

DRAWING SHEET INDEX

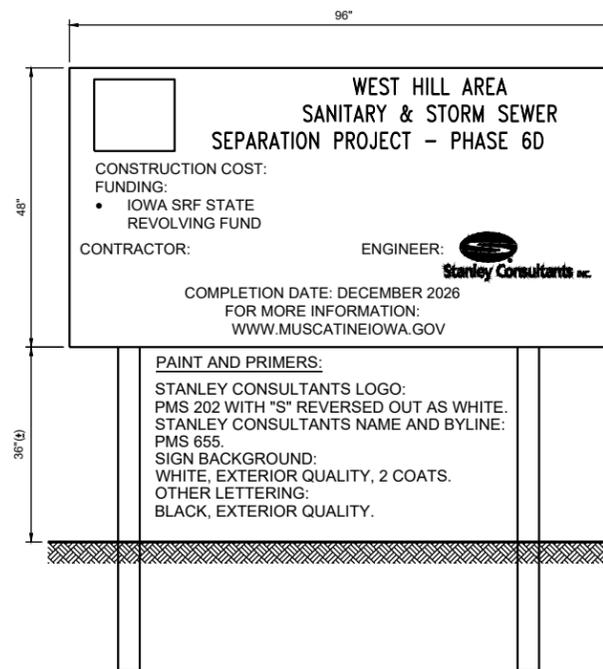
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NOTES

- SEE PROJECT MANUAL FOR PROJECT MILESTONE REQUIREMENTS. SEE SHEET J.03 FOR STAGING PLAN.
- THE PROPOSED IMPROVEMENTS INCLUDED IN THESE DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE 2025 EDITION IOWA STATEWIDE URBAN DESIGN AND SPECIFICATIONS MANUALS (SUDAS). REFER TO CONTRACT DOCUMENTS; DRAWINGS AND PROJECT MANUAL, FOR PROJECT SPECIFIC REQUIREMENTS.
- CONTRACTOR IS RESPONSIBLE FOR CALLING UTILITY ONE-CALL BEFORE ANY EXCAVATION OCCURS. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING FEATURES AND RESTORING DAMAGED FEATURES TO EXISTING CONDITIONS AT NO ADDITIONAL COST TO THE CITY.
- SEE WATER MAIN DRAWINGS FOR REPLACEMENT WORK INCLUDED IN THIS CONTRACT.



PROJECT SIGN DETAIL

SCALE: NONE

NOTES:

- CONTRACTOR TO PROVIDE TWO PROJECT SIGNS ON OPPOSITE ENDS OF PROJECT. SEE SECTION 01 50 00 FOR SPECIFIC REQUIREMENTS. SEE ITEM "SPECIAL SIGNAGE" FOR PAYMENT AND REQUIREMENTS.
- CONTRACTOR TO PROTECT AND RELOCATE SIGN AS NEEDED TO PREVENT DAMAGE.



NO.	REVISIONS	DSGN	CHKD	APVD	DATE



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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

INDEX SHEET

DESIGNED <u>KK HEIM</u>	SCALE: AS NOTED
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	
APPROVED <u>KK HEIM</u>	A.02
DATE <u>MARCH 12, 2025</u>	0

GENERAL

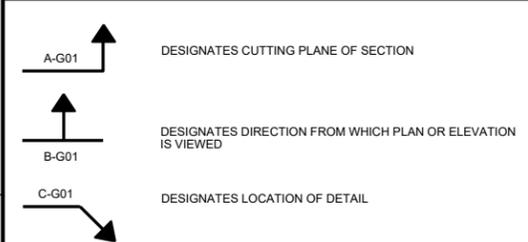
CIVIL

SUDAS DETAILS

NOTES

VIEW MARKERS

ABBREVIATIONS



SECTION A-G01
G01, G02

ELEVATION B-G01
G01

DETAIL C-G01
G01

EL 100.00' ELEVATION DESIGNATION

REVISION IDENTIFICATION SYMBOL:
THE NUMBER IN THE TRIANGLE INDICATES THE REVISION NUMBER IDENTIFIED. THE LETTER "A" IMMEDIATELY TO THE RIGHT OF THE TRIANGLE INDICATES THE REVISION IS PART OF A CONTRACT ADDENDUM. WHEN REVISIONS INVOLVE LESS THAN ENTIRE DRAWING, PRINCIPAL ASPECTS OF REVISIONS ARE "CLOUDED".

CONTRACT IDENTIFICATION:
LEFT HAND NUMBER INDICATES CONTRACTOR FURNISHING, RIGHT HAND NUMBER INDICATES CONTRACTOR INSTALLING

ASPH	ASPHALT
AVE	AVENUE
BM	BENCH MARK
BOC	BACK OF CURB
BOT	BOTTOM
C/CBS	COMBINED SEWER
CB	CATCH BASIN
CIP	CAST IRON PIPE
CIPP	CURED IN PLACE PIPE
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CP	CONTROL POINT
CTR	CENTER
D/DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DR	DRIVE
DWG	DRAWING
DWL	DOWEL
EF	EACH FACE
EG	EXISTING GRADE
EXP	EXPANSION
EXST/EX	EXISTING
FG	FINISHED GRADE
FO	FIBER OPTICS
FT	FEET
G	GAS
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
IDOT	IOWA DEPARTMENT OF TRANSPORTATION
IE	INVERT ELEVATION
IF	INSIDE FACE
IN	INCHES
INV	INVERT
IP	INTAKE POINT
JT	JOINT
LF	LINEAR FEET
LWBS	LOWER WEST BRANCH SEWER
MH	MANHOLE
MAX	MAXIMUM
MIN	MINIMUM
MPW	MUSCATINE POWER AND WATER
NA	NOT APPLICABLE
OC	ON CENTER
OE/OHE	OVERHEAD ELECTRIC
OF	OUTSIDE FACE
P	PLASTIC
PC	PORTLAND CEMENT
PCC	PORTLAND CEMENT CONCRETE
PCS	PAPOOSE CREEK SEWER
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REQD	REQUIRED
ROW	RIGHT-OF-WAY
S	STEEL
SAN	SANITARY SEWER
SS	SANITARY SEWER
SST	STAINLESS STEEL
ST	STORM SEWER/STREET
SUDAS	STATEWIDE URBAN DESIGN AND SPECIFICATIONS
TDC	TREE DECIDUOUS
TEL	TELEPHONE
TEV	TREE EVERGREEN
THK	THICK
TYP	TYPICAL
UAC	USE AS CONSTRUCTED
UNO	UNLESS NOTED OTHERWISE
UWBS	UPPER WEST BRANCH SEWER
VERT	VERTICAL
W	WATER
WSI	WEST SIDE INTERCEPTOR

	CONCRETE
	EARTH
	FIRE HYDRANT
	UTILITY POLE
	LIGHT POLE
	TELEPHONE PEDESTAL
	EXISTING GAS VALVE
	FENCE
	EXISTING CLEANOUT
	EXISTING ELECTRICAL BOX
	EXISTING MANHOLE
	EXISTING HAND HOLE
	EXISTING WATER VALVE
	EXISTING SIGN
	EXISTING SEWERS
	EXISTING INLET
	PROPOSED SANITARY SEWER
	PROPOSED STORM SEWER
	PROPOSED MANHOLE
	PROPOSED CLEANOUT
	PROPOSED INLET
	SANITARY
	STORM
	SUBDRAIN
	COMBINED
	FORCE MAIN
	ELECTRICAL
	GAS
	WATER
	TELEPHONE
	COMMUNICATIONS
	TELEPHONE DUCT
	FIBER OPTICS
	OVERHEAD ELECTRIC
	CONTROL POINT
	CONSTRUCTION LIMIT/TEMPORARY EASEMENT
	PERMANENT EASEMENT
	PROPERTY LINE
	SILT FENCE
	PROPOSED GRADE ON PROFILES
	EXISTING GROUND ON PROFILES
	CREEKS & STREAMS
	ROW ACQUISITION
	PERMANENT EASEMENT
	TEMPORARY EASEMENT
	EXISTING PERMANENT EASEMENT

SUDAS NO.	DETAIL NAME
2010.102	DESIGNATIONS OF ROADWAY EARTHWORK ITEMS
3010.101	TRENCH BEDDING AND BACKFILL ZONES
3010.102	RIGID GRAVITY PIPE TRENCH BEDDING
3010.103	FLEXIBLE GRAVITY PIPE TRENCH BEDDING
3010.104	PRESSURE PIPE TRENCH BEDDING
4010.201	SANITARY SEWER SERVICE STUB
4010.203	SANITARY SEWER CLEANOUT
4020.222	CIRCULAR CONCRETE APRONS
4020.224	CONCRETE PIPE APRON GUARD
4020.231	SUBDRAINS
4020.233	SUBDRAIN OUTLETS
6010.301	CIRCULAR SANITARY SEWER MANHOLE
6010.303	SANITARY SEWER MANHOLE OVER EXISTING SEWER
6010.401	CIRCULAR STORM SEWER MANHOLE
6010.406	SHALLOW RECTANGULAR SEWER MANHOLE
6010.501	SINGLE GRATE INTAKE
6010.502	CIRCULAR SINGLE GRATE INTAKE
6010.507	SINGLE OPEN-THROAT CURB INTAKE, SMALL BOX
6010.509	DOUBLE OPEN-THROAT CURB INTAKE, SMALL BOX
6010.512	CIRCULAR AREA INTAKE
7010.101	JOINTS
7010.102	PCC CURB DETAILS
7010.103	MANHOLE BOXOUTS IN PCC PAVEMENT
7010.901	PCC PAVEMENT JOINTING
7010.904	TYPICAL JOINTING LAYOUT
7030.101	CONCRETE DRIVEWAY, TYPE A
7030.103	DRIVEWAY GRADING
7030.104	ROW GRADING
7030.201	CLASSES OF SIDEWALKS
7030.202	CURB DETAILS FOR CLASS A SIDEWALK
7030.204	GENERAL FEATURES OF AN ACCESSIBLE SIDEWALK
7030.205	GENERAL SIDEWALK AND CURB RAMP DETAILS
7030.206	CURB RAMPS OUTSIDE OF INTERSECTION RADIUS
7030.207	CURB RAMP FOR CLASS B OR C SIDEWALK
7030.208	ALTERNATIVE CURB RAMP FOR CLASS B OR C SIDEWALK
7030.209	CURB RAMPS FOR CLASS A SIDEWALK
7030.210	DETECTABLE WARNING PLACEMENT
7040.101	FULL DEPTH PCC PATCHES LESS THAN OR EQUAL TO 15' LONG
7040.102	FULL DEPTH PCC PATCHES GREATER THAN 15' LONG
8030.101	TEMPORARY TRAFFIC CONTROL GENERAL INFORMATION
8030.111	LANE CLOSEURE AT AN INTERSECTION
8030.116	STREET OR ROAD CLOSURE
8030.117	SIDEWALK DETOUR
8030.119	CLOSURE OF MARKED OR UNMARKED CROSSWALK
9040.102	FILTER BERM AND FILTER SOCK
9040.103	ROLLED EROSION CONTROL PRODUCT (RECP) INSTALLATION ON SLOPES
9040.105	WATTLE
9040.111	RIP RAP APRON FOR PIPE OUTLET INTO CHANNEL
9040.119	SILT FENCE
9040.120	STABILIZED CONSTRUCTION EXIT
9080.101	TYPE A CONCRETE STEPS WITH HANDRAIL
9080.102	TYPE B CONCRETE STEPS WITH HANDRAIL
11030.101	TEMPORARY MAILBOXES
11040.101	TEMP. GRANULAR SIDEWALK/TEMP RESIDENTIAL ACCESS
11040.102	TEMPORARY PEDESTRIAN CHANNELIZING DEVICE

GENERAL SYMBOLS

DIMENSIONS AND SCALE

DIMENSIONS AND/OR ELEVATIONS MARKED WITH (*) ARE APPROXIMATE. OBTAIN FINAL DIMENSIONS FOR CONSTRUCTION FROM THE ENGINEER.

DIMENSIONS AND/OR ELEVATIONS MARKED WITH (A) ARE ASSUMED AND MAY BE VARIED BY THE CONTRACTOR TO SUIT EQUIPMENT FURNISHED. FINAL DIMENSIONS ARE SUBJECT TO THE REVIEW OF THE ENGINEER.

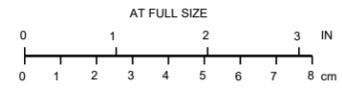
DIMENSIONS AND/OR ELEVATIONS MARKED WITH (±) MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

DIMENSIONS ARE GENERALLY TO SCALE, BUT SHOULD NOT BE SCALED. USE DIMENSIONS SHOWN. NTS (NOT TO SCALE) IS SHOWN ONLY WHERE DIMENSION IS OBVIOUSLY OUT OF SCALE.

NUMERIC SCALE VALUES (1/4"=1'-0", ETC) APPLY ONLY AT FULL SCALE.

	EXISTING
	NEW
	CENTER LINE
	SURFACE BREAK LINE
	MATERIAL BREAK LINE
	MATCH LINE
	CENTER LINE
	DIAMETER OR ROUND
	PROPERTY LINE
	WITH
	WITH OUT

- NOTES:
- SUDAS DETAILS FROM THE LATEST 2025 VERSION (CURRENT AT THE TIME OF BID) SHALL BE USED FOR ENTIRE PROJECT DURATION. SEE PROJECT MANUAL FOR A COPY OF SUDAS FIGURES LISTED.
 - OTHER DETAILS MAY BE APPLICABLE OTHER THAN THOSE LISTED HERE.



- ALL SYMBOLS AND ABBREVIATIONS SHOWN ON THIS LEGEND MAY NOT APPEAR IN THIS SET OF DRAWINGS.
- SEE INDIVIDUAL LEGENDS ON D, J, R AND S SERIES SHEETS.
- SEE TOPOGRAPHIC SURVEY LEGEND ON G.04.

