: 11/14/2025

KHA PROJECT 149621089
DATE 11/14/2025
SCALE AS SHOWN
DESIGNED BY XXX
DRAWN BY XXX
CHECKED BY XXX

UTILITY PLAN

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
C7.6

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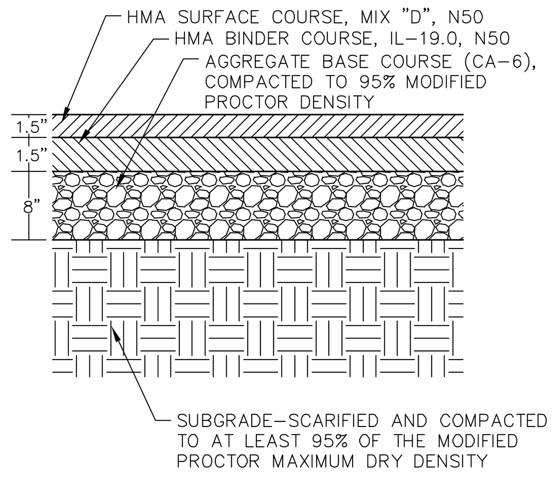
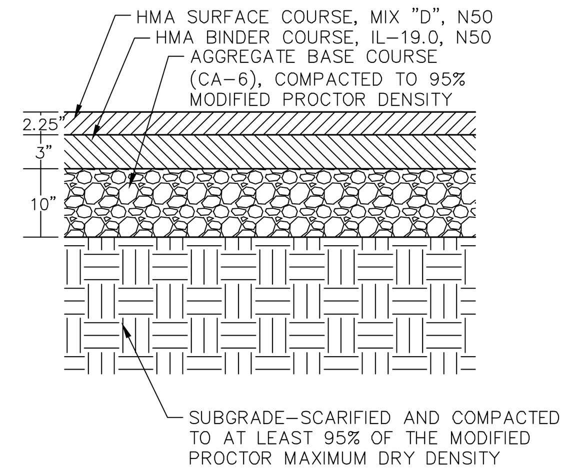


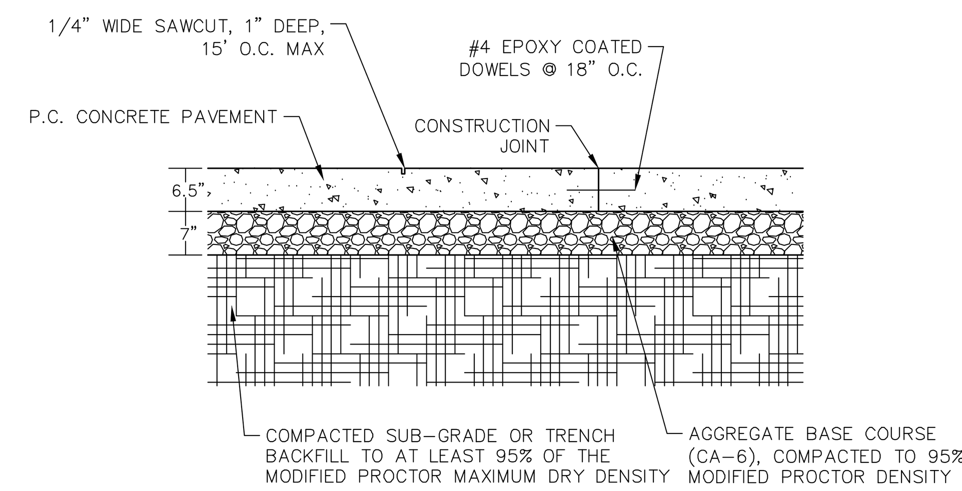
STANDARD DUTY ASPHALT PAVEMENT SECTION

N.T.S. 10/19/20



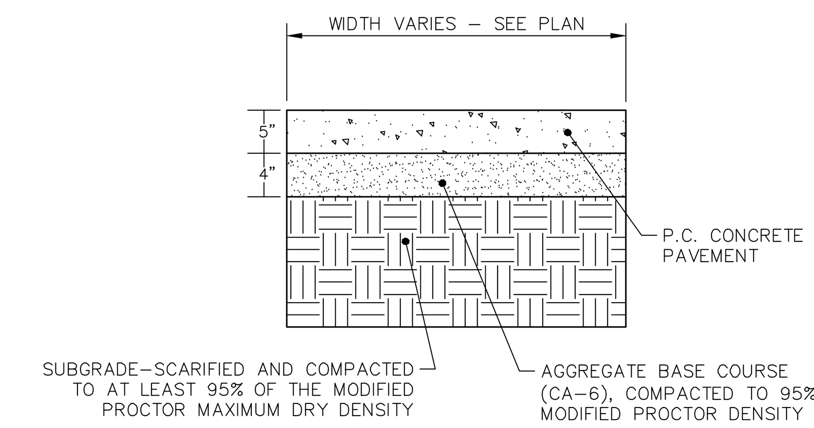
HEAVY DUTY ASPHALT PAVEMENT SECTION

N.T.S.



HEAVY DUTY CONCRETE PAVEMENT SECTION

N.T.S.

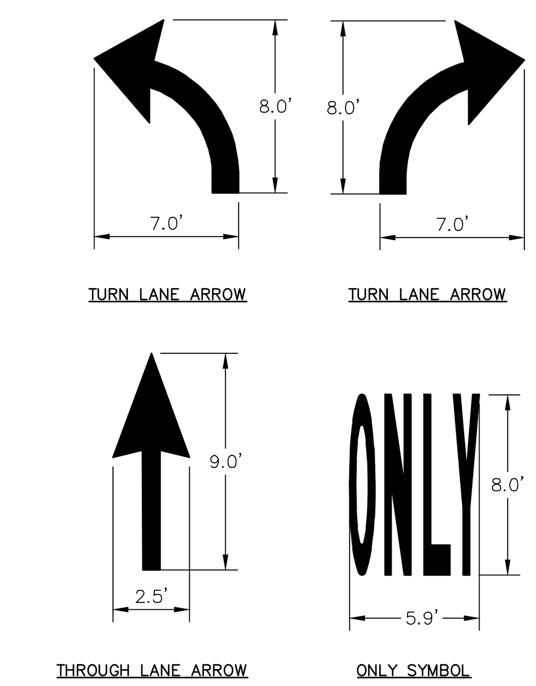


NOTES:

1. PROVIDE 1/2" EXPANSION JOINTS AT 20', MAXIMUM, SPACING AND FILLED WITH PREMOLDED BITUMINOUS EXPANSION JOINT FILLER MATERIAL OR REDWOOD. EXPANSION JOINTS SHALL HAVE #4 DOWELS, LUBRICATED, 18" LONG, AT 12" CENTERS, 6" FROM EDGE.
2. PROVIDE 3/8" GROOVED CONTROL JOINTS AT 5' CENTERS.
3. WELDED WIRE FABRIC (6X6-6X6) SHALL BE INSTALLED THROUGH DRIVEWAYS AT 2" ABOVE SLAB BOTTOM.
4. PROVIDE 1/2" BITUMINOUS EXPANSION JOINT FILLER MATERIAL WHERE WALK ABUTS EXISTING IMPROVEMENTS AND AT ALL CHANGES IN GRADE
5. USE 2-#4 REINFORCING BARS, 10' LONG OVER ALL UTILITY TRENCHES FOR NEW SIDEWALK AND CONNECTIONS TO EXISTING SIDEWALK.
6. AT DRIVE APPROACHES, SIDEWALK PCC AND BASE THICKNESS SHALL MATCH THAT OF THE DRIVE.

CONCRETE SIDEWALK

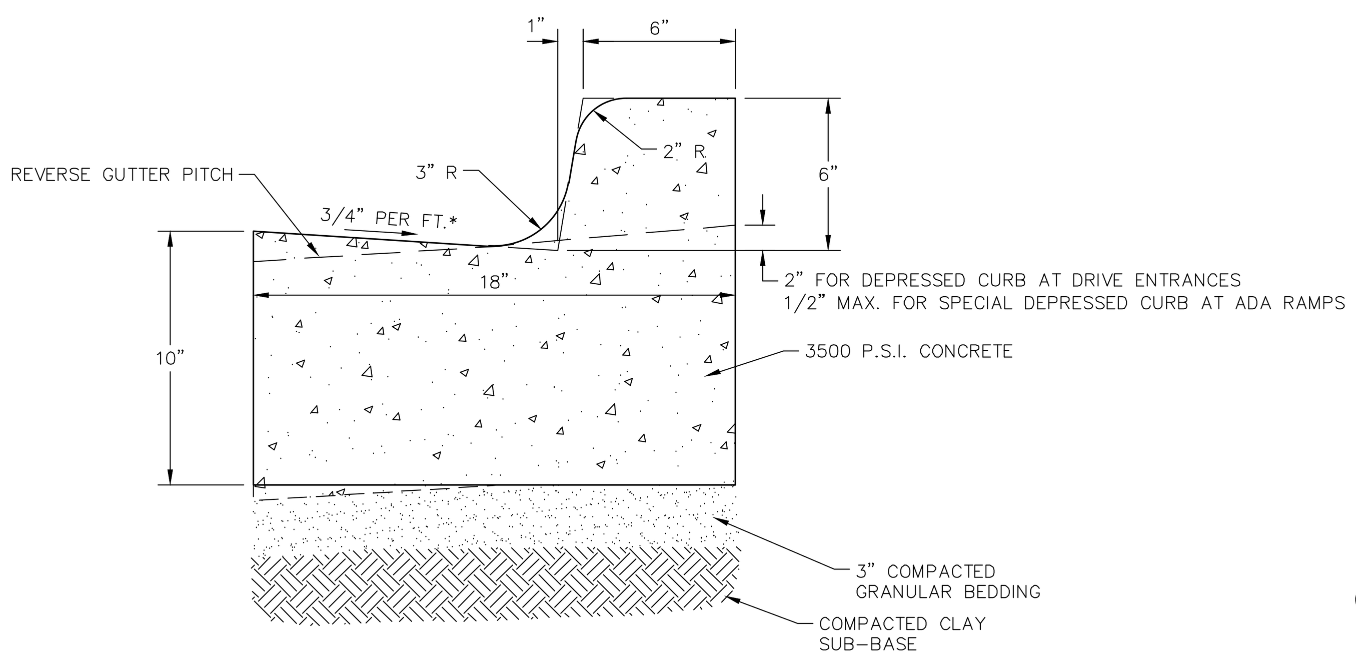
N.T.S.



NOTE: ALL TRAFFIC FLOW ARROWS TO BE PAINTED PER STATE DOT STANDARDS PER DIMENSIONS ABOVE.

TRAFFIC FLOW ARROW

N.T.S.

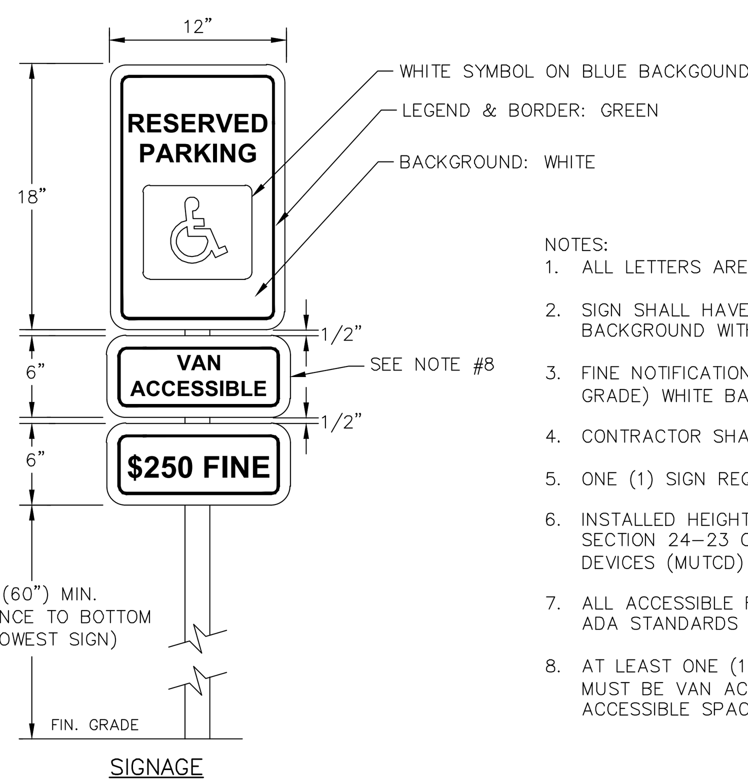


NOTES: USE TWO – #5 REBARS FOR 10 L.F. ON EITHER SIDE OF ALL UTILITY TRENCHES. INSTALL EXPANSION JOINTS EVERY 50 FT. AND SAW-CUT CONSTRUCTION JOINTS EVERY 25 FT.

* MAXIMUM GUTTER SLOPE AT ADA RAMPS TO BE 5.0%

B6.12 CURB & GUTTER

N.T.S.

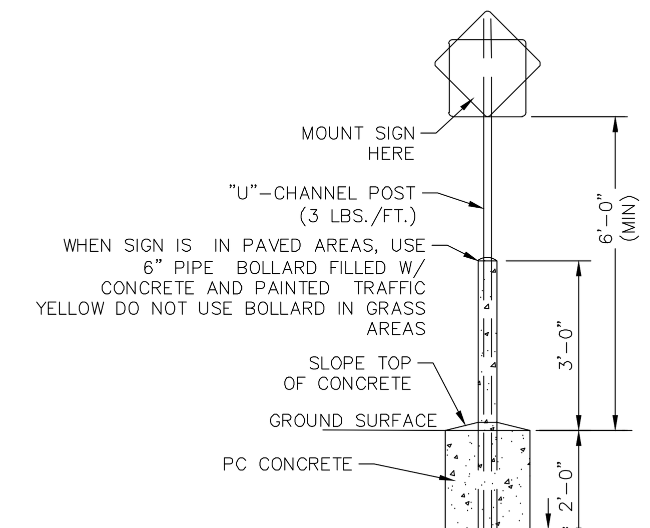


NOTES:

1. ALL LETTERS ARE 1" SERIES "C" PER MUTCD.
2. SIGN SHALL HAVE A REFLECTIVE (ENGINEERING GRADE) WHITE BACKGROUND WITH GREEN REFLECTIVE LEGEND AND BORDER.
3. FINE NOTIFICATION SIGN SHALL HAVE A REFLECTIVE (ENGINEERING GRADE) WHITE BACKGROUND WITH GREEN LEGEND AND BORDER.
4. CONTRACTOR SHALL VERIFY FINE AMOUNT.
5. ONE (1) SIGN REQUIRED FOR EACH PARKING SPACE.
6. INSTALLED HEIGHT OF SIGN SHALL BE IN ACCORDANCE WITH SECTION 24-23 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND LOCAL ADA CODE.
7. ALL ACCESSIBLE FEATURES TO BE IN STRICT ACCORDANCE WITH ADA STANDARDS AND LOCAL LAWS.
8. AT LEAST ONE (1) FOR EVERY SIX (6) ACCESSIBLE SPACES MUST BE VAN ACCESSIBLE, WITH A MINIMUM OF ONE (1) VAN ACCESSIBLE SPACE PER SITE.

ACCESSIBLE PARKING SIGNAGE

N.T.S.



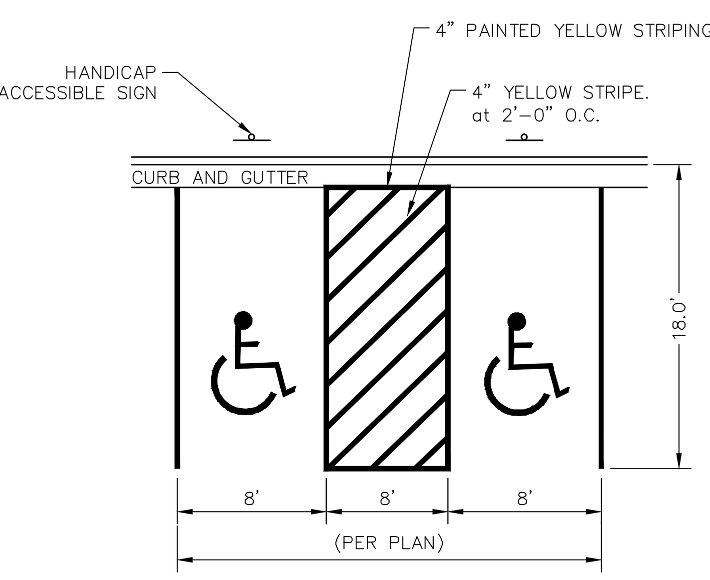
NOTES:

POLE AND SIGN TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.

ALL SIGNS SHALL COMPLY WITH U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", LOCAL CODES AND AS SPECIFIED. MOUNT SIGNS TO POST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

STANDARD SIGN BASE

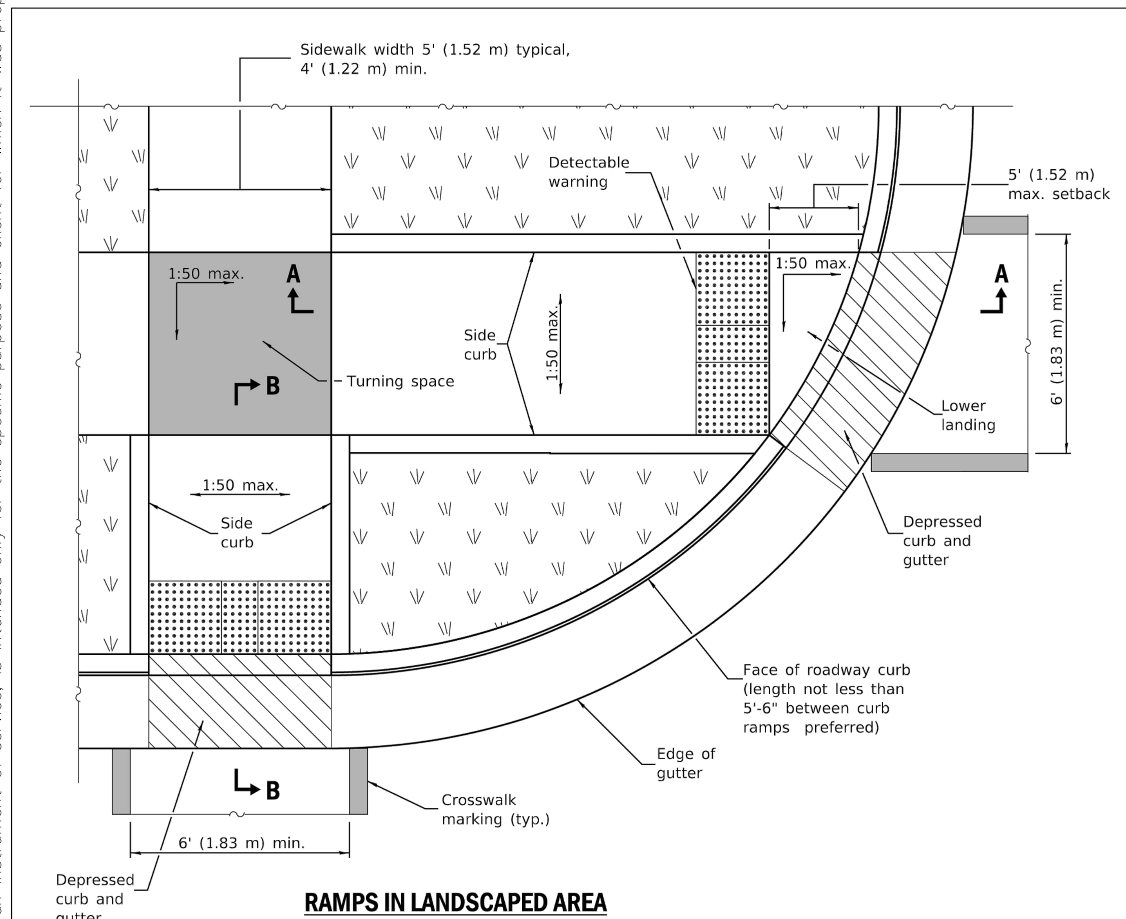
N.T.S.



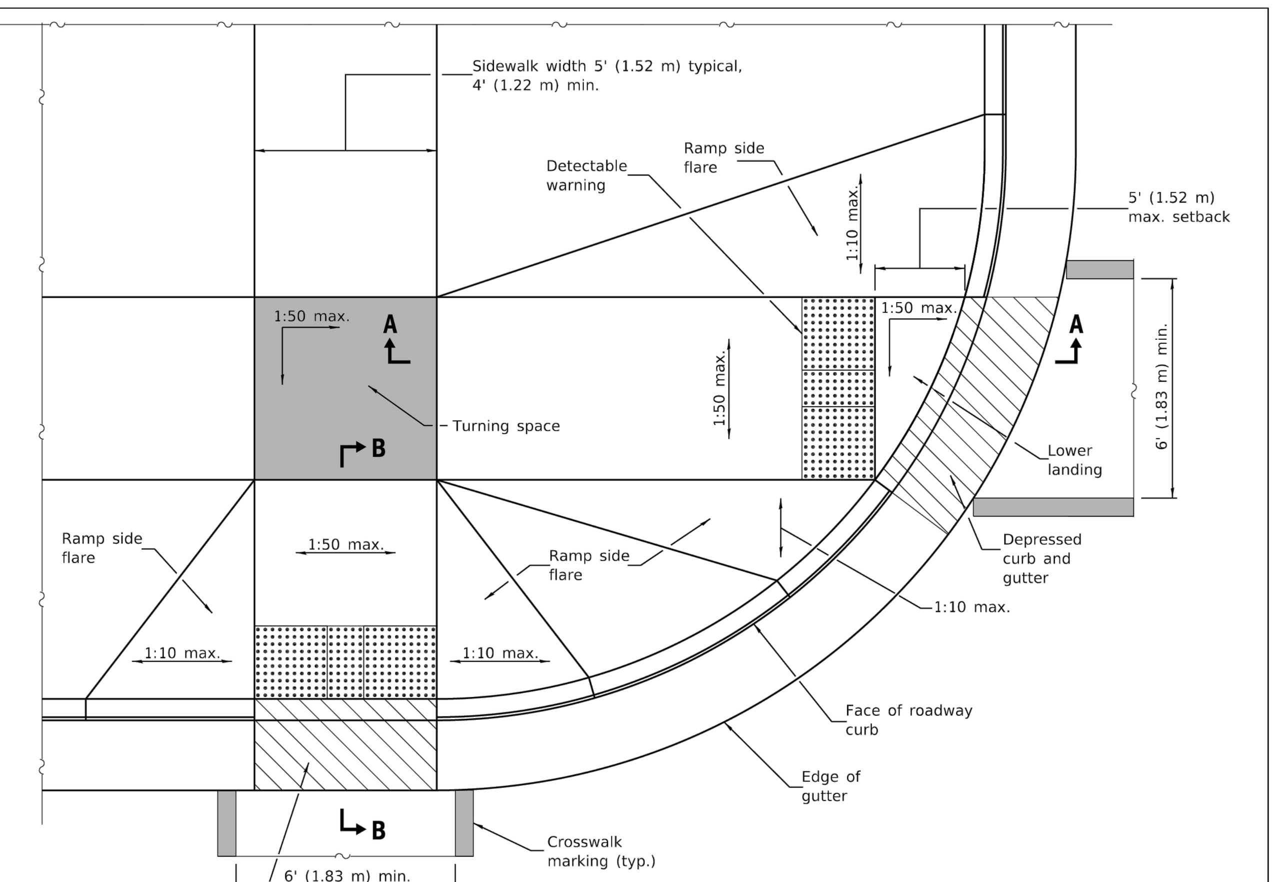
NOTE: REFER TO PLAN FOR DETAILED LAYOUT AND DIMENSIONS

TYPICAL HANDICAP STRIPING

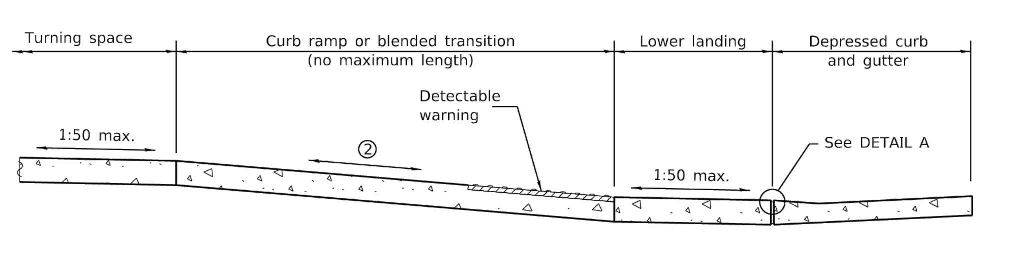
N.T.S.