NO.	REVISIONS	DSGN	CHKD	APVD	DATE

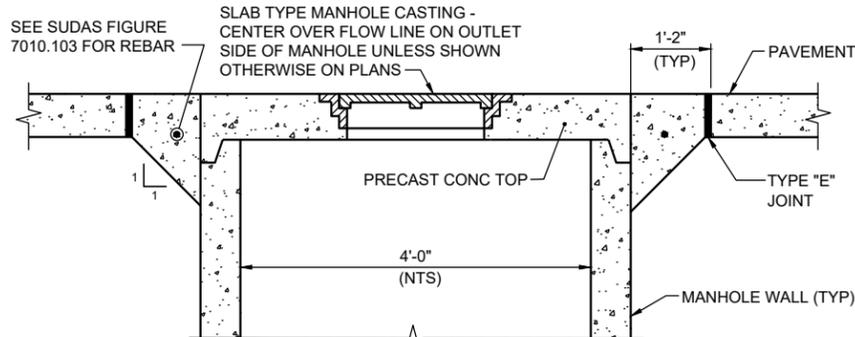
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www.stanleyconsultants.com

CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

LEGEND AND NOTES

DESIGNED <u>KK HEIM</u>	SCALE: AS NOTED
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV. <u>0</u>
APPROVED <u>JM BRADY</u>	
APPROVED <u>KK HEIM</u>	
DATE <u>MARCH 12, 2025</u>	

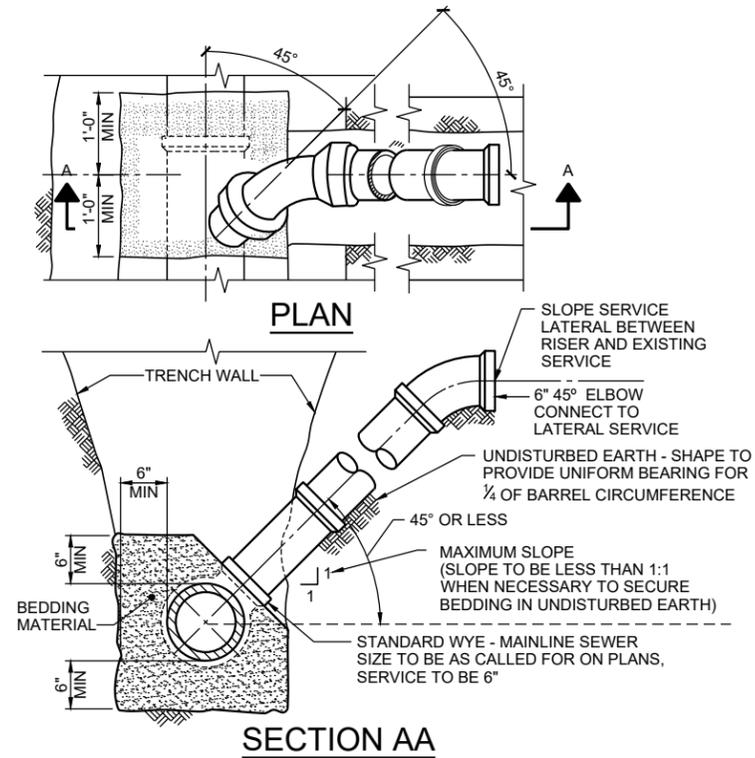
LOAD D3-RS



- NOTE:**
1. USE ONLY WHERE PIPING TO/FROM MANHOLE DOES NOT ALLOW ENOUGH UNDER PAVEMENT TO PERMIT INSTALLATION OF STANDARD MANHOLE CASTING.
 2. CASTING: EAST JORDAN 2870A WITH MACHINED BEARING SURFACES, SOLID COVER AND DROP HANDLES.
 3. PRECAST TOP DESIGNED FOR H20 LOADING.

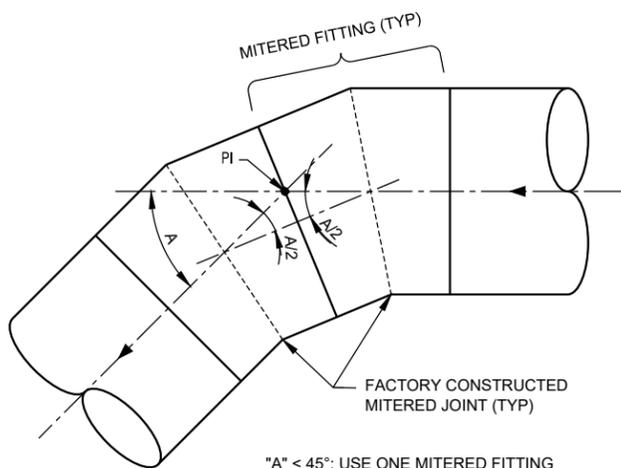
DETAIL - FLAT TOP MANHOLE (LOW HEADROOM)

SCALE: 3/4" = 1'-0"



- NOTES:**
1. FOR PIPE AND BEDDING MATERIAL SEE SPECIFICATIONS.

SEWER RISER
NO SCALE

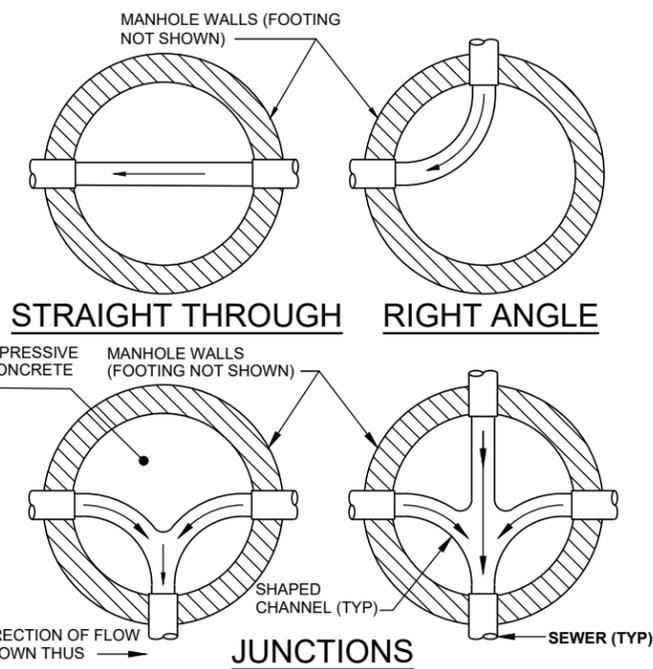


- "A" < 45°; USE ONE MITERED FITTING
"A" > 45°; USE TWO EQUAL MITERED FITTINGS

NOTE:
ALL STATIONING CONTINUOUS THRU PI WITH NO EQUATION.

TYPICAL BEND DETAIL

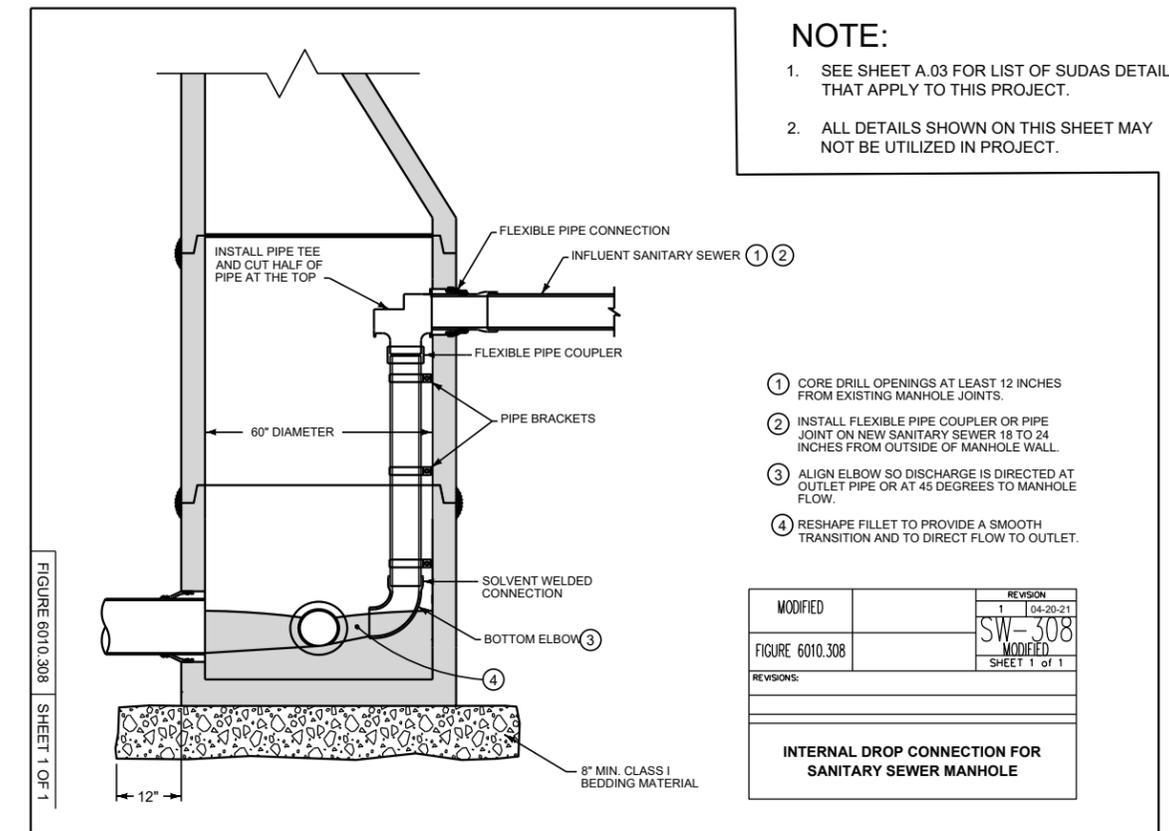
SCALE: NONE



- NOTES:**
DEPTH OF ALL CHANNELS TO BE 3/4 X DIAMETER OF THE LARGEST SEWER ENTERING OR LEAVING MANHOLE.

MANHOLE BOTTOMS

SCALE: NONE



NOTE:

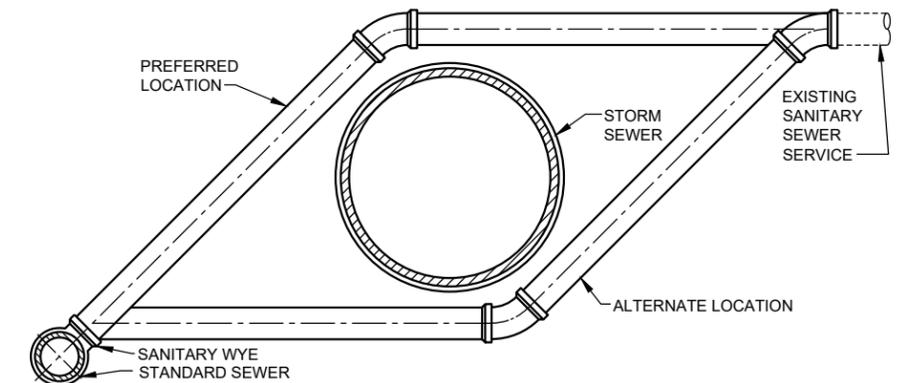
1. SEE SHEET A.03 FOR LIST OF SUDAS DETAILS THAT APPLY TO THIS PROJECT.
2. ALL DETAILS SHOWN ON THIS SHEET MAY NOT BE UTILIZED IN PROJECT.

- 1 CORE DRILL OPENINGS AT LEAST 12 INCHES FROM EXISTING MANHOLE JOINTS.
- 2 INSTALL FLEXIBLE PIPE COUPLER OR PIPE JOINT ON NEW SANITARY SEWER 18 TO 24 INCHES FROM OUTSIDE OF MANHOLE WALL.
- 3 ALIGN ELBOW SO DISCHARGE IS DIRECTED AT OUTLET PIPE OR AT 45 DEGREES TO MANHOLE FLOW.
- 4 RESHAPE FILLET TO PROVIDE A SMOOTH TRANSITION AND TO DIRECT FLOW TO OUTLET.

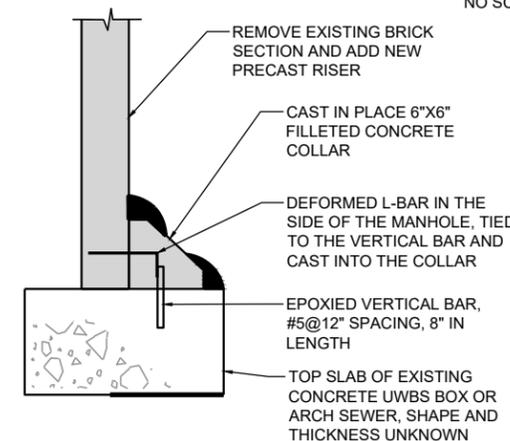
MODIFIED		REVISION	
FIGURE 6010.308		1	04-20-21
		2	SW-308
		3	MODIFIED
		4	SHEET 1 of 1

REVISIONS:

INTERNAL DROP CONNECTION FOR SANITARY SEWER MANHOLE



TYPICAL SERVICE CONNECTION
NO SCALE



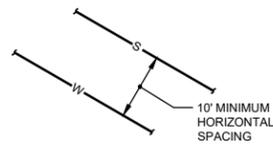
RISER CONNECTION DETAIL

SCALE: NONE

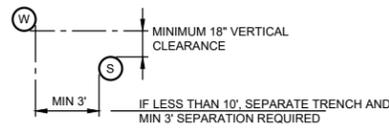
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<p>Stanley Consultants Inc. 225 Iowa Avenue, Muscatine, Iowa 52761-3764 www.stanleyconsultants.com</p>					
<p>CITY OF MUSCATINE - PHASE 6D WEST HILL AREA SANITARY AND STORM SEWER SEPARATION MUSCATINE, IOWA</p>					
<p>PIPE DETAILS</p>					
DESIGNED	KK HEIM	SCALE:		AS NOTED	
DRAWN	GM REEVES	NO.		17660.60.30	REV.
CHECKED	ER SCHALLERT	DATE		MARCH 12, 2025	A.04
APPROVED	JM BRADY				0
APPROVED	KK HEIM				
DATE	MARCH 12, 2025				

STATE OF IOWA HORIZONTAL GRAVITY SEWER & WATERMAIN SEPARATION CRITERIA

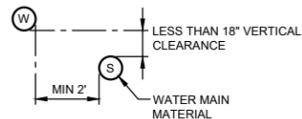
- HORIZONTAL SEPARATION OF WATER MAINS FROM GRAVITY SEWERS. WATER MAINS SHALL BE SEPARATED FROM GRAVITY SEWERS BY HORIZONTAL DISTANCE OF AT LEAST 10 FEET.



- IF 10' SEPARATION IS NOT POSSIBLE, A LESSER DISTANCE MAY BE CONSIDERED IF: THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, AND THE WATER MAIN IS PLACED IN EITHER A SEPARATE TRENCH OR IN THE SAME TRENCH ON A BENCH OF UNDISTURBED EARTH, AT A MINIMUM HORIZONTAL SEPARATION OF THREE FEET FROM THE SEWER.