RAMPS IN LANDSCAPED AREA SETBACK ≤ 5'

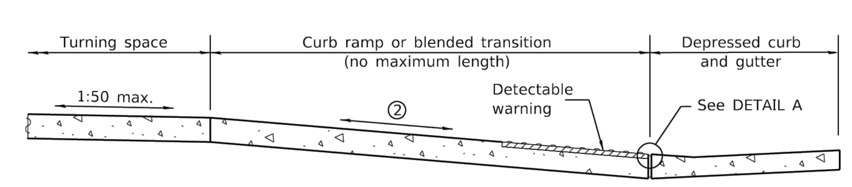


RAMPS IN PAVED AREA SETBACK ≤ 5'



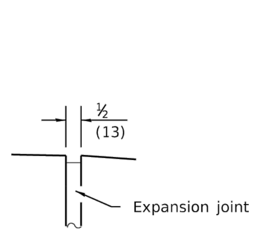
SECTION A-A

② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.

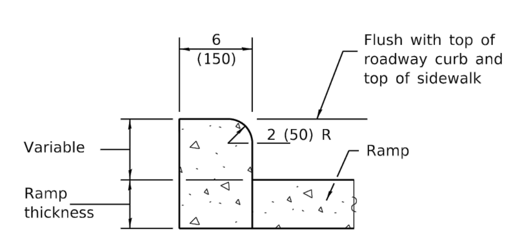


SECTION B-B

② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.



DETAIL A



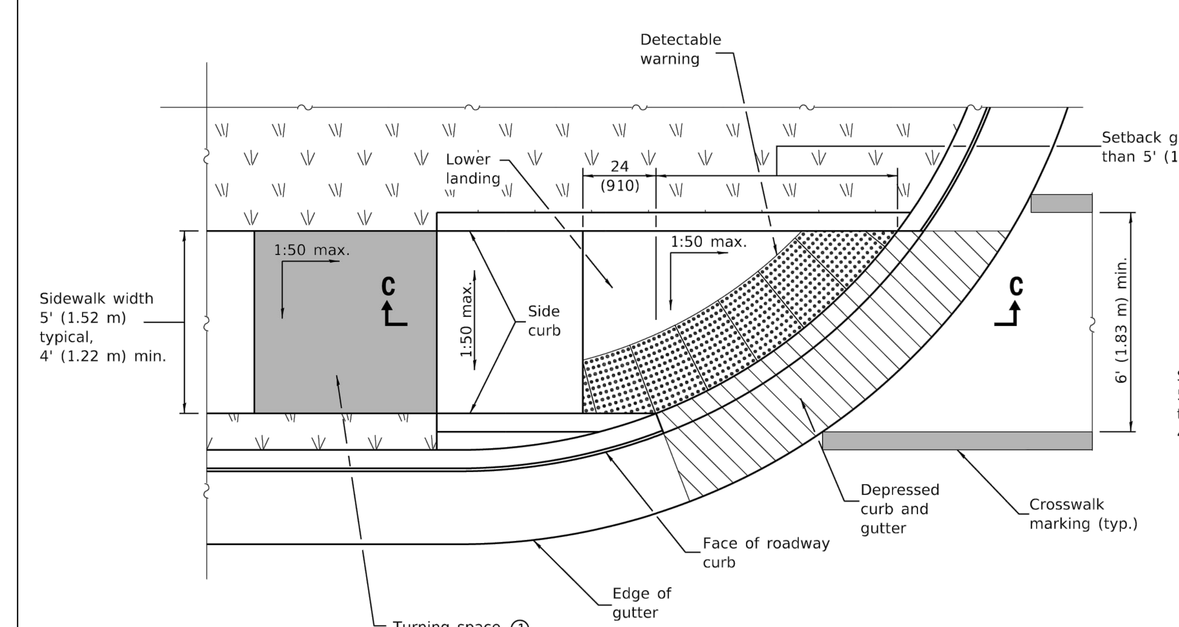
SIDE CURB DETAIL

Illinois Department of Transportation
PASSED January 1, 2019
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2019
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-97

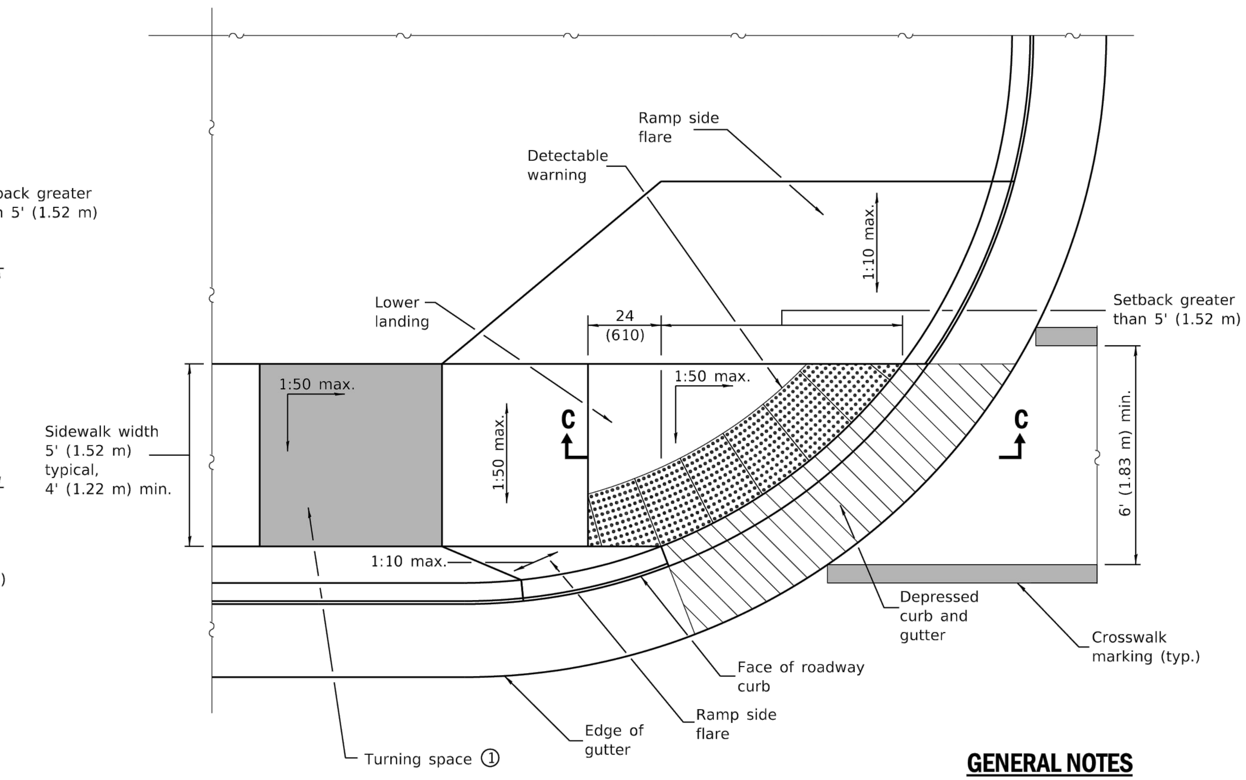
See Sheet 2 for GENERAL NOTES.

DATE	REVISIONS
1-1-19	Removed "15-foot rule", added
	"Blended transitions" and placement
	tolerances for detectable warnings.
1-1-18	Omitted diagonal slope at
	turning spaces and lower
	landings.

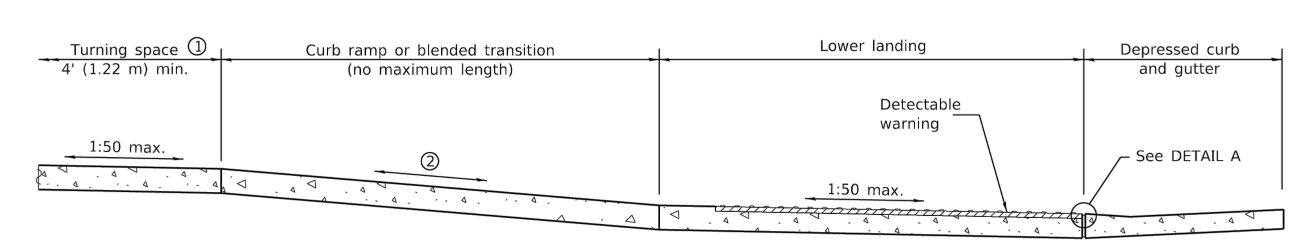
PERPENDICULAR CURB RAMPS FOR SIDEWALKS
(Sheet 1 of 2)
STANDARD 424001-11



RAMP IN LANDSCAPED AREA SETBACK > 5'



RAMP IN PAVED AREA SETBACK > 5'



SECTION C-C

① This turning space not required for blended transitions.

② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where the turning space is constrained on a side opposite a ramp, the minimum length of the turning space in the direction of the ramp-run shall be 5' (1.52 m).

Where 1:50 maximum slope is shown, 1:64 is preferred.

Detectable warnings are shown in their ideal locations but the following placement tolerances are allowed.

Side Border - Detectable warnings should extend the full width of the walking surface (excluding flared sides) but a border along each side up to 2 in. (50 mm) in width is allowed.

Curb Set-Back - Detectable warnings located at the back of curb should closely align with the curb but a gap up to 6 in. (150 mm) behind the curb is allowed.

See Standard 606001 for details of depressed curb adjacent to curb ramp.

All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation
PASSED January 1, 2019
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2019
ENGINEER OF DESIGN AND ENVIRONMENT
ISSUED 1-1-97

PERPENDICULAR CURB RAMPS FOR SIDEWALKS
(Sheet 2 of 2)
STANDARD 424001-11

No.	REVISIONS	DATE	BY

Kimley»Horn
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WARRENVILLE, IL 60555
630-487-5550
WWW.KIMLEY-HORN.COM

LICENSED PROFESSIONAL
XXXX
ILLINOIS LICENSE NUMBER
XXXX
DATE: 11/14/2025

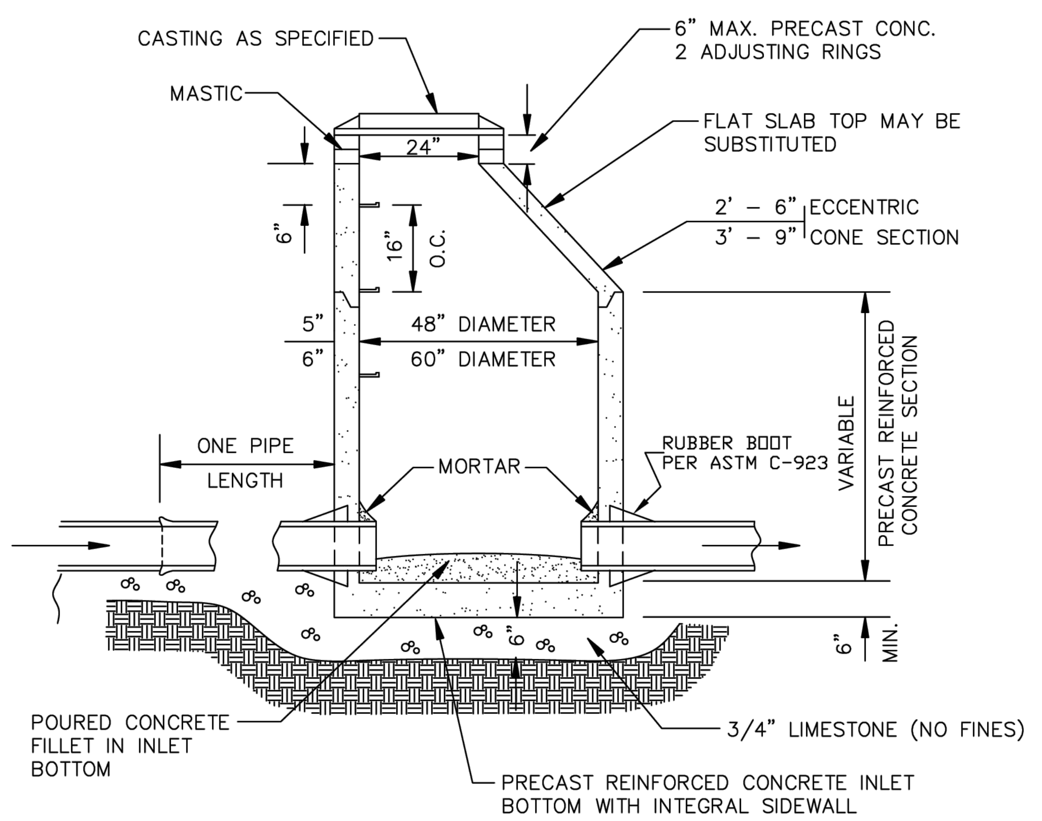
KHA PROJECT 149621089
DATE 11/14/2025
SCALE AS SHOWN
DESIGNED BY ###
DRAWN BY ###
CHECKED BY ###

CONSTRUCTION DETAILS

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
C8.0



NOTES:

1. Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.

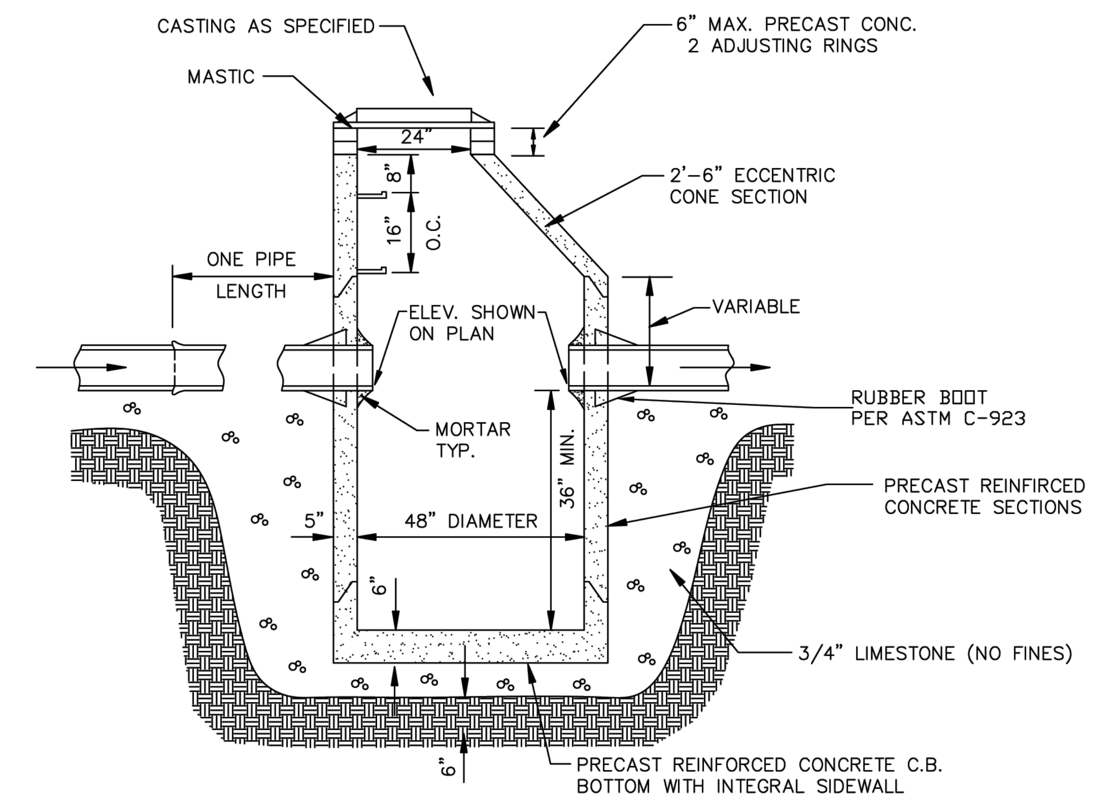
2. Pipe and frame seals: All pipe connection openings shall be precast with resilient rubber water tight pipe to manhole sleeves or seals conforming to ASTM C-923. Adapter chimney seal with twelve (12) inch sleeve type shall extend from the manhole cone to the manhole frame for all structures in the right-of-way.

3. Sealing: All mating surfaces of adjustment riser(s), structure sections, and frames shall be sealed with a mastic sealant. No concrete mortar or epoxy shall be allowed as a sealant for adjustment risers, structure sections or frames. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit.

4. All bottom sections shall be monolithically precast including bases and invert flowlines.

5. Provide CA-6 aggregate backfill around manhole to subgrade elevation in paved areas.for subgrade.

STORM MANHOLE
STORMMH.DWG | DRAWN BY: | STORM SEWER IMPROVEMENT | DATE: | REVISED: | REVISED: | REVISED:
Village of ORLAND PARK
Engineering Department | DRAWING NO. STS–01



NOTES:

1. Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.

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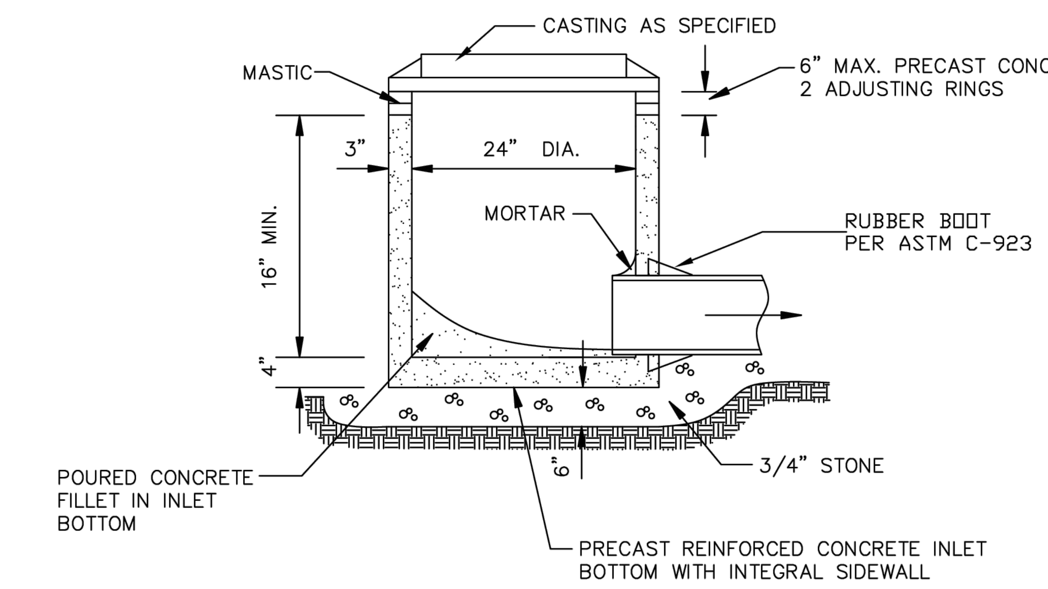
3. Sealing: All mating surfaces of adjustment riser(s), structure sections, and frames shall be sealed with a mastic sealant. No concrete mortar or epoxy shall be allowed as a sealant for adjustment risers, structure sections or frames. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit.

4. All bottom sections shall be monolithically precast including bases and invert flowlines.

5. Provide CA-6 aggregate backfill around catch basin to subgrade elevation in paved areas.for subgrade.

CATCHBASIN TYPE A
CBASIN_A.DWG | DRAWN BY: | STORM SEWER IMPROVEMENT | DATE: | REVISED: | REVISED: | REVISED:
Village of ORLAND PARK
Engineering Department | DRAWING NO. STS–02



NOTES:

1. Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.

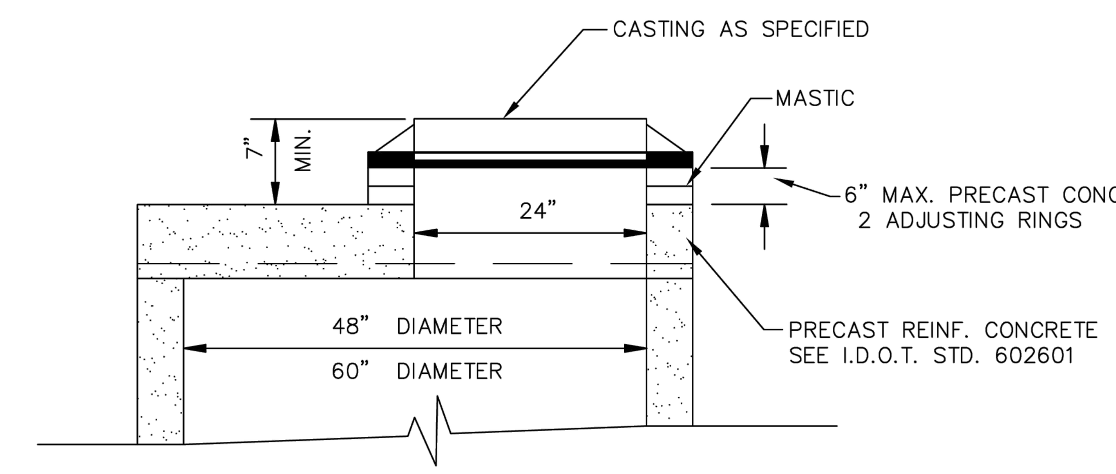
2. Pipe and frame seals: All pipe connection openings shall be precast with resilient rubber water tight pipe to manhole sleeves or seals conforming to ASTM C-923. Adapter chimney seal with twelve (12) inch sleeve type shall extend from the manhole cone to the manhole frame for all structures in the right-of-way.

3. Sealing: All non-rubber mating surfaces, exterior joints of frames, adjustment riser(s), flat slab top or cone section (if applicable) and structure section shall be sealed with a uniform application of bituminous mastic sealant. The mating surfaces of all rubber Adjustment risers shall be sealed with the manufacturer's recommended sealant for rubber adjustment risers. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit. Interior surfaces shall be sealed with concrete mortar or epoxy mortar. Concrete mortar or epoxy mortar will not be used on mating surfaces as a sealant between adjustment risers, structure sections or frames

4. All bottom sections shall be monolithically precast including bases and invert flowlines.

5. Provide CA-6 aggregate backfill around inlet to subgrade elevation in paved areas.for subgrade.

INLET TYPE A
INLET_A.DWG | DRAWN BY: | STORM SEWER IMPROVEMENT | DATE: | REVISED: | REVISED: | REVISED:
Village of ORLAND PARK
Engineering Department | DRAWING NO. STS–05