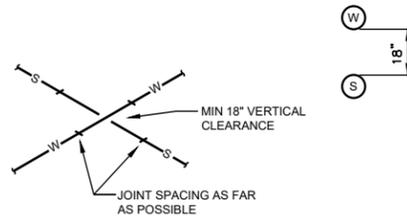
- IF IT IS NOT POSSIBLE TO OBTAIN THE REQUIRED HORIZONTAL CLEARANCE OF THREE FEET AND VERTICAL SEPARATION OF 18 INCHES BETWEEN THE WATER MAIN AND SEWER, THE SEWER MUST BE CONSTRUCTED OF WATER MAIN MATERIALS MEETING A MINIMUM PRESSURE RATING OF 150 PSI. A LINEAR SEPARATION OF AT LEAST TWO FEET SHALL BE PROVIDED.



- GRAVITY SEWER AND WATER MAIN SEPARATION REQUIREMENTS SUMMARIZED HERE CAN BE FOUND IN SUDAS SPECIFICATION SECTION 4010 AND SECTION 5010, IOWA WASTEWATER FACILITIES DESIGN STANDARDS CHAPTER 12, AND 567 IOWA ADMINISTRATIVE CODE CHAPTER 43.

STATE OF IOWA WATERMAIN AND SEWER CROSSING CRITERIA

- PREFERRED CROSSINGS WITH SEWERS: (SANITARY, COMBINED OR STORM)**
 - VERTICAL SEPARATION OF WATER MAINS CROSSING OVER ANY SEWER SHALL BE AT LEAST 18-INCHES WHEN MEASURED FROM THE BOTTOM OF THE WATER MAIN TO THE TOP OF THE SEWER.
 - ALL JOINTS SHALL BE PLACED AS FAR AS POSSIBLE FROM THE POINT OF CROSSING.
 - PIPES SHALL BE ADEQUATELY SUPPORTED
 - JOINTS SHALL BE WATERTIGHT
 - LOW PERMEABILITY SOIL SHALL BE USED FOR BACKFILL MATERIAL WITHIN 10-FOOT OF POINT OF CROSSING.

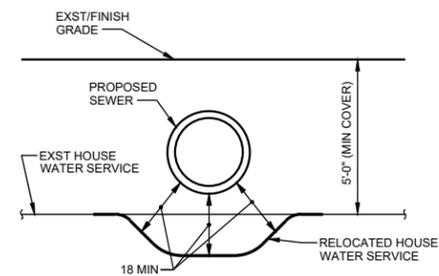
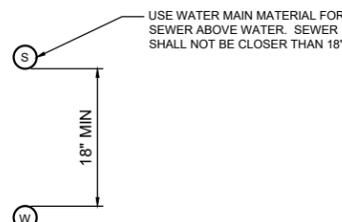
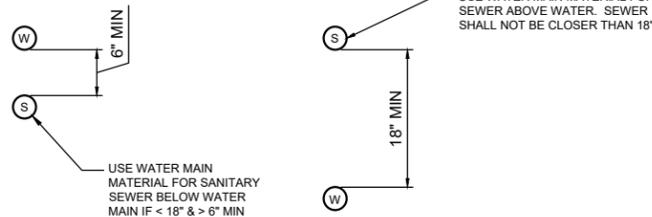


- ALTERNATIVE ALLOWABLE CROSSING VERTICAL SEPARATION:** IF PHYSICAL CONDITIONS PROHIBIT PREFERRED CROSSING CONFIGURATION:

- SEWER SHALL NOT BE PLACED CLOSER THAN 6-INCHES BELOW A WATER MAIN; OR,
- SEWER SHALL NOT BE PLACED CLOSER THAN 18-INCHES ABOVE WATER MAIN.

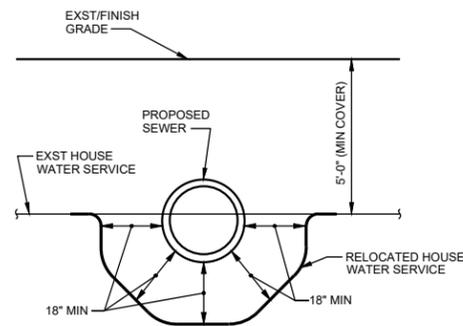
USE WATER MAIN MATERIAL FOR SEWER WHEN:

- SANITARY SEWER CROSSES BELOW WATER MAIN AND VERTICAL SEPARATION IS LESS THAN 18-INCHES AND GREATER THAN 6-INCHES.
- SANITARY SEWER CROSSES ABOVE WATER MAIN AND VERTICAL SEPARATION IS GREATER THAN 18-INCHES.
- STORM SEWERS CROSSING ABOVE WATER MAIN WITH 18" (MINIMUM CLEARANCE) MAY BE CONSTRUCTED OF GASKETTED RCP OR WATER MAIN MATERIAL.
- STORM SEWERS CROSSING BELOW WATER MAIN AND SEPARATION IS LESS THAN 18-INCHES AND GREATER THAN 6-INCHES, STORM SEWER CONSTRUCTED OF GASKETED RCP OR WATER MAIN MATERIAL.



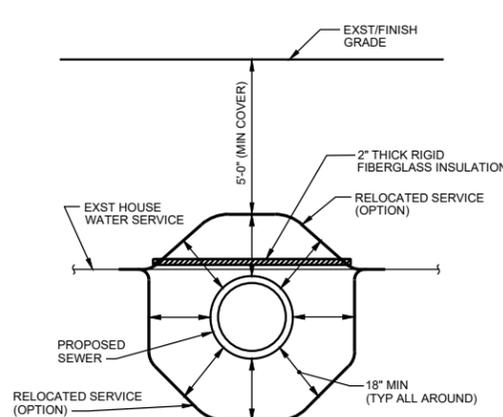
EXISTING SERVICE BELOW PROPOSED SEWER

- NOTE:
- SERVICE MAY BE RELOCATED OVER PROPOSED SEWER IF 18" SEPARATION AND 5' OF COVER CAN BE OBTAINED. EXCAVATE TO UNCOVER EXISTING SERVICE TO DETERMINE SEPARATION DISTANCE.



EXISTING SERVICE IN CONFLICT WITH PROPOSED SEWER

- NOTE:
- SERVICE MAY BE RELOCATED OVER PROPOSED SEWER IF 18" SEPARATION AND 5' OF COVER CAN BE OBTAINED.

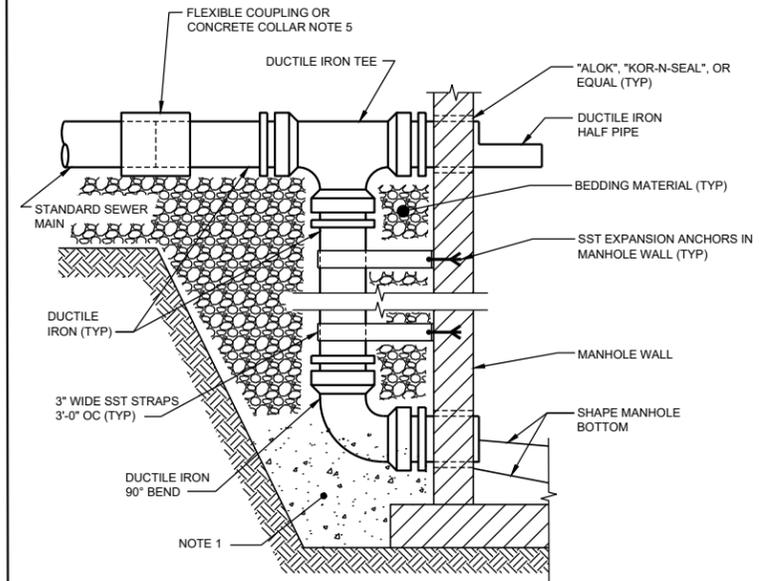


EXISTING SERVICE ABOVE PROPOSED SEWER

NO SCALE

WATER SERVICE RELOCATION DETAILS

NO SCALE

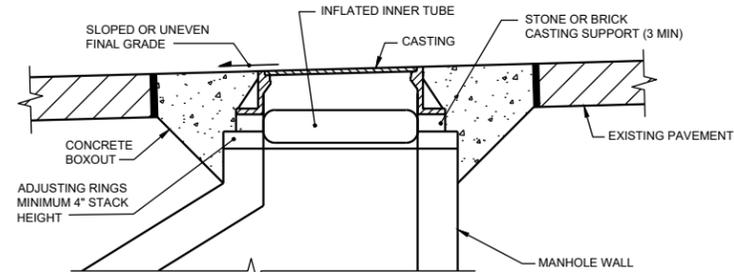


NOTES:

- SUPPORT 90° BEND ON CONCRETE THRUST BLOCK WITH 2500 PSI COMPRESSIVE STRENGTH CONCRETE. ENCASE ELBOW IN CONCRETE, 12-INCHES MINIMUM ON ALL SIDES.
- ALL JOINTS SHALL BE RESTRAINED.
- EXTERNAL DROP CONNECTION ONLY USED WHERE INDICATED ON DRAWINGS. ALL OTHER DROP CONNECTIONS SHALL BE INTERNAL DROP CONNECTIONS.
- MINIMIZE BY USING SHORTEST WORKABLE HORIZONTAL PIPE SPOOLS.
- JOINT SHALL BE OUTSIDE OF DEEP EXCAVATION, MINIMUM 8'.
- DUCTILE IRON PIPE FOR DROP DOES NOT REQUIRE SPECIAL LINING FOR SANITARY SEWERS. USE STANDARD CEMENT MORTAR LINING WITH SEAL COAT.

EXTERNAL DROP CONNECTION DETAIL

NO SCALE

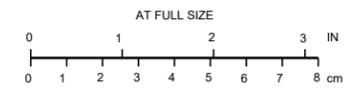


NOTES:

- ADJUST CASTING ELEVATION USING A MINIMUM OF 3 STONES, BRICKS OR OTHER SUITABLE SUPPORT.
- INSTALL INNER TUBE AS SHOWN AND INFLATE TO PROVIDE "FORM" FOR CONCRETE INSTALLATION.
- POUR CONCRETE BOXOUT AROUND MANHOLE TOP AS DETAILED AND WORK CONCRETE UNDER CASTING AND AROUND SUPPORT.
- REMOVE TUBE AFTER CONCRETE SETS.
- INSTALL INTERIOR INFILTRATION BARRIER SEAL (SANITARY MANHOLES ONLY).
- CITY STAFF IS AVAILABLE TO DEMONSTRATE THIS METHOD.
- SEE SUDAS DETAIL 7010-103 FOR MANHOLE BOXOUT REQUIREMENTS IN PCC PAVEMENT.
- SEE SUDAS SECTION 6010 FOR ADJUSTMENT OF CASTINGS.

DETAIL-FLUSH CASTING INSTALLATION

SCALE: 3/4" = 1'-0"



NOTES

NO.	REVISIONS	DSGN	CHKD	APVD	DATE



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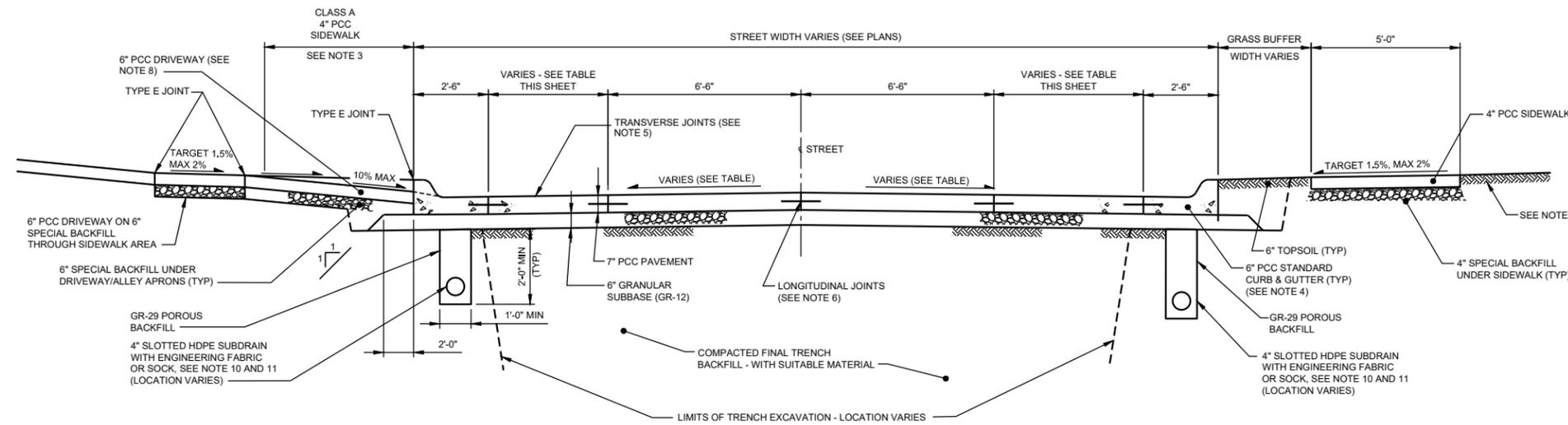
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

MISCELLANEOUS SEWER DETAILS

DESIGNED <u>KK HEIM</u>	SCALE: AS NOTED
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	A.05
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	

NOTES

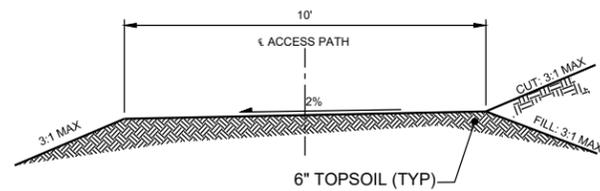
- LIMITS OF SIDEWALK AND DRIVEWAY/ALLEY REMOVAL AND REPLACEMENT VARY. SEE PLANS.
- PAVEMENT CONSTRUCTION WHERE NEW PAVEMENT BUTTS UP TO EXISTING BRICK BASE PAVEMENT SHALL USE 'B' JOINT FROM SUDAS DETAIL 7010.101.
- INSTALL CLASS A SIDEWALK WHEN SIDEWALK IS ALONG BACK OF CURB PER SUDAS DETAIL 7030.201. 5' MINIMUM WIDTH SEE PLANS FOR LOCATIONS AND SIDEWALK WIDTHS. TRANSVERSE SIDEWALK ISOLATION JOINTS SHALL BE LOCATED AT INTERVALS NOT MORE THAN 100' IN LENGTH OF SIDEWALK. LOCATE TO CREATE LEAST VISUAL DETRACTION POSSIBLE.
- SEE SUDAS DETAIL 7010.102 FOR 6" STANDARD CURB AND GUTTER DETAIL.
- TRANSVERSE JOINTS: 7" PCC SHALL HAVE TYPE 'CD' TRANSVERSE JOINTS AT 15' MAXIMUM INTERVAL. 7" PCC DOWELED CONTRACTION JOINTS SHALL BE 3/4" DOWEL DIAMETER.
- LONGITUDINAL JOINTS: 7" PCC SHALL HAVE TYPE L-1, KT-1, OR BT-1 LONGITUDINAL JOINTS DEPENDING ON THE PAVING SEQUENCE. SEE SUDAS DETAIL 7010.101 FOR BAR SIZES.
- SLOPE BEHIND SIDEWALK VARIES. GRADE UNIFORMLY BETWEEN BACK OF SIDEWALK AND GRADING LIMITS. 3:1 MAXIMUM.
- SEE SUDAS DETAIL 7030.101 FOR DRIVEWAY/ALLEY OPENINGS AND DROP CURB HEIGHT.
- SEE W SERIES SHEETS FOR PROPOSED CROSS SECTIONS. DROP CURB HEIGHT: 1.5'.
- WHEN SUBDRAIN IS IN CONFLICT WITH LONGITUDINAL STORM SEWER PIPE, ELIMINATE SUBDRAIN.
- SEE SUDAS DETAIL 4040.231 FOR SUBDRAIN LOCATION OPTIONS AND SECTION REQUIREMENTS.
- PAVING MUST BE DONE USING A SLIP FORM PAVER, HAND POUR, OR OTHER SUDAS APPROVED METHOD. POWER/LASER SCREED WILL NOT BE ALLOWED ON MAINLINE DRIVING SURFACE.
- TRANSITION PAVEMENT CROSS SLOPE TO MATCH EXISTING CROSS SLOPE OVER 24 FEET MINIMUM.