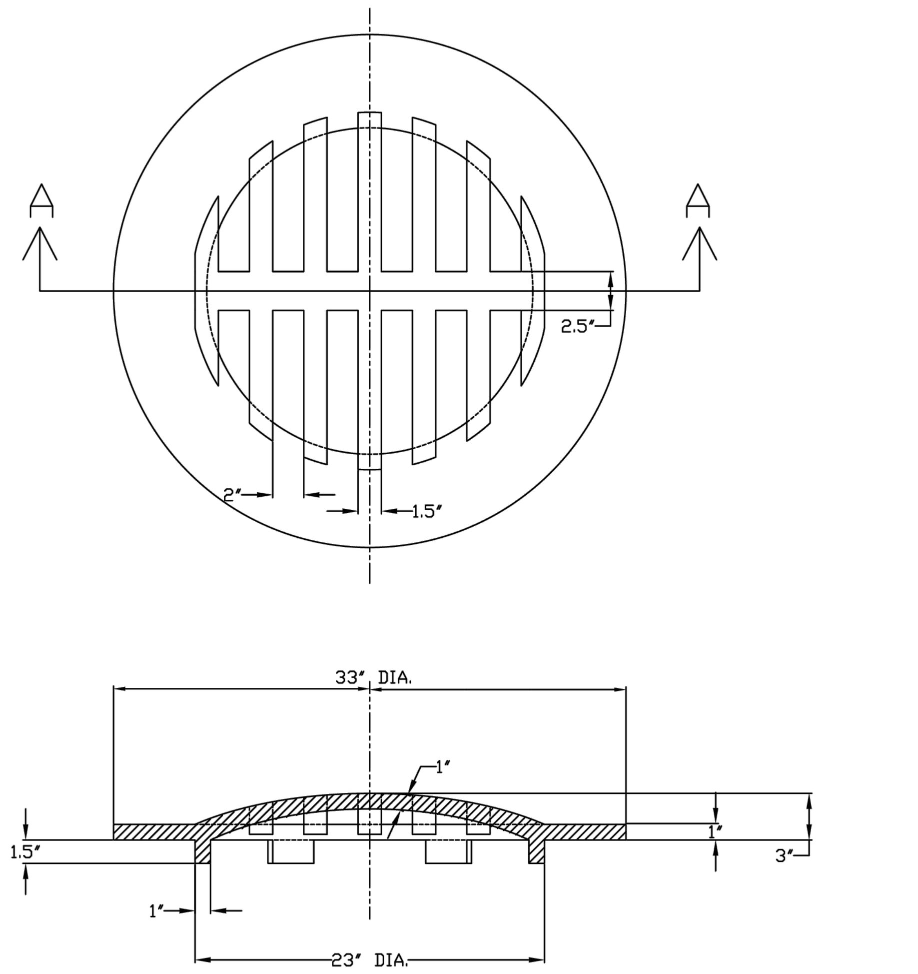


NOTES:

1. Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.

2. Sealing: All non-rubber mating surfaces, exterior joints of frames, adjustment riser(s), flat slab top or cone section (if applicable) and structure section shall be sealed with a uniform application of bituminous mastic sealant. The mating surfaces of all rubber adjustment risers shall be sealed with the manufacturer's recommended sealant for rubber adjustment risers. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit. Interior surfaces shall be sealed with concrete mortar or epoxy mortar. Concrete mortar or epoxy mortar will not be used on mating surfaces as a sealant between adjustment risers, structure sections or frames.

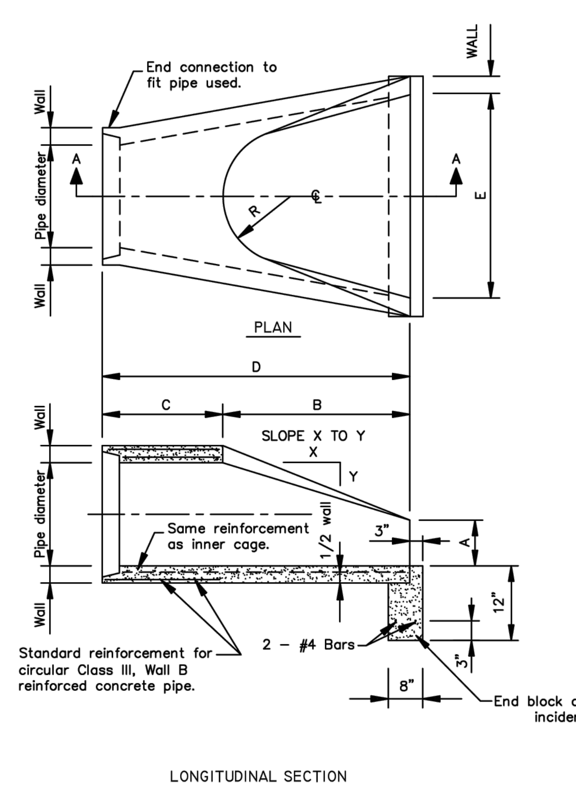
FLAT SLAB TOP
FLTSLAB.DWG | DRAWN BY: | STORM SEWER IMPROVEMENT | DATE: | REVISED: | REVISED: | REVISED:
Village of ORLAND PARK
Engineering Department | DRAWING NO. STS–06



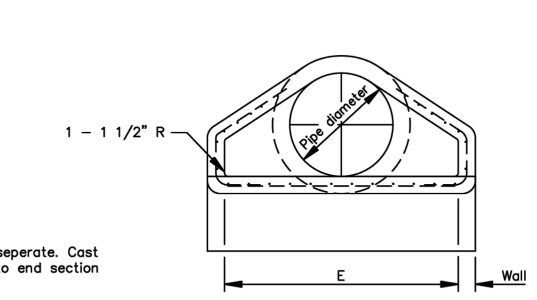
SECTION A-A
CAST GRATE
WT. 200 LBS.

THE CAST GRATE MAY BE EITHER GRAY IRON OR DUCTILE IRON CONFORMING TO THE STANDARD SPECIFICATIONS. DUCTILE IRON CASTING SHALL BE GRADE 65-45-12.

GRATE TYPE 8
GRATE-8.DWG | DRAWN BY: | STORM SEWER IMPROVEMENT | DATE: | REVISED: | REVISED: | REVISED:
Village of ORLAND PARK
Engineering Department | DRAWING NO. STS–07



PIPE DIA.	WALL	A	B	C	D	E	R	SLOPE
12"	2"	4"	2'-0"	4'-7/8"	6'-7/8"	2'-0"	9"	3:1
15"	2 1/4"	6"	2'-3"	3'-10"	6'-1"	2'-6"	11"	3:1
18"	2 1/2"	9"	2'-3"	3'-10"	6'-1"	3'-0"	12"	3:1
21"	2 3/4"	9"	2'-11"	3'-2"	6'-1"	3'-6"	13"	3:1
24"	3"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	14"	3:1
27"	3 1/4"	10 1/2"	4'-0"	2'-1 1/2"	6'-1 1/2"	4'-6"	14 1/2"	3:1
30"	3 1/2"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	15"	3:1
33"	3 3/4"	1'-1 1/2"	4'-10 1'2"	3'-3 1/4"	8'-1 3/4"	5'-6"	17 1/2"	3:1
36"	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	20"	3:1
42"	4 1/2"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	22"	3:1
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	22"	3:1
54"	5 1/2"	2'-3"	5'-5"	2'-11"	8'-4"	7'-6"	24"	2.4:1



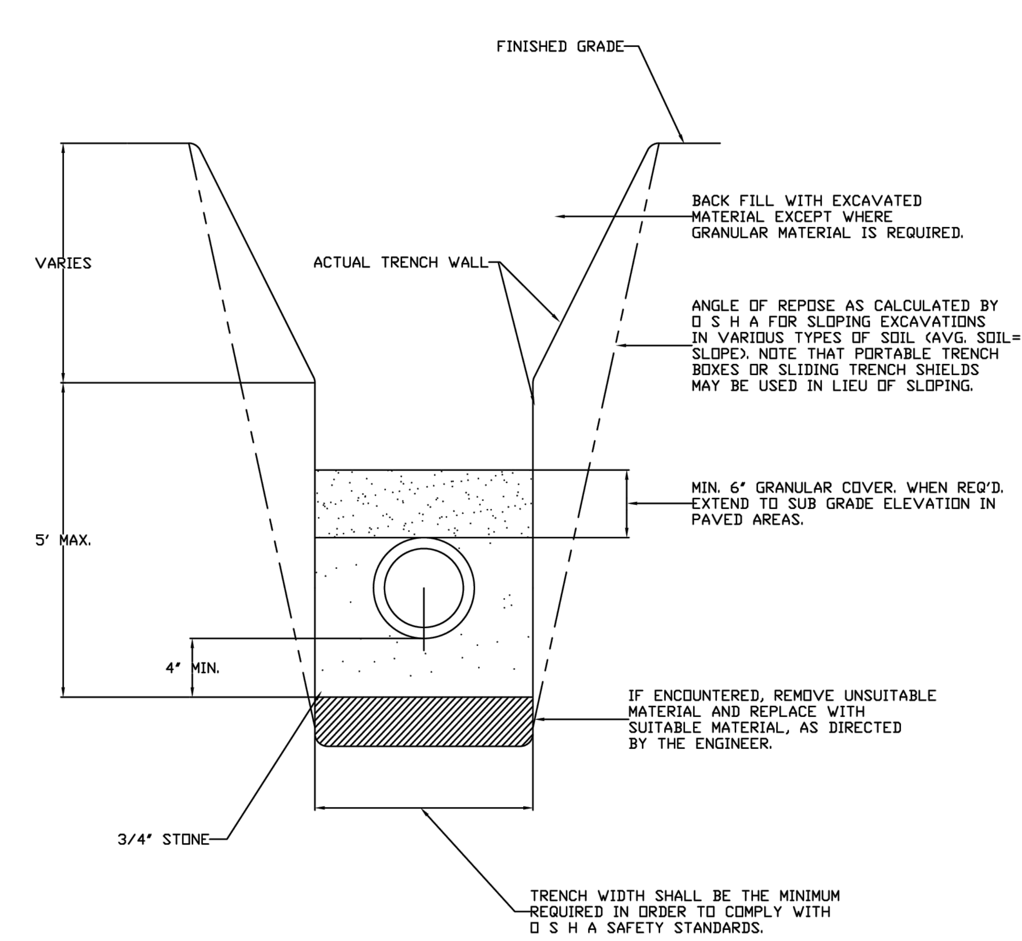
END VIEW

NOTES
PRECAST CONCRETE FLARED END SECTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF A.A.S.H.O. M-170 CLASS III, WALL B REINFORCED CONCRETE PIPE.

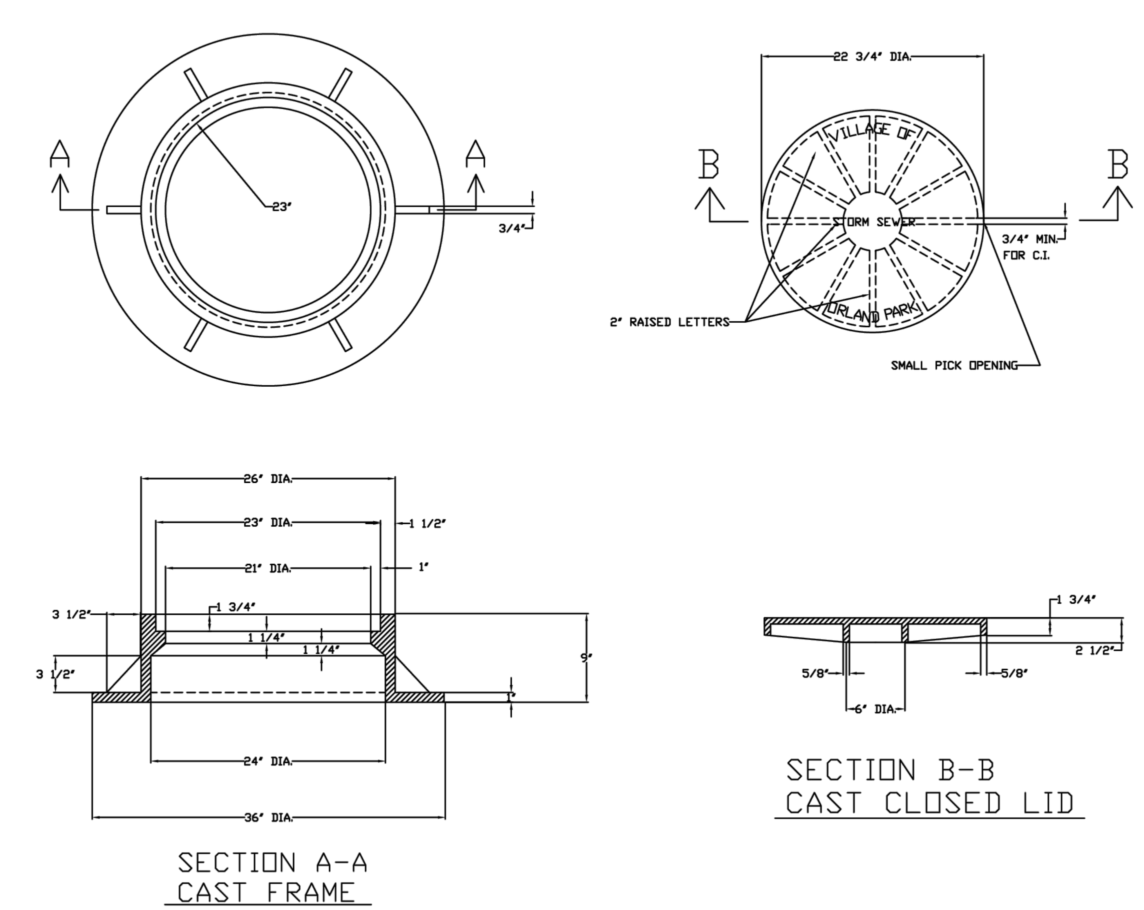
PRECAST CONCRETE FLARED END SECTION FOR PIPE DIAMETER REQUIRED SHALL BE AS INDICATED ON DETAIL PLAN FOR EACH INDIVIDUAL INSTALLATION.