7" PCC TYPICAL SECTION
APPLIES TO: ALL STREETS

VARIABLE LONGITUDINAL JOINT	
STREET WIDTH	JOINT DIMENSION
27' B-B	NO QUARTER JOINT (12' TRANSVERSE JOINT SPACING)
30' B-B	6' QUARTER JOINT (12' TRANSVERSE JOINT SPACING)
33' B-B	7.5' QUARTER JOINT (12' TRANSVERSE JOINT SPACING)

PAVEMENT CROSS SLOPE		
STREET	LEFT CROSS SLOPE	RIGHT CROSS SLOPE
HAGERMAN DR	2%	2%
LOGAN ST	3%	2%
EISENHOWER ST	2%	2%
DEVITT AVE	3.5%	2%



ACCESS PATH SECTION
APPLIES TO: ACCESS PATH

NO.	REVISIONS	DSGN	CHKD	APVD	DATE


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CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

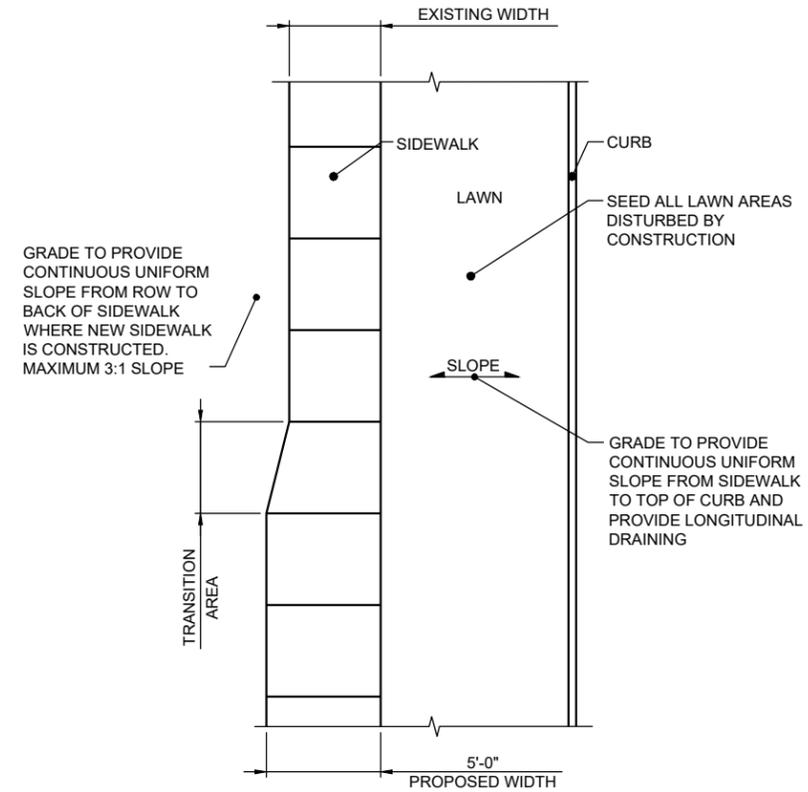
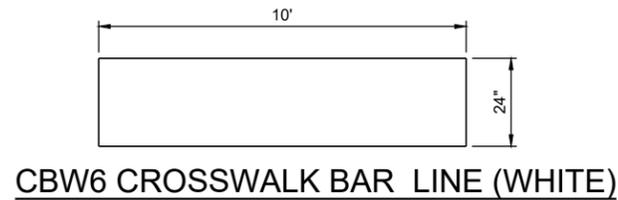
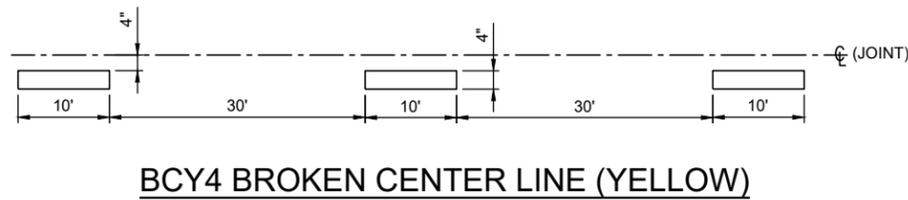
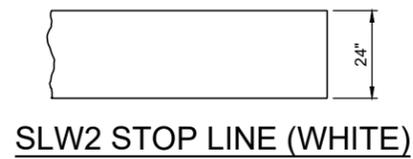
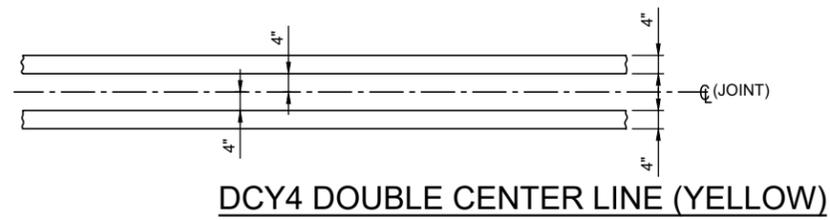
PAVEMENT TYPICAL SECTIONS

DESIGNED PM JOHNSON	SCALE: AS NOTED
DRAWN GM REEVES	NO. 17660.60.30
CHECKED ER SCHALLERT	REV.
APPROVED KK HEIM	B.01
APPROVED PM JOHNSON	0
DATE MARCH 12, 2025	



CADDD 03-RS

NOTES

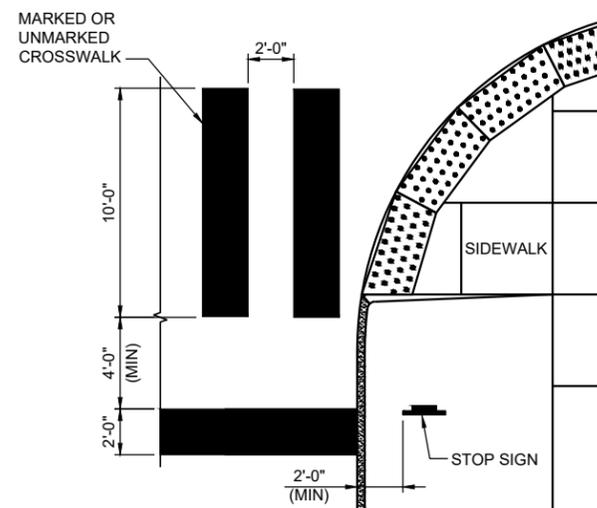
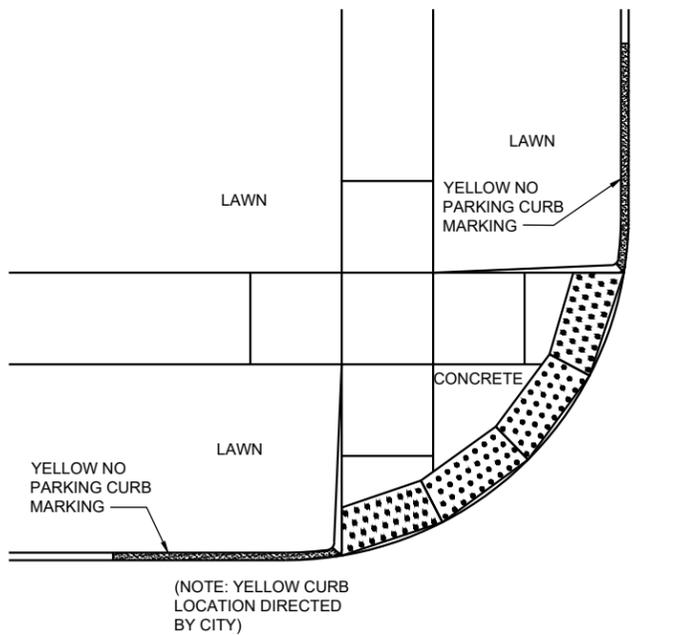


GENERAL NOTE

- CONTRACTOR SHALL INSTALL ALL PAVEMENT MARKINGS AS APPROVED BY THE CITY OF MUSCATINE. PAVEMENT MARKINGS SHALL CONFORM TO IOWA DOT AND MUTCD REQUIREMENTS.

STANDARD TYPES OF PAVEMENT MARKINGS
NO SCALE

SIDEWALK-LAWN AREAS TRANSITION FROM PROPOSED TO EXISTING
NO SCALE



NO PARKING CURB MARKING (YELLOW)
NO SCALE

PEDESTRIAN STREET CROSSING
NO SCALE

NO.	REVISIONS	DSGN	CHKD	APVD	DATE



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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

PAVEMENT DETAILS

DESIGNED	PM JOHNSON	SCALE:	AS NOTED
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	KK HEIM	B.02	0
DATE	MARCH 12, 2025		



NOTES

1. REFER TO WATER MAIN PLANS FOR ADDITIONAL ESTIMATED PROJECT QUANTITIES.
2. ESTIMATED PROJECT QUANTITIES ARE PROVIDED ON THIS SHEET FOR CONVENIENCE AND SHOULD MATCH THOSE IN THE PROJECT MANUAL. IF DISCREPANCIES ARE FOUND ESTIMATED QUANTITIES IN THE PROJECT MANUAL PREVAIL.

ESTIMATED PROJECT QUANTITIES

ITEM NO	SUDAS ITEM CODE	DESCRIPTION	UNIT	ESTIMATED QUANTITY
1	2010-A	CLEARING AND GRUBBING BY UNITS	UNIT	195.1
2	2010-C	GRUBBING BY LUMP SUM	LS	1
3	2010-D-1	TOPSOIL, ON-SITE TOPSOIL	CY	1648
4	2010-D-3	TOPSOIL, OFF-SITE TOPSOIL, CONTRACTOR PROVIDED	CY	1344
5	2010-D-3	TOP SOIL, OFF-SITE TOPSOIL, OWNER PROVIDED	CY	149
6	2010-E	CLASS 10 EXCAVATION	CY	2181
7	2010-E	CLASS 10 EXCAVATION, GRADING EARTHWORK	CY	204
8	2010-E	CLASS 13 EXCAVATION - DEBRIS REMOVAL AND DISPOSAL	TONS	120
9	2010-H	GRANULAR STABILIZATION, 12" GRANULAR SUBBASE	SY	2764
10	2010-I	SUBGRADE TREATMENT, GEOTEXTILE	SY	2764
11	2010-J	GRANULAR SUBBASE - 6" (UNDER ROADWAY PAVEMENT) (CONTRACTOR PROVIDED)	SY	6634
12	2010-J	GRANULAR SUBBASE - 6" (UNDER ROADWAY PAVEMENT) (CITY FURNISHED CRUSHED CONCRETE)	SY	4423
13	2010-J	SPECIAL BACKFILL - CONTRACTOR PROVIDED MATERIAL - 6" (UNDER DRIVEWAY/ALLEY)	SY	1380
14	2010-J	SPECIAL BACKFILL - CONTRACTOR PROVIDED MATERIAL - 4" (UNDER SIDEWALKS)	SY	97
15	2010-J	TEMPORARY GRANULAR SURFACE	TONS	491
16	2010-K-3	REMOVALS, PIPES	LF	250
17	2010-K-3-X	REMOVALS, PIPES, EXISTING UWBS	LF	1234
18	2010-L-1	FILLING AND PLUGGING OF PIPE	LF	190
19	2505-XX	STEEL BEAM GUARDRAIL	LF	54
20	3010-C	TRENCH FOUNDATION (1-INCH CLEAN)	CY	300
21	3010-C	STABILIZED (FOUNDATION) MATERIALS	CY	50
22	3010-XX	SHEETING LEFT IN PLACE	SF	400
23	3010-XX	EXPLORATORY TRENCH AND TEST DIGS	LF	100
24	3010-XX	VIBRATION MONITORING	LS	1
25	3010-xx	EXCAVATION PLAN	LS	1
26	4010-A-1	SANITARY SEWER SERVICE, 4" OR 6" PVC (ASTM D3034)	LF	524
27	4010-A-1	SANITARY SEWER SERVICE, 4" OR 6" PVC (ASTM D3034) OUTSIDE OF ROW	LF	246
28	4010-A-1	SANITARY SEWER SERVICE, TRENCHLESS	LF	140
29	4010-A-1	SANITARY SEWER, POLYVINYL CHLORIDE COMPOSITE PIPE (TRUSS TYPE PVC), 8"	LF	362
30	4010-A-1	SANITARY SEWER, POLYVINYL CHLORIDE COMPOSITE PIPE (TRUSS TYPE PVC), 12"	LF	411
31	4010-A-1	SANITARY SEWER, POLYVINYL CHLORIDE COMPOSITE PIPE (TRUSS TYPE PVC), 15"	LF	3124
32	4010-A-1	SANITARY SEWER, 18" PVC	LF	23
33	4010-A-1	SANITARY SEWER, 15" DIP	LF	87
34	4010-A-2	SANITARY SEWER, TRENCHLESS CONSTRUCTION, 12" SEWER	LF	15
35	4010-A-2	SANITARY SEWER, TRENCHLESS CONSTRUCTION, 15" SEWER	LF	30
36	4010-xx	SANITARY SEWER SERVICE CONNECTIONS TO MAIN, (4" AND 6")	EA	46
37	4010-I	SANITARY SEWER CLEANOUT	EA	1
38	4010-XX	SANITARY SEWER INTERNAL HOME REPLUMBING	LS	1
39	4010-A	SEWER, DIP, WATER MAIN MATERIAL, FOR CONFLICTS, 8"	LF	30
40	4010-A	SEWER, DIP, WATER MAIN MATERIAL, FOR CONFLICTS, 12"	LF	30
41	4010-A	SEWER, DIP, WATER MAIN MATERIAL, FOR CONFLICTS, 16"	LF	30
42	4010-A	SEWER, PVC, WATER MAIN MATERIAL, FOR CONFLICTS, 8"	LF	30
43	4010-A	SEWER, PVC, WATER MAIN MATERIAL, FOR CONFLICTS, 12"	LF	30
44	4010-A	SEWER, PVC, WATER MAIN MATERIAL, FOR CONFLICTS, 16"	LF	30
45	4020-A-1	STORM SEWER, 12", CLASS IV RCP	LF	8
46	4020-A-1	STORM SEWER, 15", CLASS IV RCP	LF	380
47	4020-A-1	STORM SEWER, 18", CLASS IV RCP	LF	1152
48	4020-A-1	STORM SEWER, 21", CLASS IV RCP	LF	9
49	4020-A-1	STORM SEWER, 24", CLASS IV RCP	LF	267
50	4020-A-1	STORM SEWER, 30", CLASS IV RCP	LF	383
51	4020-A-1	STORM SEWER, 48" ELLIPTICAL (38"HX60"W), CLASS IV RCP	LF	1221
52	4020-A-1	STORM SEWER INLET PIPING, 12" PVC (ASTM F949)	LF	20
53	4020-A-1	STORM SEWER INLET PIPING, 15" PVC (ASTM F949)	LF	20
54	4030-B	PIPE APRON, FOOTING, GUARD	EA	5
55	4040-A	TYPE 1 SUBDRAINS (LONGITUDINAL) CORRUGATED PE, 4"	LF	5857
56	4040-D-1	SUBDRAIN OUTLETS AND CONNECTIONS	EA	15
57	4050-A-2	PRE-REHABILITATION CLEANING AND INSPECTION, ALL DIAMETERS	LF	994
58	4050-C-1	CIPP MAIN LINING, 12"	LF	594
59	4050-C-1	CIPP MAIN LINING, 15"	LF	400
60	4050-C-2	BUILDING SANITARY SEWER SERVICE REINSTATEMENT	EA	30
61	4050-G	BYPASS PUMPING, HAGERMAN DR STORM	LS	1

ESTIMATED PROJECT QUANTITIES

ITEM NO	SUDAS ITEM CODE	DESCRIPTION	UNIT	ESTIMATED QUANTITY
62	4060-XX	INTERNAL VIDEO INSPECTION (ALL SEWER)	LF	7427
63	5010-E-1	WATER SERVICE PIPE, COPPER, 1"	LF	600
64	5010-E-2	WATER SERVICE CORPORATION	EA	15
65	5010-E-3	WATER SERVICE CURB STOP AND BOX	EA	15
66	5020-C	FIRE HYDRANT ASSEMBLY	EA	1
67	6010-A	SANITARY MANHOLE, ECCENTRIC, SW-301, 5' DIAMETER (8' DEEP)	EA	21
68	6010-A	SANITARY MANHOLE, EXTRA DEPTH, 5' DIAMETER	LF	59.9
69	6010-A	SANITARY MANHOLE, SW-301 FLAT TOP, 5' DIAMETER	EA	1
70	6010-A	STORM MANHOLE, FLAT TOP, SW-401, 5' DIAMETER (UP TO 8' DEEP)	EA	7
71	6010-A	STORM MANHOLE, EXTRA DEPTH, 5' DIAMETER	LF	10.7
72	6010-A	STORM MANHOLE, SW-401, 8' DIAMETER	EA	3
73	6010-A	STORM MANHOLE, SW-401, 8' DIAMETER WITH 4' DIAMETER RISER	EA	1
74	6010-A	MANHOLE REPLACEMENT RISER SECTIONS, 3' RISER	LF	9.6
75	6010-A	STORM MANHOLE, SW-406, SHALLOW RECTANGULAR (8'X8')	EA	1
76	6010-B	STORM INLET, SW-501	EA	1
77	6010-B	STORM INLET, SW-502, 5'	EA	4
78	6010-B	STORM INLET, SW-507	EA	5
79	6010-B	STORM INLET, SW-509	EA	7
80	6010-B	STORM INLET, SW-512, 24" DIAMETER, 604 TYPE 5	EA	1
81	6010-C-1	SANITARY INTERNAL DROP CONNECTION	EA	3
82	6010-H	REMOVE MANHOLE OR INTAKE	EA	24
83	6010-X	CURB OPENING CASTING	EA	10
84	6010-X	MANHOLE CASTING	EA	1
85	7010-A	PCC PAVEMENT, 7 INCH	SY	9756
86	7010-I	PCC PAVEMENT SAMPLES AND TESTING	LS	1
87	7020-A	ASPHALT PAVEMENT BY TON	TON	75
88	7030-A-3	REMOVAL OF DRIVEWAY/ALLEY	SY	1312
89	7030-A-1	REMOVAL OF SIDEWALK	SY	92
90	7030-B	REMOVAL OF CURB, LIMESTONE CURB	LF	20
91	7030-E	PCC SIDEWALK, 4-INCH	SY	97
92	7030-E	PCC SIDEWALK, 6-INCH	SY	3
93	7030-G	DETECTABLE WARNINGS	SF	25
94	7030-H-1	PAVED DRIVEWAYS, AND ALLEYS, PCC, 6-INCH	SY	1380
95	7040-G	MILLING	SY	7587
96	7040-H	PAVEMENT REMOVAL, CONCRETE	SY	1770
97	7040-XX	SUBBASE MATERIAL REMOVAL AFTER MILLING	SY	7587
98	8020-C	PAINTED PAVEMENT MARKINGS, DURABLE	STA	1.2
99	8030-A	TEMPORARY TRAFFIC CONTROL	LS	1
100	8030-XX	SPECIAL SIGNAGE	SF	64
101	9010-B	SEEDING, FERTILIZING & MULCHING FOR CONVENTIONAL SEEDING, RESIDENTIAL (TYPE 1)	SF	1000
102	9010-B	SEEDING, FERTILIZING, & MULCHING FOR HYDRAULIC SEEDING, RESIDENTIAL (TYPE 1)	SF	80649
103	9010-B	SEEDING, FERTILIZING, & MULCHING FOR HYDRAULIC SEEDING, NOT MOWED MIX (TYPE 2)	SF	88966
104	9030-A	PLANTS, LANDSCAPING BY AREA	SF	406
105	9040-A-2	SWPPP MANAGEMENT	LS	1
106	9040-D	FILTER SOCKS	LF	5857
107	9040-E	TEMPORARY ROLLED EROSION CONTROL PRODUCTS (RECP) TYPE 4 B (LONG TERM)	SY	7125
108	9040-J	RIPRAP, CLASS D AND E REVETMENT	TONS	10
109	9040-J	EROSION STONE	TONS	40
110	9040-N	SILT FENCE OR SILT FENCE DITCH CHECK	LF	1670
111	9040-O	STABILIZED CONSTRUCTION EXIT	EA	9
112	9040-Q-2	EROSION CONTROL MULCHING, HYDROMULCHING	ACRE	3.9
113	9040-T	INLET PROTECTION DEVICE, DROP IN PROTECTION	EA	10
114	9040-T	INLET PROTECTION DEVICE, OPEN-THROAT CURB INTAKE SEDIMENT FILTER, EC-602	LF	40
115	9040-XX	TURF REINFORCEMENT MESH (TEMPORARY)	SF	4000
116	9060-D	REMOVAL AND REINSTALLATION OF EXISTING FENCE	LF	165
117	9070-A	RETAINING WALL, ALL TYPES	SF	95
118	9080-A	CONCRETE STEPS	SF	70
119	9080-B	HANDRAIL	LF	30
120	11,010-A	CONSTRUCTION SURVEY	LS	1
121	11,010-XX	RECORD DRAWINGS	LS	1
122	11,020-A	MOBILIZATION	LS	1
123	11,020-A	MOBILIZATION, EROSION CONTROL	EA	9
124	11,020-XX	EXISTING CONDITIONS VIDEO RECORD	LS	1
125	11,030-A	MAINTENANCE OF POSTAL SERVICE	LS	1
126	11,030-B	MAINTENANCE OF SOLID WASTE COLLECTION	LS	1
127	11,050-A	CONCRETE WASHOUT	LS	1

NO.	REVISIONS	DSGN	CHKD	APVD	DATE
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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

ESTIMATED PROJECT QUANTITIES

DESIGNED <u>KK HEIM</u>	SCALE: AS NOTED
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	
APPROVED <u>KK HEIM</u>	C.01
DATE <u>MARCH 12, 2025</u>	0

CA00 D3-RS

NOTES

1. ALL SUDAS REFERENCES ARE TO SUDAS SPECIFICATIONS 2025 EDITION.
2. FOR EACH ITEM, CONTRACTOR SHALL CAREFULLY REVIEW THE REFERENCED SUDAS SPECIFICATION IN ITS ENTIRETY. SUDAS SPEC, ESTIMATE REFERENCE NOTES, SPECIAL PROVISIONS SECTION 00 75 00, AND THE DRAWINGS MUST BE REVIEWED TOGETHER FOR EACH PROJECT ITEM. UNLESS NOTED OTHERWISE IN THESE CONTRACT DOCUMENTS, ALL PROVISIONS OF SUDAS APPLY.
3. MEASUREMENT AND PAYMENT DESCRIPTIONS IN PART 1.08 UNDER EACH SUDAS STANDARD SPECIFICATION SECTION SHALL BE REVIEWED IN CONJUNCTION WITH THESE ESTIMATE REFERENCE NOTES.

NO.	REVISIONS	DGSN	CHKD	APVD	DATE



CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SEWER
ESTIMATE REFERENCE NOTES**

DESIGNED <u>KK HEIM</u>	SCALE: AS NOTED
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	C.02
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	

ESTIMATE REFERENCE NOTES			
ITEM NO	ITEM CODE	UNIT	DESCRIPTION
1	2010-A	UNIT	CLEARING AND GRUBBING BY UNITS A. REFER TO SUDAS SECTION 2010, 1.08 FOR MEASUREMENT AND PAYMENT OF TREES AND STUMPS. B. INCLUDES ALL LISTED ITEMS IN 1.08 FOR REMOVING STREET TREES AND STUMPS WITH TRUNK DIAMETER 6-INCHES OR GREATER ALONG THE SEWER ALIGNMENT IN DIRECT CONFLICT WITH TRENCH ALIGNMENT, STREET RESTORATION, OR AS DIRECTED BY CITY. C. REMOVING TREES 6-INCHES IN DIAMETER AND SMALLER IS CONSIDERED INCIDENTAL TO TRENCH EXCAVATION. APPROVAL TO REMOVE TREE IS REQUIRED FROM THE CITY. STREET TREE REMOVAL CAN BE PERFORMED YEAR ROUND. D. DISPOSAL OF TREES, STUMPS, BRUSH, ROOTS AND OTHER VEGETATION AT CONTRACTOR SELECTED SITE. E. FOR TREES TO BE SAVED, EXCAVATE UNDER ROOTS. CUT NO TREE ROOTS LARGER THAN 3-INCHES IN DIAMETER. F. REFER TO R SHEETS FOR KNOWN TRUNK DIAMETER OF TREES WITHIN THE PROJECT AREA AND ANY TREES ANTICIPATED FOR REMOVAL OR PROTECTION. G. CITY TIPPING FLOOR IS NOT AVAILABLE FOR TREE DISPOSAL.
2	2010-C	LS	GRUBBING BY LUMP SUM A. REFER TO SUDAS SECTION 2010, 1.08 AND 3.01. B. GRUBBING TO BE PERFORMED BY CONTRACTOR WITHIN CONSTRUCTION LIMITS NOTED ON SHEETS R.02 THRU R.04. GRUBBING LIMITS MUST BE CITY APPROVED PRIOR TO ACTIVITIES. C. TREE CUTTING BETWEEN HAGERMAN DRIVE AND EISENHOWER WILL OCCUR BETWEEN DATES OCTOBER 1 THROUGH MARCH 31 BY OTHERS. D. PROPERTY OWNERS MAY TAKE POSSESSION OF TREES THAT HAVE DOWNED ON THEIR PROPERTY. COORDINATE WITH CITY. ITEM DOES NOT INCLUDE TREE CLEARING OR GRUBBING IN CITY ROW ALONG RESIDENTIAL STREETS. E. INCLUDES COSTS TO DISPOSE OF ALREADY FELLED TREES.
3	2010-D-1	CY	TOPSOIL, ON-SITE TOPSOIL A. INCLUDES ALL LISTED ITEMS IN 1.08. B. FINISHED DEPTH OF PLACED TOPSOIL SHALL BE MINIMUM OF 6-INCHES. C. STRIPPING AND STOCKPILING TOPSOIL SHALL BE DONE IN GRASSED AND WOODED AREA BETWEEN HAGERMAN DRIVE AND EISENHOWER UNLESS CITY REQUIRES OTHERWISE. D. MEASUREMENT FOR PAYMENT WILL BE BASED ON THE AREAS ON-SITE TOPSOIL WAS PLACED AND WILL BE COMPUTED ON THE BASIS OF A UNIFORM 6-INCH FINISHED DEPTH.
4	2010-D-3	CY	TOP SOIL, OFF-SITE TOPSOIL, CONTRACTOR PROVIDED A. INCLUDES ALL LISTED ITEMS IN 1.08. B. FINISHED DEPTH OF PLACED TOPSOIL SHALL BE MINIMUM OF 6-INCHES. ALL TOPSOIL FOR THIS ITEM SHALL BE FURNISHED BY CONTRACTOR. CONTRACTOR'S OFF-SITE SOURCE SHALL BE APPROVED BY CITY. C. REFER TO D SHEETS FOR SEEDING AREAS. PROVIDE OFFSITE TOPSOIL FOR SEEDED AREAS. QUANTITY ESTIMATE WAS SPLIT BETWEEN OWNER PROVIDED AND CONTRACTOR PROVIDED. D. USE OF THIS ITEM REQUIRES CITY ENGINEER'S PRIOR APPROVAL. E. MEASUREMENT FOR PAYMENT WILL BE BASED ON THE AREAS TOPSOIL WAS PLACED AND WILL BE COMPUTED ON THE BASIS OF A UNIFORM 6-INCH FINISHED DEPTH.
5	2010-D-3	CY	TOP SOIL, OFF-SITE TOPSOIL, OWNER PROVIDED A. INCLUDES ALL LISTED ITEMS IN 1.08. B. PLACED TOPSOIL FINISHED DEPTH SHALL BE A MINIMUM OF 6-INCHES. C. ALL TOPSOIL FOR THIS ITEM SHALL BE FURNISHED BY CITY. CONSULT CITY IF AVAILABLE. MATERIAL MAY BE AVAILABLE AT CITY'S LAKE PARK BOULEVARD COMPOST SITE (FORMER DOT SITE). CITY PROVIDED MATERIAL MAY REQUIRE CONTRACTOR PREPARATION FOR USE AS TOPSOIL MEETING REQUIREMENTS OF SUDAS SPEC. D. QUANTITY ESTIMATE IS BASED ON FINISHED DEPTH OF 6-INCHES OF PLACED TOPSOIL WITHIN RESIDENTIAL SEEDING AREA SHOWN ON D SERIES SHEETS. QUANTITY ESTIMATE WAS SPLIT BETWEEN OWNER PROVIDED AND CONTRACTOR PROVIDED. F. MEASUREMENT FOR PAYMENT WILL BE BASED ON THE AREAS TOPSOIL WAS PLACED AND WILL BE COMPUTED ON THE BASIS OF A UNIFORM 6-INCH FINISHED DEPTH.
6	2010-E	CY	CLASS 10 EXCAVATION A. REFER TO SUDAS SECTION 2010 AND IOWA DOT SPECIFICATIONS SECTION 2102 B. ITEM INCLUDES, BUT IS NOT LIMITED TO, COST TO EXCAVATE, LOAD, HAUL, AND PROPERLY DISPOSE OF COMMONLY ENCOUNTERED EXCAVATED MATERIALS. THIS ITEM IS USED FOR REMOVAL OF AGGREGATE MATERIAL UNDER EXISTING STREETS. C. MEASUREMENT SHALL BE PER COMMONLY ACCEPTED PER-TRUCK VOLUME AS AGREED UPON BY THE CITY AND CONTRACTOR. SEE 1.08 E. 1, b, 2). D. QUANTITY IS ESTIMATED BASED ON A NOMINAL 6-INCH THICKNESS UNDER REMOVED PAVEMENT TO PROVIDE DEPTH FOR PLACEMENT OF GRANULAR SUBBASE.
7	2010-E	CY	CLASS 10 EXCAVATION, GRADING EARTHWORK A. REFER TO D SHEETS FOR GRADING TO CREATE ACCESS PATH. B. INCLUDES WORK ITEMS LISTED IN 1.08 AND ALL ASSOCIATED EARTHWORK NEED TO SHAPE AND GRADE THE AREA. C. PAYMENT WILL BE MADE BASED ON PLAN ESTIMATE WITHOUT FINAL FIELD MEASUREMENT. MEASUREMENT ADJUSTMENTS CAN BE MADE AS OUTLINED IN 1.08. D. ESTIMATED VOLUME OF EARTHWORK FOR THE ACCESS PATH IS 204 CY CUT AND 138 CY FILL. E. ESTIMATED VOLUME OF EARTHWORK FOR THE CUL-DE-SAC IS 334 CY CUT AND 9 CY FILL.
8	2010-E	TONS	CLASS 13 EXCAVATION - DEBRIS REMOVAL AND DISPOSAL A. REFER TO SUDAS SECTION 2010 AND IOWA DOT SPECIFICATIONS SECTION 2102, EXCEPT AS MODIFIED HEREIN. B. ITEM INCLUDES, BUT IS NOT LIMITED TO, COST TO EXCAVATE, LOAD, HAUL, AND PROPERLY DISPOSE OF USED RAILROAD TIES, CONCRETE DEBRIS AND ASSOCIATED MATERIALS. ITEM TO INCLUDE CITY LANDFILL TIPPING FEE. CONTRACTOR TO TRANSPORT MATERIAL TO LANDFILL AFTER MATERIAL IS WEIGHED AT TRANSFER STATION. C. MEASUREMENT AND PAYMENT IS BASED ON SCALED WEIGHT OF DEBRIS AND ASSOCIATED MATERIAL IN TONS. D. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE..