FLARED END SECTIONS 12 INCHES OR GREATER WILL REQUIRE GRATES.

PRECAST REINFORCED CONCRETE FLARED END SECTION
FLRDEND.DWG | DRAWN BY: | STORM SEWER IMPROVEMENT | DATE: | REVISED: | REVISED: | REVISED:
Village of ORLAND PARK
Engineering Department | DRAWING NO. STS–08



TRENCH SECTION (STORM SEWER)
STORMTRE.DWG | DRAWN BY: | STORM SEWER IMPROVEMENT | DATE: | REVISED: | REVISED: | REVISED:
Village of ORLAND PARK
Engineering Department | DRAWING NO. STS–11



SECTION A-A
CAST FRAME

SECTION B-B
CAST CLOSED LID

NOTES:
1. DUCTILE IRON CASTINGS SHALL BE GRADE 60-40-18 AND SHALL BE TESTED IN ACCORDANCE WITH FEDERAL SPECIFICATIONS.
2. ALL LIDS AND COVERS SHALL BE MACHINED.
3. THE MANHOLE COVERS SHALL HAVE RAISED LETTERS AS SHOWN.
4. ALTERNATIVE TO DUCTILE IRON LID, GRAY IRON LID MAY BE USED.
5. MINIMUM WEIGHTS FOR CASTINGS AS SHOWN.
6. CASTINGS SHALL BE EAST JORDAN IRON WORKS 1050Z1 FRAME AND 1020A COVER.

STORM SEWER FRAME & COVER
FRAME&CO.DWG | DRAWN BY: | STORM SEWER IMPROVEMENT | DATE: | REVISED: | REVISED: | REVISED:
Village of ORLAND PARK
Engineering Department | DRAWING NO. STS–14

No.	REVISIONS	DATE	BY

Kimley»Horn
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LICENSED PROFESSIONAL
XXXX
ILLINOIS LICENSE NUMBER
XXXX
DATE: 11/14/2025

KHA PROJECT 149621089
DATE 11/14/2025
SCALE AS SHOWN
DESIGNED BY ###
DRAWN BY ###
CHECKED BY ###

CONSTRUCTION DETAILS

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
C8.1

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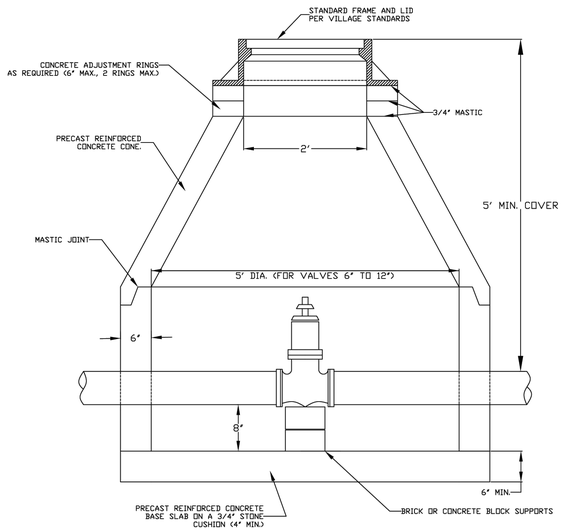
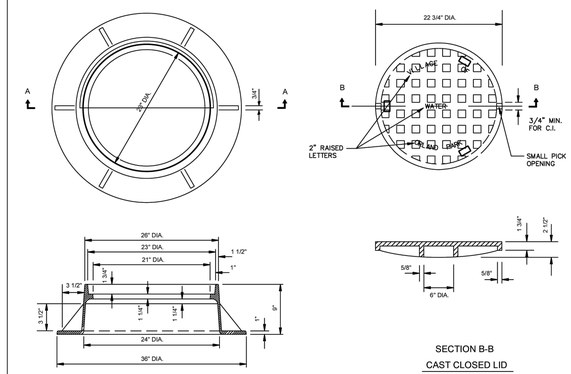


Notes:
1. Adjustments to existing structures should not exceed a total of 12" of adjustment rings. Any adjustment greater than 12" must use a barrel extention.
2. Precast concrete sections shall conform to ASTM C478.

VALVE VAULT		
VALVEVAULT.DWG DRAWN BY:	WATER MAIN IMPROVEMENT	DATE: REVISED: 11/19/07
Village of ORLAND PARK		REVISED: REVISED:
Engineering Department		DRAWING NO. WM-01

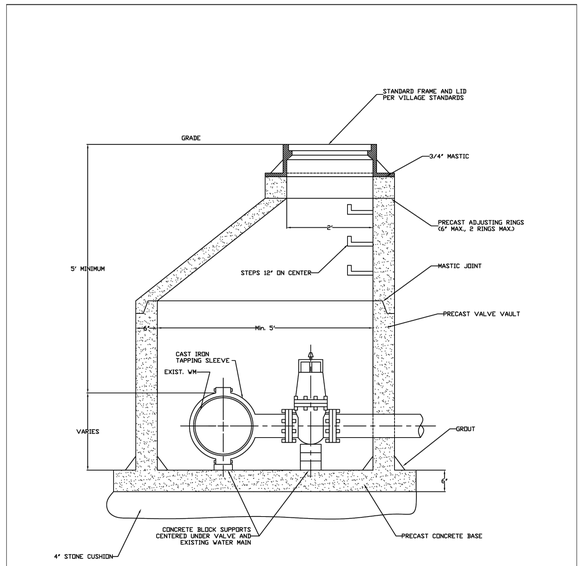


SECTION A-A
CAST FRAME
WT. = 330 LBS.

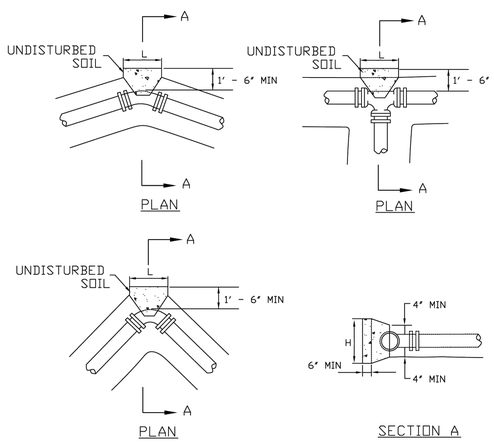
SECTION B-B
CAST CLOSED LID

1. DUCTILE IRON CASTINGS SHALL BE GRADE 60-40-18 & SHALL BE TESTED IN ACCORDANCE WITH FEDERAL SPECIFICATIONS.
2. ALL LIDS AND COVERS SHALL BE MACHINED
3. THE MANHOLE COVERS SHALL HAVE RAISED LETTERS AS SHOWN.
4. ALTERNATIVE TO DUCTILE IRON LID, GRAY IRON LID MAY BE USED
5. MINIMUM WEIGHTS FOR CASTINGS AS SHOWN
6. CASTINGS SHALL BE EAST JORDAN IRON WORKS 1050Z1 FRAME & 1020A COVER.

VALVE VAULT FRAME & COVER		
VALVFRM.DWG DRAWN BY:	WATER MAIN IMPROVEMENT	DATE: REVISED:
Village of ORLAND PARK		REVISED: REVISED:
Engineering Department		REVISED: DRAWING NO. WM-03



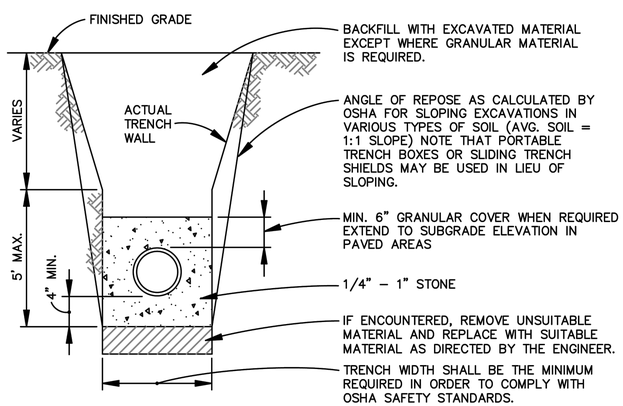
PRESSURE CONNECTION		
PRESSURE.DWG DRAWN BY:	WATER MAIN IMPROVEMENT	DATE: REVISED: 2/24/05
Village of ORLAND PARK		REVISED: REVISED:
Engineering Department		DRAWING NO. WM-05



CONCRETE THRUST BLOCK DIMENSIONS										
PIPE SIZE	11-15° BEND		22-30° BEND		45°-BEND		90°-BEND		TEE & PLUG	
DIAMETER	H	L	H	L	H	L	H	L	H	L
≤ 8"	1'-6"	1'-6"	2'-0"	2'-6"	2'-6"	3'-0"	3'-6"	4'-0"	3'-0"	3'-6"
≤ 12"	1'-6"	2'-0"	2'-3"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	3'-6"	4'-0"
≤ 16"	2'-0"	2'-0"	2'-6"	3'-0"	4'-0"	4'-6"	5'-0"	6'-0"	4'-6"	5'-6"

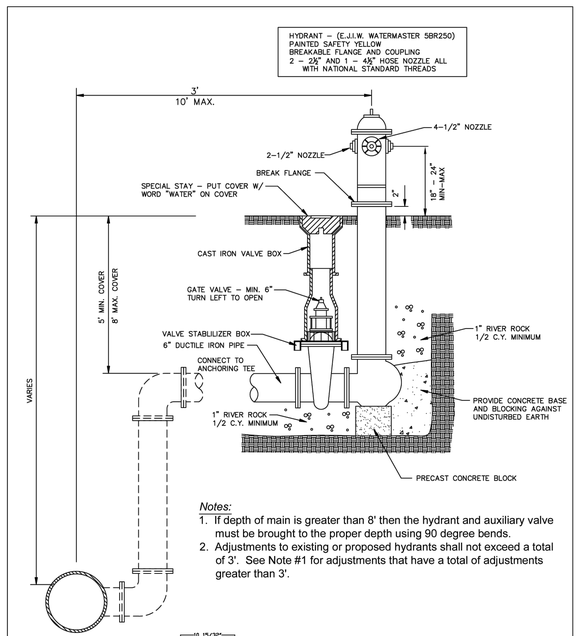
1. ALL BLOCKING SHALL BE CONSTRUCTED WITH POURED CL. X CONCRETE AGAINST UNDISTURBED VERTICAL EARTH FACE WITH A MINIMUM WIDTH OF 12 INCHES.
2. THRUST BLOCKS TO BE USED AT ALL BENDS 11 1/4 DEGREES OR GREATER.
3. MECHANICAL JOINT RETAINER GLANDS MAY BE USED AS AN ALTERNATIVE TO CONCRETE THRUST BLOCK INSTALLATION WHEN APPROVED BY THE VILLAGE ENGINEER.
4. TEST PRESSURE 150 PSI.