ESTIMATE REFERENCE NOTES			
ITEM NO	ITEM CODE	UNIT	DESCRIPTION
9	2010-H	SY	GRANULAR STABILIZATION, 12" GRANULAR SUBBASE A. THIS ITEM IS USED FOR EXTRA AGGREGATE AT A THICKNESS OF 12" TO REPLACE UNSTABLE SUBGRADE. THE AGGREGATE MATERIAL SHALL BE GRANULAR SUBBASE LISTED UNDER SUDAS 2010, 2.04, D. 2. SEE 3.06 FOR SUBGRADE PREPARATION INSTALLATION REQUIREMENTS. B. QUANTITY ESTIMATE INCLUDES UP TO A MAXIMUM OF 2 FOOT HORIZONTALLY OF GRANULAR SUBBASE FOR SUBGRADE STABILIZATION BEYOND PAVEMENT EDGE. CONTRACTOR WILL NOT BE PAID FOR ADDITIONAL GRANULAR SUBBASE PLACED BEYOND THE MAXIMUM STATED. C. ITEM INCLUDES BUT IS NOT LIMITED TO SUBGRADE STABILIZATION AGGREGATE FURNISHING, LOADING, HAULING, PLACING, COMPACTING AND TRIMMING TO PROPER GRADE. PAY ITEM ALSO INCLUDES SUBGRADE PREPARATION, MANIPULATION, COMPACTION, SHAPING, AND TRIMMING TO PREPARE FOR SUBGRADE STABILIZATION AGGREGATE PLACEMENT. D. SUBGRADE STABILIZATION AGGREGATE COMPACTION TESTING SHALL BE PROVIDED BY CONTRACTOR IN ACCORDANCE WITH SUDAS SECTION 2010, 3.09. E. SUBGRADE STABILIZATION AGGREGATE SHALL BE PROOF-ROLLED. PROOF-ROLLING MUST BE WITNESSED AND APPROVED BY CITY.
10	2010-I	SY	SUBGRADE TREATMENT, GEOTEXTILE A. REFER TO SUDAS SECTION 2010, 2.04, C. 6; AND 3.07, B. B. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE. CITY ENGINEER MUST AUTHORIZE PAY ITEM USAGE. C. ITEM IS USED TO STABILIZE SUBGRADE UNDER PAVEMENT. USE WOVEN, UV-STABILIZED GEOTEXTILE WITH A MINIMUM TENSILE STRENGTH OF 135 LB/FT ACCORDING TO SUDAS SECTION 9040, 2.14 B. D. INCLUDES ITEMS LISTED IN 1.08 E. MEASUREMENT INCLUDES INCORPORATING THE GEOTEXTILE UNDER THE SUBBASE INCLUDING 2 FEET BEHIND THE BACK OF CURB ON EACH SIDE.
11	2010-J	SY	GRANULAR SUBBASE - 6" (UNDER ROADWAY PAVEMENT) (CONTRACTOR PROVIDED) A. REFER TO SUDAS SECTION 2010; 2.04, D, 2; IOWA DOT SPECIFICATION 4121 B. QUANTITY ESTIMATE INCLUDES UP TO A MAXIMUM OF 2 FEET HORIZONTALLY OF GRANULAR SUBBASE BEYOND PAVEMENT EDGE. CONTRACTOR WILL NOT BE PAID FOR EXCESS GRANULAR SUBBASE BEYOND THE MAXIMUM STATED. ITEM ALSO INCLUDES SUBGRADE PREPARATION, MANIPULATION, COMPACTION, SHAPING, AND TRIMMING TO PREPARE FOR SUBBASE PLACEMENT AND LOADING AND HAULING OF SUBBASE. C. GRANULAR SUBBASE AGGREGATE SHALL BE GRADATION 12A OR 12B OR 14 ACCORDING TO DOT TABLE 4109.02-1. SEE TYPICAL SECTIONS ON DRAWING B.01. D. SUBBASE COMPACTION TESTING SHALL BE PROVIDED BY CONTRACTOR IN ACCORDANCE WITH SUDAS SECTION 2010, 3.09. E. SUBGRADE SHALL BE PROOF-ROLLED. PROOF-ROLLING MUST BE WITNESSED AND APPROVED BY CITY. F. THIS MATERIAL IS CONTRACTOR FURNISHED AGGREGATE USED FOR SUBBASE UNDER PCC PAVMENT
12	2010-J	SY	GRANULAR SUBBASE - 6" (UNDER ROADWAY PAVEMENT) (CITY FURNISHED CRUSHED CONCRETE) A. ALL ITEMS LISTED UNDER 'GRANULAR SUBBASE - CONTRACTOR PROVIDED' APPLY TO THIS ITEM. B. GRANULAR SUBBASE SHALL BE CITY SUPPLIED CRUSHED CONCRETE CRUSHED TO GRADATION 12A OR 12B ACCORDING TO DOT TABLE 4109.02-1. C. THIS MATERIAL IS CITY FURNISHED CRUSHED CONCRETE USED FOR SUBBASE UNDER PCC PAVEMENT.
13	2010-J	SY	SPECIAL BACKFILL - CONTRACTOR PROVIDED MATERIAL - 6" (UNDER DRIVEWAY/ALLEY) A. REFER TO SECTION 2010, 2.04, D, 1; AND 3.08. B. QUANTITY ESTIMATE DOES NOT INCLUDE ANY SPECIAL BACKFILL BEYOND THE PAVEMENT EDGE. C. ITEM INCLUDES, BUT IS NOT LIMITED TO SUBBASE, LOADING, HAULING, PLACING, COMPACTING AND TRIMMING TO PROPER GRADE. PAY ITEM ALSO INCLUDES SUBGRADE PREPARATION, MANIPULATION, COMPACTION, SHAPING, AND TRIMMING TO PREPARE FOR SUBBASE PLACEMENT. D. SPECIAL BACKFILL SHALL MEET THE GRADATION REQUIREMENTS OF IOWA DOT SECTION 4132.02 GRADATION 30. E. SEE DRAWING B.01 FOR TYPICAL SECTION. F. COMPACTION TESTING SHALL BE PROVIDED BY CONTRACTOR IN ACCORDANCE WITH SUDAS SECTION 2010, 3.09. SUBGRADE PROOFROLLING IS NOT REQUIRED.
14	2010-J	SY	SPECIAL BACKFILL - CONTRACTOR PROVIDED MATERIAL - 4" (UNDER SIDEWALKS) A. ALL ITEMS DESCRIBED UNDER 6" SPECIAL BACKFILL APPLY TO THIS ITEM.
15	2010-J	TON	TEMPORARY GRANULAR SURFACE A. MATERIAL SHALL BE INSTALLED FOR TEMPORARY CONSTRUCTION AND RESIDENT VEHICLE ACCESS ROUTES PARALLEL TO PAVEMENTS UNDER CONSTRUCTION WHEN FIELD DIRECTED BY THE CITY. PRIOR AUTHORIZATION OF THIS ITEM IS REQUIRED BEFORE INSTALLATION. B. ITEM INCLUDES, BUT IS NOT LIMITED TO, ALL COSTS FOR LABOR, MATERIAL, AND EQUIPMENT FOR HAULING; PLACING, COMPACTING, AND REMOVAL AS NECESSARY. C. MATERIAL SHALL BE IOWA DOT SECTION 4123 OR 4109, GRADATION 12, GRANULAR SUBBASE, OR IOWA DOT SECTION 4132, GRADATION 30 OR 31, SPECIAL BACKFILL SO THAT IT CAN BE LEFT IN PLACE AS PAVEMENT BASE OR REUSED UNDER DRIVEWAYS AND SIDEWALKS ADJACENT TO THE PAVEMENT. D. REFER TO SUDAS SECTION 2010, 3.08, FOR (SUBBASE) INSTALLATION REQUIREMENTS TO BE APPLIED TO CRUSHED STONE INSTALLATION. E. QUANTITY WAS ESTIMATED INCLUDING POSSIBLE USAGE ON HAGERMAN DRIVE.
16	2010-K-3	LF	REMOVALS, PIPES A. THIS ITEM SHALL BE USED AT THE DISCRETION OF THE CITY ENGINEER. CONTRACTOR SHALL OBTAIN APPROVAL PRIOR TO UTILIZING THIS ITEM. B. USE ITEM FOR REMOVAL OF EXISTING SEWER PIPES OUTSIDE THE EXCAVATED TRENCH TO INSTALL NEW SEWERS. USE WHEN REMOVED PIPE IS 10 FEET OR MORE AWAY FROM NEW SEWERS. SEPARATE PAYMENT WILL NOT BE MADE FOR DIFFERENT SIZES AND TYPES OF EXISTING PIPES. PAYMENT WILL NOT BE MADE FOR REMOVAL OF PIPES WITHIN THE PIPE TRENCH OF NEW SEWERS. C. INCLUDED ITEMS LISTED ARE LISTED IN 1.08 PLUS EXCAVATION TO REMOVE THE PIPE AND PROTECTION OF EXISTING UTILITIES AND BACKFILLING.
17	2010-K-3-X	LF	REMOVALS, PIPES, EXISTING UWBS A. USE FOR REMOVAL OF EXISTING UWBS ON HAGERMAN DRIVE. SEE SHEETS M.01, M.02 AND M.03. B. INCLUDES ALL ITEMS LISTED IN 1.08 K 3 TO CAREFUL REMOVE AND DISPOSE OF EXISTING 3.2' X 3.2' EXISTING CONCRETE BOX STRUCTURE.

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NOTES

1. ALL SUDAS REFERENCES ARE TO SUDAS SPECIFICATIONS 2025 EDITION.
2. FOR EACH ITEM, CONTRACTOR SHALL CAREFULLY REVIEW THE REFERENCED SUDAS SPECIFICATION IN ITS ENTIRETY. SUDAS SPEC, ESTIMATE REFERENCE NOTES, SPECIAL PROVISIONS SECTION 00 75 00, AND THE DRAWINGS MUST BE REVIEWED TOGETHER FOR EACH PROJECT ITEM. UNLESS NOTED OTHERWISE IN THESE CONTRACT DOCUMENTS, ALL PROVISIONS OF SUDAS APPLY.
3. MEASUREMENT AND PAYMENT DESCRIPTIONS IN PART 1.08 UNDER EACH SUDAS STANDARD SPECIFICATION SECTION SHALL BE REVIEWED IN CONJUNCTION WITH THESE ESTIMATE REFERENCE NOTES.

ESTIMATE REFERENCE NOTES			
ITEM NO	ITEM CODE	UNIT	DESCRIPTION
18	2010-L-1	LF	FILLING AND PLUGGING OF PIPES A. CONTRACTOR SHALL OBTAIN APPROVAL FROM CITY ENGINEER PRIOR TO UTILIZING THIS ITEM. B. THIS ITEM IS FOR FILLING ANY SIZE SEWER PIPE WITH FLOWABLE MORTAR ACCORDING TO SPECIFICATION 3010, 2.06 AND IOWA DOT ARTICLE 2506.02 FOR FLOWABLE MORTAR WITH CRITICAL FLUIDITY. C. ITEM INCLUDES BUT IS NOT LIMITED TO ALL WORK, MATERIALS AND EQUIPMENT TO PLACE FLOWABLE MORTAR TO FILL PIPE TO THE CROWN INCLUDING FLOWABLE MORTAR, EXCAVATION TO ACCESS THE PIPE, VENT AND GROUT TUBES, BULKHEADS AND BACKFILLING. D. LOCATIONS WHERE THE CITY COULD CONSIDER USING INCLUDE THE EXISTING 8-INCH SANITARY ON EAST SIDE OF LOGAN ST.
19	2505-XX	LF	STEEL BEAM GUARDRAIL A. INSTALL NEW STANDARD W-BEAM GUARDRAIL AT END OF EISENHOWER ST. SEE SHEET D.07. B. CONSTRUCT STEEL BEAM GUARDRAIL IN ACCORDANCE WITH IOWA DOT SECTION 2505 REQUIREMENTS. C. ITEM INCLUDES FURNISHING ALL MATERIALS, EQUIPMENT, TOOLS, AND LABOR NECESSARY TO INSTALL NEW GUARDRAIL AND POSTS, BLOCKOUTS, BRACKETS, END ANCHORS, HARDWARE, INCLUDING EXCAVATION, AND PLACING BACKFILL.
20	3010-C	CY	TRENCH FOUNDATION (1-INCH CLEAN) A. CRUSHED ROCK OR CLEAN GRAVEL HAVING SAME GRADATION AS CLASS 1 PIPE BEDDING MATERIAL (1-INCH CLEAN). SEE 2.02, A. B. INCLUDES THOSE ITEMS LISTED IN 1.08 C PLUS COSTS FOR EXCAVATION, DEWATERING AND INCIDENTALS FOR PROVIDING AND INSTALLING ADDITIONAL GRANULAR MATERIAL IN PLACE OF UNSUITABLE PIPE TRENCH FOUNDATION MATERIALS. C. CITY ENGINEER MUST AUTHORIZE ITEM USAGE. MATERIAL USED TO CORRECT UNAUTHORIZED OVER-EXCAVATION WILL NOT BE MEASURED. DOES NOT INCLUDE PIPE BEDDING MATERIAL THICKNESS SHOWN ON FIGURE 3010.101. D. PAYMENT WILL BE MEASURED USING WEIGHT TICKETS RECORDED IN TONS FOR MATERIAL DELIVERED AND INCORPORATED INTO PROJECT. TONS SHALL BE CONVERTED TO CUBIC YARDS WITH STANDARD IOWA DOT CONVERSION RATES 127 PCF FOR TRENCH FOUNDATION. E. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE. F. USE FOR OVER-EXCAVATION AND FOUNDATION STONE IDENTIFIED ON FIGURE 3010.101.
21	3010-C	CY	STABILIZED (FOUNDATION) MATERIALS A. ALL ITEMS LISTED UNDER TRENCH FOUNDATION (1-INCH CLEAN) APPLIES EXCEPT THOSE NOTED. B. STABILIZATION (FOUNDATION) MATERIALS CAN BE USED AS TRENCH FOUNDATION MATERIAL FOR OVEREXCAVATION. C. STABILIZATION (FOUNDATION) MATERIALS MEETING REQUIREMENTS OF 2.05, A (CLEAN 2 1/2 INCH CRUSHED STONE) OR B (GRADATION 13A - MACADAM ST BASE). D. PAYMENT WILL BE MEASURED USING WEIGHT TICKETS RECORDED IN TONS FOR MATERIAL DELIVERED AND INCORPORATED INTO PROJECT. TONS SHALL BE CONVERTED TO CUBIC YARDS WITH STANDARD IOWA DOT CONVERSION RATES OF 130 PCF FOR MACADAM STONE.
22	3010-XX	SF	SHEETING LEFT IN PLACE A. ITEM INCLUDES MATERIAL COST AND LABOR TO PROVIDE AND INSTALL SHEETING AND SHORING ONLY WHEN AUTHORIZED BY CITY ENGINEER TO BE LEFT IN PLACE. B. SHEETING AND SHORING, WHICH MAY BE REMOVED WITHOUT ENDANGERING UTILITIES OR STRUCTURES SHALL BE CONSIDERED INCIDENTAL TO PIPE INSTALLATION AND SHALL NOT BE PAID FOR. TOP OF SHEETING LEFT IN PLACE SHALL BE CUT OFF 2-FOOT BELOW FINISHED GRADE. C. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE. D. MEASUREMENT AND PAYMENT WILL BE AT THE UNIT PRICE PER FACE SQUARE FEET OF SHEET PILE INSTALLED, BOTH ABOVE AND BELOW GRADE.
23	3010-XX	LF	EXPLORATORY TRENCH AND TEST DIGS A. ITEM MAY BE USED FOR UNEXPECTED CONFLICTS. CITY WILL DEFINE LIMITS OF EXPLORATORY TRENCH AND TEST DIGS IN THE FIELD. B. ROUTINE UTILITY POTHOLING AND EXPLORATORY TEST DIGS IN ADVANCE OF ANY PIPE LAYING OR EXCAVATION WORK TO VERIFY DEPTH OF UTILITIES THAT COULD BE IN CONFLICT IS INCIDENTAL TO PIPE INSTALLATION. C. MEASUREMENT AND PAYMENT FOR THIS ITEM WILL BE AT THE UNIT PRICE PER LINEAR FOOT ALONG EXPLORATORY TRENCH. D. LOCATIONS WHERE THIS ITEM CAN BE USED ARE: SHEETS MSA.01 THRU MSA.03 HAGERMAN DRIVE INVESTIGATIVE EXCAVATIONS TO DETERMINE BOTTOM ELEVATION OF UWBS; SHEET MSA.11 LOGAN STREET TO INVESTIGATE BOTTOM ELEVATION OF UWBS TO CONFIRM CLEARANCE FOR TRENCHLESS CONSTRUCTION. OTHER LOCATIONS MUST BE AUTHORIZED BY CITY ENGINEER.
24	3010-XX	LS	VIBRATION MONITORING A. INCLUDES ALL COSTS TO PERFORM VIBRATION MONITORING TO PROTECT BUILDINGS OR STRUCTURES FROM IMPACTS. THIS ITEM SHOULD NOT BE USED FOR SLOPE STABILITY MONITORING. CITY RESERVES THE RIGHT TO ASK THE CONTRACTOR TO USE VIBRATION MONITORING AT THEIR DISCRETION. B. VIBRATION MONITORING IS NOT REQUIRED FOR STRUCTURES IN THE PROJECT AREA. THIS ITEM IS INCLUDED AS A PROVISIONAL ALLOWANCE. ALLOWANCE IS \$20,000. C. SEE SPECIAL PROVISIONS SECTION 00 75 00 FOR VIBRATION MONITORING REQUIREMENTS. D. COSTS TO INCLUDE PREPARING A WRITTEN MONITORING PLAN, INSTALLING, MONITORING, AND REMOVING VIBRATION MONITORING EQUIPMENT, PREPARING AND PROVIDING REPORT DOCUMENTATION; NOTIFICATION OF VIBRATION EVENTS. THERE WILL BE NO COMPENSATION FOR DELAYS AS THE RESULT OF EXCEEDING THE VIBRATION TRIGGER THRESHOLD OR DELAYS FOR FAULTY OR DAMAGED EQUIPMENT. THERE WILL BE NO COMPENSATION FOR ADJUSTMENT OF CONSTRUCTION ACTIVITIES OR EQUIPMENT TO REDUCE VIBRATIONS TO LEVELS BELOW THE ALLOWABLE LIMIT.

ESTIMATE REFERENCE NOTES			
ITEM NO	ITEM CODE	UNIT	DESCRIPTION
25	3010-XX	LS	EXCAVATION PLAN A. CONTRACTOR SHALL SUBMIT PIPE INSTALLATION EXCAVATION PLAN BETWEEN HAGERMAN DRIVE AND EISENHOWER STREET. EXCAVATION PLAN SHALL CONSIDER EXISTING CONTOURS AND SLOPES. CONTRACTOR'S PLAN SHALL BE REVIEWED AND SEALED BY A LICENSED ENGINEER QUALIFIED TO EVALUATE SHORING AND EXCAVATION STABILITY. B. SEE SEWER PIPE WORK ON SHEETS MSA.04, MSA.05, MSA.06, MSA.07, M.07 AND SHEETS D.04 AND D.05 FOR GRADED ACCESS PATH WORK WITHIN STEEP TERRAIN AREAS. C. CONTRACTOR TO MONITOR THE SOIL CONDITIONS FOR MOVEMENT. PERFORM CONSTRUCTION TO PROTECT EXISTING SLOPES FROM POTENTIAL EROSION AND SLOPE DESTABILIZATION. MINIMIZE DURATION AND LENGTH OF OPEN PIPE EXCAVATIONS. EXCAVATIONS SHALL BE FILLED IF WORK IS NOT ACTIVE. SHEET, SHORE AND BRACE ADEQUATELY TO PREVENT GROUND MOVEMENT AND DAMAGE. CONTRACTOR MONITORING AND SHEET, SHORING, OR BRACING IS INCIDENTAL TO PIPE INSTALLATION.
	4010-A	LF	SANITARY SEWER GRAVITY MAIN, GENERAL FOR ITEMS 26 THRU 36 A. REFER TO SECTION 4010 FOR PIPE MATERIAL AND INSTALLATION; AND SECTION 4060 FOR TESTING. B. INCLUDES ALL ITEMS LISTED IN 4010, 1.08 A. PLUS FIELD ENGINEERING; LABORATORY TESTING SERVICES; DEWATERING; SHEETING, SHORING; PIPING AND PUMPING FOR BYPASSING SEWAGE FLOW AS NECESSARY TO MAINTAIN SERVICE; REMOVAL OF EXISTING SEWER PIPES WITHIN TRENCH LIMITS; PLUGGING OF EXISTING PIPING AND MANHOLES; UTILITY COMPANY CHARGES FOR TEMPORARY RELOCATIONS, SUPPORTS OR BRACING, UTILITY REPAIR; WATER AND SEWER HOUSE SERVICE VERIFICATION AND REPAIR; CONNECTIONS TO EXISTING SYSTEM AND PIPE CONNECTIONS; LEAKAGE AND DEFLECTION TESTING OF PVC SEWERS (MANDREL), CLEANING, HAULING AND DISPOSAL OF UNSUITABLE TRENCH EXCAVATED MATERIAL, AND INCIDENTAL WORK. C. PAYMENT WILL BE MADE FOR VARIOUS DEPTHS OF CUT MEASURED TO PIPE INVERT AND DIAMETERS LISTED. LENGTH WILL BE MEASURED ALONG CENTER LINE OF PIPE WITH NO DEDUCTION FOR MANHOLES. D. TRENCH BEDDING CLASS FOR ALL SANITARY SEWER SERVICE AND MAIN LINE TRUSS, PVC, OR DIP SHALL BE CLASS F-3 ACCORDING TO FIGURE 3010.103. USE CLASS 1 CRUSHED STONE BEDDING MATERIAL. CONSOLIDATE AND COMPACT BEDDING. E. WHEN PIPE CENTERLINE IS LOCATED UNDER, OR WITHIN 2-FEET OF THE OUTER EDGE OF PAVEMENT, FINAL TRENCH BACKFILL ABOVE THE BEDDING ZONE SHALL BE CLASS II GRANULAR BACKFILL MATERIAL MEETING THE REQUIREMENTS OF SECTION 3010. CLASS A ROADSTONE (IOWA DOT GRADATION 11) IS ACCEPTABLE. ALL BACKFILL MATERIAL IS INCLUDED IN THE PRICE OF THE PIPE. MANSAND SHALL NOT BE USED. F. COMPACTION SHALL BE IN ACCORDANCE WITH SECTION 3010 FOR CLASS II BACKFILL MATERIAL AND COHESIONLESS SOILS. COMPACT BACKFILL TO AT LEAST 65% RELATIVE DENSITY WITHIN RIGHT OF WAY. HYDRAULIC COMPACTION (FLOODING WITH WATER) IS NOT ALLOWED UNLESS AUTHORIZED BY CITY ENGINEER. G. REFER TO C SHEETS FOR PIPE SUMMARY TABLE. H. INTERNAL VIDEO INSPECTION OF NEW SANITARY SEWERS IS REQUIRED AND PAID SEPARATELY. I. UNSUITABLE EXCAVATED TRENCH MATERIAL MUST BE HAULED AWAY AND DISPOSED OF A SITE TO BE DETERMINED BY THE CONTRACTOR. CITY'S RAVINE FILL SITE NEAR LOCUST STREET IS NOT AVAILABLE. DISPOSAL OF TRENCH SPOIL MATERIAL IS INCLUDED IN THE PRICE OF THE PIPE.
26	4010-A-1	LF	SANITARY SEWER SERVICE, 4" OR 6" PVC (ASTM D3034) A. REFER TO 2.04, C, 1. FOR PVC SERVICE PIPE MEETING REQUIREMENTS OF ASTM D3034, SDR 23.5. B. USE TO REPLACE SANITARY SERVICES FROM PIPE TRENCH TO LOCATION OUTSIDE OF PAVEMENT, 5' BEHIND THE CURB. FIRST 10' OF SANITARY SERVICE REPLACEMENT IS NOT PAID FOR WITH THIS ITEM. SEE "SANITARY SERVICE CONNECTIONS TO MAIN" ITEM FOR WYE CONNECTION TO MAIN AND FIRST 10' OF SEWER SERVICE. C. USE TO REPLACE EXISTING SANITARY SERVICES FROM PIPE TRENCH TO LOCATIONS BEHIND THE CURB THAT ARE NOT PVC OR DIP IN GOOD CONDITION. CONNECT TO EXISTING SERVICE IN SOUND CONDITION.
27	4010-A-1	LF	SANITARY SEWER SERVICE, 4" OR 6" PVC (ASTM D3034) OUTSIDE OF ROW A. ITEM IS THE SAME AS SANITARY SEWER SERVICE ABOVE BUT USED FOR SERVICES OUTSIDE CITY ROW. B. BACKFILL WITH GRANULAR BACKFILL IS NOT REQUIRED IF NOT UNDER PAVEMENT.
28	4010-A-2	LF	SANITARY SEWER SERVICE, TRENCHLESS A. USE FOR SANITARY SERVICES REQUIRING TRENCHLESS INSTALLATION UNDER EXISTING UWBS OR TRENCHLESS SERVICE INSTALLATION ON PRIVATE PROPERTY FOR SERVICE RECONFIGURATION OUTSIDE OF THE HOME. B. USE DIP SERVICE PIPE OR INSTALL PVC IN CASING PIPE.
29	4010-A-1	LF	SANITARY SEWER, POLYVINYL CHLORIDE COMPOSITE PIPE (TRUSS TYPE PVC), 8" A. REFER TO SUDAS SECTION 4010, 2.01, E. FOR TRUSS PIPE MEETING REQUIREMENTS OF ASTM D 2680.
30	4010-A-1	LF	SANITARY SEWER, POLYVINYL CHLORIDE COMPOSITE PIPE (TRUSS TYPE PVC), 12" A. REFER TO SECTION 4010, 2.01, E. FOR TRUSS PIPE MEETING REQUIREMENTS OF ASTM D 2680.
31	4010-A-1	LF	SANITARY SEWER, POLYVINYL CHLORIDE COMPOSITE PIPE (TRUSS TYPE PVC), 15" A. REFER TO SECTION 4010, 2.01, E. FOR TRUSS PIPE MEETING REQUIREMENTS OF ASTM D 2680.
32	4010-A-1	LF	SANITARY SEWER, 18" PVC A. REFER TO SECTION 4010, 2.01, B. FOR SOLID WALL POLYVINYL CHLORIDE PIPE (PVC) MEETING REQUIREMENTS OF ASTM F 679.
33	4010-A-1	LF	SANITARY SEWER, 15" DIP A. USE FOR CROSSING CREEK/DRAINAGE WAY ON SHEET MSA.07. B. USE 2.01 G FOR CERAMIC EPOXY LINED DIP THICKNESS CLASS 52 WITH MECHANICAL JOINTS. C. BACKFILL REMAINING PIPE TRENCH ABOVE PIPE ENVELOP WITH GRAVEL BACKFILL, CLASS A ROAD STONE (IOWA DOT GRADATION 11) TO TOP OF EROSION STONE LAYER.
34	4010-A-2	LF	SANITARY SEWER, TRENCHLESS CONSTRUCTION, 12" SEWER A. REFER TO SECTION 4010 AND 3020 FOR REQUIREMENTS. B. USE STEEL CASING PIPE IN ACCORDANCE WITH SECTION 3020, 2.02, MINIMUM THICKNESS 0.375". STEEL PRODUCTS SHALL BE COMPATIBLE WITH AMERICAN IRON AND STEEL REQUIREMENTS. C. SEWER PIPE SHALL BE TRUSS PIPE MEETING ASTM D 2680. D. ITEM INCLUDES ALL COSTS FOR MATERIAL, LABOR, EXCAVATION, DEWATERING, SHEETING AND SHORING, PIPE PUSHING, DIRECTIONAL DRILLING, JACKING, BORING, OR AUGERING, OR OTHER TRENCHLESS CONSTRUCTION METHOD, FURNISHING AND INSTALLING SEWER PIPE AND CASING PIPE, SPACERS, AND END SEALS, EXCAVATION, BEDDING, BACK FILL PLACEMENT AND COMPACTION FOR LAUNCHING AND RECEIVING PITS AND PIPE, TRENCH PROTECTION MEASURES, PROTECTION OF EXISTING FEATURES AND PROTECTION OF UTILITIES, PIPE CONNECTIONS, TESTING, AND INSPECTION. E. CONTRACTOR MUST SUBMIT TRENCHLESS TECHNOLOGY PLAN PRIOR TO BEGINNING WORK.