CONCRETE THRUST BLOCK DETAILS		
TB2.DWG DRAWN BY:	WATER MAIN IMPROVEMENT	DATE: REVISED:
Village of ORLAND PARK		REVISED: REVISED:
Engineering Department		REVISED: DRAWING NO. WM-10



DIP AND PVC WHEN USED AS WATER MAIN SHALL NOT REQUIRE GRANULAR BEDDING OR COVER. PROVIDE UNIFORM AND CONTINUOUS SUPPORT OF PIPE BARREL BETWEEN BELL HOLES

TRENCH SECTION (WATER MAIN)		
WATTRENCH.DWG DRAWN BY:	WATER MAIN IMPROVEMENT	DATE: REVISED:
Village of ORLAND PARK		REVISED: REVISED:
Engineering Department		REVISED: DRAWING NO. WM-11



Notes:
1. If depth of main is greater than 8' then the hydrant and auxiliary valve must be brought to the proper depth using 90 degree bends.
2. Adjustments to existing or proposed hydrants shall not exceed a total of 3'. See Note #1 for adjustments that have a total of adjustments greater than 3'.

HYDRANT INSTALLATION		
WM_HYDRANT 11-19-07.DWG DRAWN BY:	WATER MAIN IMPROVEMENT	DATE: 4/24/08 REVISED: wdc 11/28/07
Village of ORLAND PARK		REVISED: REVISED:
Engineering Department		DRAWING NO. WM-06

No.	REVISIONS	DATE	BY

Kimley»Horn

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630-487-5550
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ILLINOIS LICENSE NUMBER
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DATE: 11/14/2025

KHA PROJECT 149621089
DATE 11/14/2025
SCALE AS SHOWN
DESIGNED BY ####
DRAWN BY ####
CHECKED BY ####

CONSTRUCTION DETAILS

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
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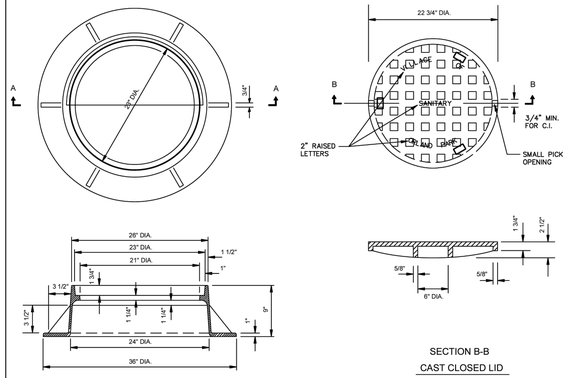
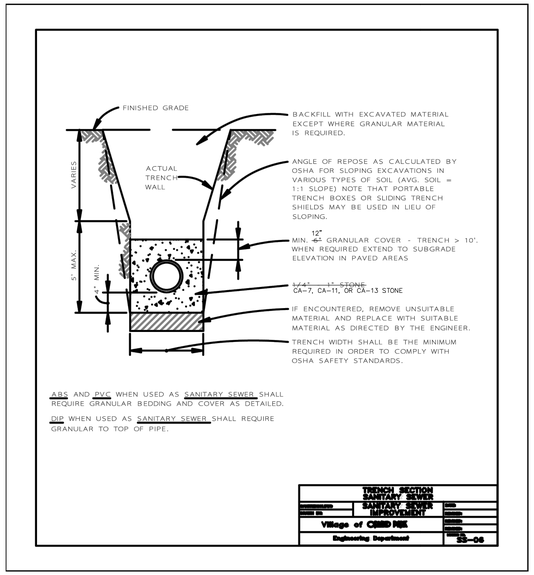


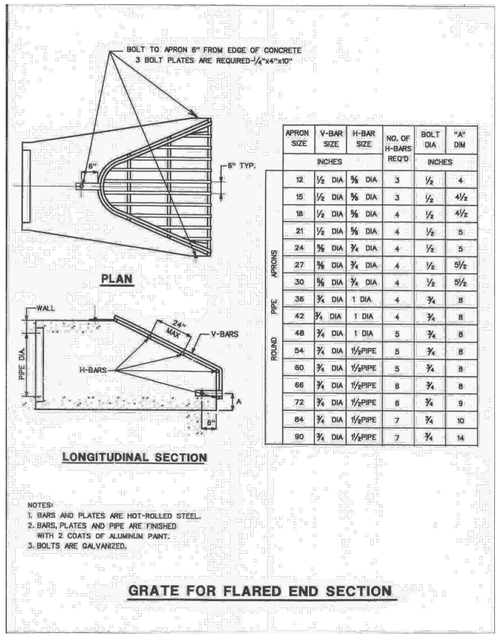
SECTION A-A
CAST FRAME
WT. = 330 LBS.

SECTION B-B
CAST CLOSED LID

1. DUCTILE IRON CASTINGS SHALL BE GRADE 60-40-18 & SHALL BE TESTED IN ACCORDANCE WITH FEDERAL SPECIFICATIONS.
2. CASTINGS SHALL BE EAST JORDAN IRON WORKS 1050Z1 FRAME AND 1020A COVER.

SANITARY MANHOLE FRAME & COVER		
MANHOLE.FRM.DWG DRAWN BY:	SANITARY SEWER IMPROVEMENT	DATE: REVISED: REVISED: REVISED:
Village of ORLAND PARK		
Engineering Department		DRAWING NO. SS-04

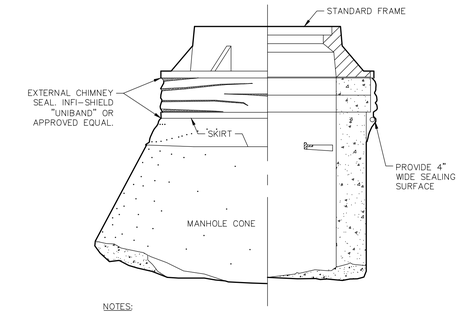




	APRON SIZE	V-BAR SIZE	H-BAR SIZE	NO. OF H-BARS REQ'D	BOLT DIA	"A" DIM
	INCHES				INCHES	
APRONS PIPE ROUND	12	1/2 DIA	5/8 DIA	3	1/2	4
	15	1/2 DIA	5/8 DIA	3	1/2	4 1/2
	18	1/2 DIA	5/8 DIA	4	1/2	4 1/2
	21	1/2 DIA	5/8 DIA	4	1/2	5
	24	5/8 DIA	3/4 DIA	4	1/2	5
	27	5/8 DIA	3/4 DIA	4	1/2	5 1/2
	30	5/8 DIA	3/4 DIA	4	1/2	5 1/2
	36	3/4 DIA	1 DIA	4	3/4	8
	42	3/4 DIA	1 DIA	4	3/4	8
	48	3/4 DIA	1 DIA	5	3/4	8
	54	3/4 DIA	1 1/8 PIPE	5	3/4	8
	60	3/4 DIA	1 1/8 PIPE	5	3/4	8
	66	3/4 DIA	1 1/8 PIPE	6	3/4	8
	72	3/4 DIA	1 1/8 PIPE	6	3/4	9
	84	3/4 DIA	1 1/8 PIPE	7	3/4	10
	90	3/4 DIA	1 1/8 PIPE	7	3/4	14

NOTES:
1. BARS AND PLATES ARE HOT-ROLLED STEEL.
2. BARS, PLATES AND PIPE ARE FINISHED WITH 2 COATS OF ALUMINUM PAINT.
3. BOLTS ARE GALVANIZED.

GRATE FOR FLARED END SECTION



NOTES:

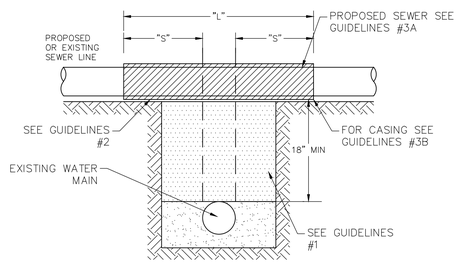
1. CHIMNEY SEALS SHALL BE INSTALLED ON ALL SANITARY SEWERAGE SYSTEM MANHOLES AND GREASE TRAP CATCH BASIN.
2. EXTERNAL CHIMNEY SEAL SHALL BE INFI-SHIELD "UNIBAND" BY SIMA ENVIRONMENTAL OR APPROVED EQUAL.
3. CHIMNEY SEALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

EXTERNAL CHIMNEY SEAL

N.T.S.

PROPOSED SEWER LINE WITH 18" MINIMUM VERTICAL SEPARATION ABOVE EXISTING WATER MAIN.

NOTE: COMPACTION REQUIREMENTS REFER TO ARTICLE 20-4.



NOTE:

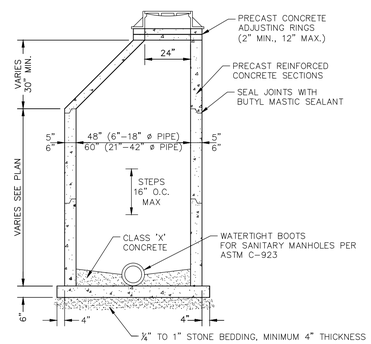
1. "S" THE LENGTH NECESSARY TO PROVIDE 10 FEET SEPARATION AS MEASURED PERPENDICULAR TO THE EXISTING SEWER LINE.

GUIDELINES:

1. IF SELECT GRANULAR BACKFILL EXISTS: REMOVE WITHIN WIDTH OF PROPOSED SEWER TRENCH AND REPLACE WITH SELECT EXCAVATED (CLASS IV) AND COMPACT.
2. OMIT SELECT GRANULAR EMBEDMENT AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF SEWER AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT THE LENGTH OF "L" FEET.
3. A) CONSTRUCT "L" FEET OF PROPOSED SEWER OF WATER MAIN MATERIAL AND PRESSURE TEST, OR:
   B) USE "L" FEET OF WATER MAIN MATERIAL FOR CASING OF PROPOSED SEWER AND SEAL ENDS OF CASING.

PROPOSED SEWER OVER EXISTING WATER MAIN CROSSING DETAIL

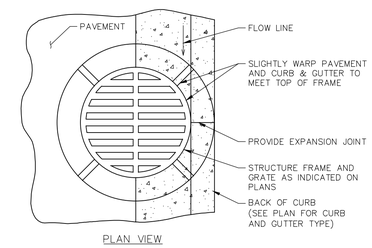
N.T.S.

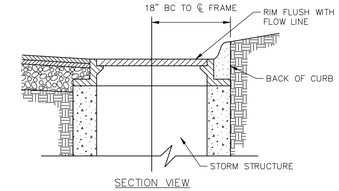


NOTES:
1. UNLESS OTHERWISE NOTED, USE THE FOLLOWING FRAMES & GRATES OR EQUALS:
   1.1. -IN PAVED AREAS: NEENAH R-1713 OR APPROVED EQUAL W/TYPE B COVER (CLOSED)
   1.2. -IN GRASS: NEENAH R-1711 W/TYPE B COVER (CLOSED)
2. EAST JORDAN EQUIVALENTS ALSO MAY BE USED.
3. ALL COVERS SHALL BE SELF SEALING WITH CONCEALED PICK HOLES AND HAVE "SANITARY" CAST ON THE COVER.
4. SANITARY MANHOLES NEED WATER PROOF COATING ON EXTERIOR AND STEPS.
5. MASTIC ROPE REQUIRED BETWEEN ALL PRECAST SECTIONS WITH CHIMNEY SEAL.
6. WATER PROOF WRAP REQUIRED ON ALL JOINTS.
7. HYRDRAULIC CEMENT REQUIRED FOR ANY ANNULAR SPACES AROUND THE PIPES AND BOOTS.

SANITARY MANHOLE

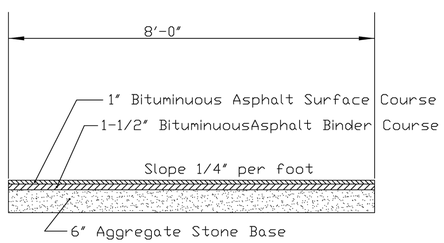
N.T.S.

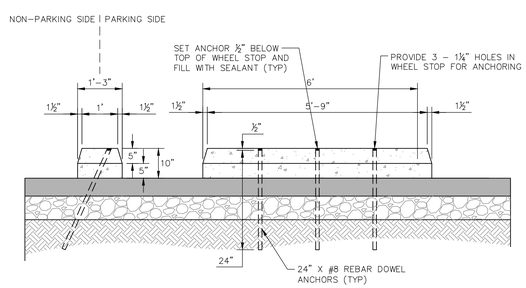




INLET AT CURB FRAME LOCATION

N.T.S.

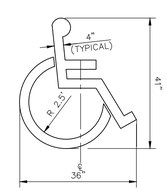




NOTE:
1. CONCRETE WHEEL STOPS TO BE PAINTED SAFETY YELLOW.
2. IF PARKING SLIP CURB IS 8" OR HIGHER WITH STANDOFF DISTANCE OF 6" OR MORE FROM OBJECTS SUCH AS FENCES THEN WHEEL STOPS ARE NOT REQUIRED.

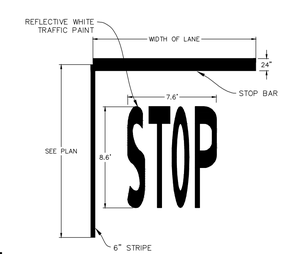
REINFORCED CONCRETE WHEEL STOP

N.T.S.



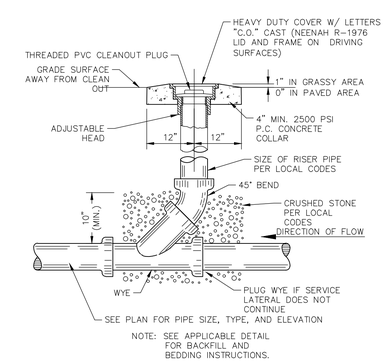
ACCESSIBLE PARKING SYMBOL

N.T.S.



STOP BAR

N.T.S.



NOTE: SEE APPLICABLE DETAIL FOR BACKFILL AND BEDDING INSTRUCTIONS.

SANITARY/STORM CLEAN-OUT

N.T.S.

Pedestrian Bike Path		
FILE NAME: Bike Path.dwg DRAWN BY: WOC	Street Improvement	DATE: REVISED: REVISED: REVISED:
Village of ORLAND PARK		
Engineering Department		DRAWING NO.

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
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WARRENVILLE, ILLINOIS 60555
630-487-5550
WWW.KIMLEY-HORN.COM

LICENSED PROFESSIONAL
XXXX
ILLINOIS LICENSE NUMBER
XXXX
DATE: 11/14/2025

KHA PROJECT 149621089
DATE 11/14/2025
SCALE AS SHOWN
DESIGNED BY ####
DRAWN BY ####
CHECKED BY ####

CONSTRUCTION DETAILS

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER
C8.3

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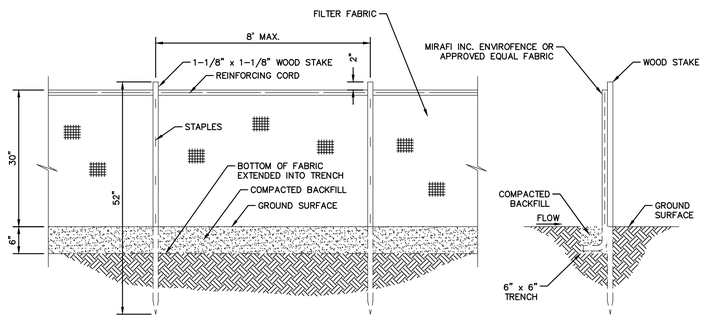
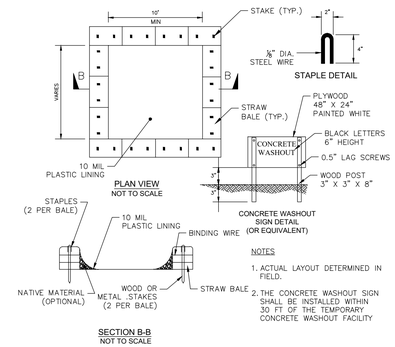


FRONT VIEW

SIDE VIEW

SEDIMENTATION/SILT FENCE (SF)

N.T.S.

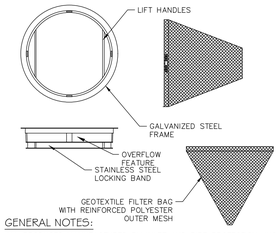


NOTES

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT OF THE TEMPORARY CONCRETE WASHOUT FACILITY

CONCRETE WASHOUT (CW)

N.T.S.



GENERAL NOTES:

ALL PRODUCTS MANUFACTURED BY INLET AND PIPE PROTECTION, INC OR APPROVED EQUAL.

NOTE: INLET FILTERS ARE SLIGHTLY SMALLER THAN THE INLET GRATE SIZES. WHEN IDENTIFYING OR SPECIFYING FILTERS/CASTINGS PLEASE REFER TO THE DIAMETER "D" OR WIDTH "W" AND HEIGHT "H" OF FILTER FRAMES OR CASTING GRATES. YOU MAY ALSO REFER TO OUR CASTING CROSS REFERENCE GUIDE FOR IDOT STANDARDS

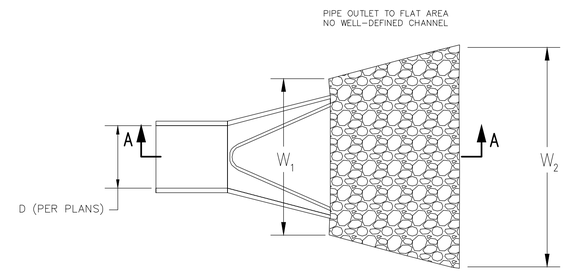
IDOT TYPE 1 ROUND INLET FILTER DEPICTED

NOTE: ROUND AND SQUARE INLET FILTERS AVAILABLE FOR MOST NEENAH AND EAST JORDAN BEEHIVE, ROLL CURB AND CURB BOX FRAME TYPES

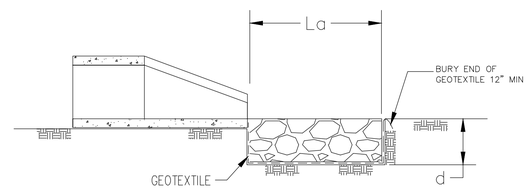
ALL IPP INLET FILTERS TO CONFORM TO IDOT SPECIFICATIONS AS OUTLINED IN ARTICLE 1081.15 OF IDOT'S STANDARD SPECIFICATIONS GUIDE.

INLET PROTECTION (IP)

N.T.S.



PLAN



SECTION A-A

NOTES:

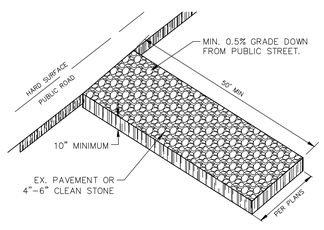
1. THE ROCK RIPRAP SHALL MEET IDOT REQUIREMENTS FOR GRADATION NO. RR-3 & RR-4 , QUALITY DESIGNATION "A".
2. GEOTEXTILE (NON-WOVEN) MINIMUM CRITERIA:
   - 2.1. WEIGHT OF GEOTEXTILE (OZ/SQ.YD.) 6
   - 2.2. TENSILE STRENGTH (LB) ASTM D 4632 180
   - 2.3. ELONGATION AT FAILURE (%) ASTM D 4632 ≥ 50
   - 2.4. PUNCTURE (LB) ASTM D 4833 80
   - 2.5. ULTRAVIOLET LIGHT (% RESIDUAL TENSILE STRENGTH) ASTM D 4355 MIN 70
   - 2.6. APPARENT OPENING SIZE (AOS) ASTM D 4751 MAX 40 SIEVE
   - 2.7. PERMITTIVITY SEC^{-1} ASTM D 4491 MIN 0.70
3. ANY GEOTEXTILE SPLICES SHALL OVERLAP A MINIMUM OF 18 INCHES, WITH UPSTREAM OR UPSLOPE GEOTEXTILE OVERLAPPING THE ABUTTING DOWNSLOPE GEOTEXTILE.
4. APRON WIDTH W_1 SHALL BE 3 TIMES THE CULVERT PIPE DIAMETER. APRON WIDTH W_2 SHALL BE EQUAL TO L_A PLUS THE PIPE DIAMETER.
5. ROCK THICKNESS D SHALL BE AT LEAST 1.5 TIMES THE RIPRAP D_{100} SIZE.
6. APRON LENGTH L_A AND ROCK RIPRAP HAS BEEN SIZED ACCORDING TO ILLINOIS URBAN MANUAL ROCK OUTLET PROTECTION STANDARD 910 BASED CALCULATED VELOCITY FOR THIS PROJECT SITE. PLEASE SEE TABLE 1 FOR DETAILS.

RIPRAP DIMENSION TABLE

INLET PIPE SIZE d (IN)	LENGTH OF APRON La (FT)	ROCK GRADATION (IDOT)	WIDTH OF APRON U/S FACE W1 (FT)	WIDTH OF APRON D/S FACE W2 (FT)	DEPTH OF RIPRAP d (IN)
12	12	RR-3	3.00	13.00	15
15	12	RR-3	3.75	13.25	15
18	16	RR-4	4.50	17.50	20
21	16	RR-4	5.25	17.75	20
24	20	RR-4	6.00	22.00	20
27	20	RR-4	6.75	22.50	20
30	22	RR-4	7.50	24.50	20
36	24	RR-5	9.00	27.00	28
42	24	RR-5	10.50	27.50	30
48	28	RR-6	12.00	32.00	32
54	28	RR-6	13.50	32.50	32
60	36	RR-6	15.00	41.00	32
72	44	RR-6	18.00	50.00	32

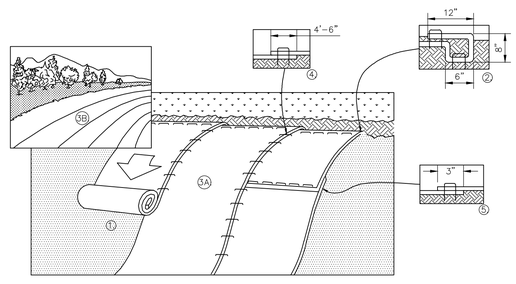
RIP RAP DETAIL OUTLET PROTECTION

N.T.S.



CONSTRUCTION ENTRANCE (CE)

N.T.S.



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH AS SHOWN IN DETAIL 2. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS PER MANUFACTURES RECOMMENDATION.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH MINIMUM 6" OVERLAP. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.
6. PLACE STAPLES/STAKES PER MANUFACTURER'S RECOMMENDATION FOR THE APPROPRIATE SLOPE BEING APPLIED.

NOTES:

1. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
2. FOLLOW EROSION CONTROL TECHNOLOGY COUNCIL SPECIFICATION FOR PRODUCT SELECTION.
3. PERVIOUS LAND WITH SLOPES RUNNING GREATER THAN OR EQUAL TO 4:1 SHALL CONTAIN SLOPE STABILIZATION BLANKET

EROSION CONTROL BLANKET (SLOPE INSTALLATION)

N.T.S.

STABILIZATION TYPE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING			A			*	*					
DORMANT SEEDING	B										B	
TEMPORARY SEEDING			C				D					
SODDING			E **									
MULCHING	F											

A KENTUCKY BLUEGRASS 90 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 30 LBS/ACRE

B KENTUCKY BLUEGRASS 135 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 45 LBS/ACRE + 2 TONS STRAW MULCH/ACRE

C SPRING OATS 100 LBS/ACRE

D WHEAT OR CEREAL RYE 150 LBS/ACRE

E SOD

F STRAW MULCH 2 TONS/ACRE

* WATERING NEEDED DURING JUNE AND JULY

** WATERING NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD

SEEDING CHART

No.	REVISIONS	DATE	BY

Kimley»Horn
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WARRENVILLE, ILLINOIS 60555
630-487-5550
WWW.KIMLEY-HORN.COM

LICENSED PROFESSIONAL XXXX

ILLINOIS LICENSE NUMBER XXXX

DATE: 11/14/2025

KHA PROJECT 149621089

DATE 11/14/2025

SCALE AS SHOWN

DESIGNED BY ###

DRAWN BY ###

CHECKED BY ###

EROSION CONTROL DETAILS

159TH & LAGRANGE RETAIL

CITY OF ORLAND PARK ILLINOIS

SHEET NUMBER C9.0

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