NO.	REVISIONS	DSGN	CHKD	APVD	DATE
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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SEWER
ESTIMATE REFERENCE NOTES**

DESIGNED	KK HEIM	SCALE:	AS NOTED
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	JM BRADY		
APPROVED	KK HEIM		
DATE	MARCH 12, 2025	C.03	0

NOTES

1. ALL SUDAS REFERENCES ARE TO SUDAS SPECIFICATIONS 2025 EDITION.
2. FOR EACH ITEM, CONTRACTOR SHALL CAREFULLY REVIEW THE REFERENCED SUDAS SPECIFICATION IN ITS ENTIRETY. SUDAS SPEC, ESTIMATE REFERENCE NOTES, SPECIAL PROVISIONS SECTION 00 75 00, AND THE DRAWINGS MUST BE REVIEWED TOGETHER FOR EACH PROJECT ITEM. UNLESS NOTED OTHERWISE IN THESE CONTRACT DOCUMENTS, ALL PROVISIONS OF SUDAS APPLY.
3. MEASUREMENT AND PAYMENT DESCRIPTIONS IN PART 1.08 UNDER EACH SUDAS STANDARD SPECIFICATION SECTION SHALL BE REVIEWED IN CONJUNCTION WITH THESE ESTIMATE REFERENCE NOTES.

ESTIMATE REFERENCE NOTES			
ITEM NO	ITEM CODE	UNIT	DESCRIPTION
35	4010-A-2	LF	SANITARY SEWER, TRENCHLESS CONSTRUCTION, 15" SEWER A. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE. CITY MUST AUTHORIZE USE. INCLUDED FOR POSSIBLE TRENCHLESS CONSTRUCTION ALTERNATIVE TO OPEN CUT IN HILLY PARTS OF RAVINE AREA. B. DESCRIPTION UNDER 12" TRENCHLESS SEWER CONSTRUCTION APPLIES TO THIS ITEM.
36	4010-E	EA	SANITARY SEWER SERVICE CONNECTIONS TO MAIN, (4" AND 6") A. REFER TO SECTION 4010, 2.04, A. PIPE SHALL BE PVC CONFORMING TO ASTM D3034 WITH SDR 23.5. B. ITEM INCLUDES ALL COSTS FOR LOCATING AND CONNECTING SANITARY SERVICE DIRECTLY TO NEW SANITARY SEWER, INCLUDING SPECIAL FITTINGS ON THE MAIN AND SERVICE CONNECTION, AND UP TO 10' OF SERVICE PIPING TO CONNECT THE MAIN WITH THE SERVICE. COST FOR NEW SERVICE PIPING BEYOND 10' TO BE PAID FOR AS ITEM "SANITARY SEWER SERVICE". C. CONNECTIONS SHALL BE MADE WITH PREFORMED WYE FITTINGS. PREFORMED TAPPING SADDLES ARE NOT ALLOWED FOR INITIAL INSTALLATION OF PROPOSED SEWERS. D. SIZE OF ALL EXISTING SERVICE LINES ARE NOT KNOWN. WYE FITTINGS SHALL BE 6-INCH CONNECTIONS MADE TO EXISTING SERVICE WITH WATERTIGHT COUPLER.
37	4010-I	EA	SANITARY SEWER CLEANOUT A. REFER TO 1.08 FOR MEASUREMENT AND PAYMENT DESCRIPTION. B. REFER TO FIGURE 4010.203 FOR REQUIREMENTS. C. CLEANOUTS REQUIRED WHEN CONNECTING TO EXISTING SANITARY SERVICE WHICH RESULTS IN A HORIZONTAL CHANGE IN DIRECTION. CLEANOUT SHALL BE PLACED IN GRASS BOULEVARD WHEN POSSIBLE. D. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE.
38	4010-XX	LS	SANITARY SEWER INTERNAL HOME REPLUMBING A. A TOTAL LUMP SUM ALLOWANCE UP TO \$80,000 IS ALLOWED FOR INTERNAL HOME REPLUMBING UNDER THIS CONTRACT FOR THE HOMES LISTED IN THIS DESCRIPTION. CONTRACTOR MUST SUBMIT ITEMIZED RECEIPTS FOR THE INTERNAL WORK FOR EACH HOME PRIOR TO REQUESTING PAYMENT FOR THIS ITEM. SUBMITTAL OF ANTICIPATED COST PRIOR TO WORK BEGINNING AND RECEIPTS AFTER WORK IS COMPLETED IS REQUIRED. CONTRACTOR WILL BE PAID FOR THE WORK PERFORMED NOT TO EXCEED THE LUMP SUM AMOUNT UNLESS AUTHORIZED BY THE CITY ENGINEER. B. WORK MUST BE PERFORMED BY A LICENSED PLUMBER AND IN CONFORMANCE WITH CITY AND INTERNATIONAL PLUMBING CODE. C. PLUMBER MUST CONTACT CITY PLUMBING INSPECTOR PRIOR TO BEGINNING WORK. CONTRACTOR TO OBTAIN PLUMBING PERMIT FOR EACH HOUSE. CITY PERMIT WILL BE PROVIDED AT NO COST TO CONTRACTOR. D. THIS ALLOWANCE COVERS INTERNAL HOME REPLUMBING AT THE FOLLOWING ADDRESSES: 1223 LOGAN STREET, 1211 LOGAN STREET, 1207 LOGAN STREET, 1205 LOGAN STREET. E. IF EXTERNAL SEWER SERVICE WORK IS NEEDED ON PRIVATE PROPERTY, EXTERNAL WORK IS COVERED USING THE SANITARY SEWER SERVICE WORK ITEMS. IF HOMES NOT LISTED REQUIRE INTERNAL REPLUMBING, THIS ITEM CAN BE USED UP TO THE DOLLAR AMOUNT ALLOWANCE.
	4010-A	LF	SANITARY OR STORM SEWER, WATER MAIN EQUIVALENT MATERIAL, FOR CONFLICTS, GENERAL APPLIES TO 39-44 A. INCLUDES ALL ITEMS LISTED UNDER "SANITARY SEWER, GENERAL" IN ADDITION TO THE WATER MAIN EQUIVALENT PIPE MATERIAL. ITEM INCLUDES ALL COSTS FOR LABOR, MATERIALS, EXCAVATION, BACKFILL, TRENCH SPOILS REMOVAL AND DISPOSAL, INSTALLATION OF WATER MAIN EQUIVALENT PIPE MATERIAL IN LIEU OF SPECIFIED SEWER PIPE MATERIAL AT LOCATIONS IN CLOSE PROXIMITY TO WATER MAINS. PAYMENT WILL BE MADE BY PIPE DIAMETER AND PIPE MATERIAL. B. CRITERIA FOR USING WATER MAIN EQUIVALENT PIPE MATERIAL IS LISTED IN SUDAS SECTION 4010, 4020, 5010, AND IS SUMMARIZED ON DRAWING A.05. C. TRENCH BEDDING CLASS SHALL BE CLASS F-3 ACCORDING TO SUDAS FIGURE 3010.103. USE CLASS 1 BEDDING MATERIAL. CONSOLIDATE AND COMPACT BEDDING MATERIAL. COMPACTION OF GRANULAR FINAL TRENCH BACKFILL SHALL BE AS DESCRIBED UNDER SANITARY SEWER.
39	4010-A	LF	SEWER, DIP, WATER MAIN MATERIAL, FOR CONFLICTS, 8" A. REFER TO SUDAS SECTION 5010, 2.01 B FOR DIP MEETING AWWA C151. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE.
40	4010-A	LF	SEWER, DIP, WATER MAIN MATERIAL, FOR CONFLICTS, 12" A. REFER TO SECTION 5010, 2.01 B FOR DIP MEETING AWWA C151. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE.
41	4010-A	LF	SEWER, DIP, WATER MAIN MATERIAL, FOR CONFLICTS, 16" A. REFER TO SECTION 5010, 2.01 B FOR DIP MEETING AWWA C151. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE.
42	4010-A	LF	SEWER, PVC, WATER MAIN MATERIAL, FOR CONFLICTS, 8" A. REFER TO SECTION 5010, 2.01 A FOR PVC MEETING AWWA C900. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE.
43	4010-A	LF	SEWER, PVC, WATER MAIN MATERIAL, FOR CONFLICTS, 12" A. REFER TO SECTION 5010, 2.01 A FOR PVC MEETING AWWA C900. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE.
44	4010-A	LF	SEWER, PVC, WATER MAIN MATERIAL, FOR CONFLICTS, 16" A. REFER TO SECTION 5010, 2.01 A FOR PVC MEETING AWWA C900. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE.

ESTIMATE REFERENCE NOTES			
ITEM NO	ITEM CODE	UNIT	DESCRIPTION
	4020-A-1	LF	STORM SEWER, TRENCHED ; GENERAL APPLIES TO ITEMS 45 THRU 53 A. REFER TO SECTIONS 4020 AND SECTION 4060 IN THEIR ENTIRETY FOR REQUIREMENTS. B. THIS ITEM INCLUDES EVERYTHING LISTED IN 4020 1.08 A. 1 PLUS FIELD ENGINEERING; LABORATORY TESTING SERVICES; DEWATERING; SHEETING; SHORING; PIPING AND PUMPING FOR BYPASSING FLOW TO MAINTAIN SERVICE; REMOVAL OF EXISTING SEWER PIPES, WITHIN TRENCH LIMITS; PLUGGING OF EXISTING PIPING AND MANHOLES; WATER AND SEWER HOUSE SERVICE VERIFICATION AND REPAIR; UTILITY REPAIR; UTILITY COMPANY CHARGES FOR TEMPORARY RELOCATIONS, SUPPORTS OR BRACING; CONNECTIONS TO EXISTING SYSTEM AND PIPE CONNECTIONS; DEFLECTION TESTING OF PVC SEWERS (MANDREL), CLEANING, HAULING AND DISPOSAL OF UNSUITABLE TRENCH EXCAVATED MATERIAL, AND INCIDENTAL WORK. C. MEASUREMENT AND PAYMENT WILL BE MADE FOR VARIOUS DIAMETERS AND PIPE TYPE LISTED. LENGTH WILL BE MEASURED ALONG CENTER LINE OF PIPE WITH NO DEDUCTION FOR STRUCTURES. NO DIFFERENTIATION WILL BE MADE FOR DEPTH OF PIPE. D. FOR RCP PIPING, TRENCH BEDDING CLASS SHALL BE CLASS R-2 ACCORDING TO SUDAS FIGURE 3010.102. PLACE CLASS I BEDDING MATERIAL TO SPRINGLINE (HORIZONTAL CENTERLINE) OF PIPE. MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 3010 2.02A. CONSOLIDATE AND COMPACT BEDDING MATERIAL. E. WHEN PIPE CENTERLINE IS LOCATED UNDER, OR WITHIN 2- FEET OF THE OUTER EDGE OF PAVEMENT, FINAL TRENCH BACKFILL ABOVE THE BEDDING ZONE SHALL BE CLASS II GRANULAR BACKFILL MATERIAL MEETING THE REQUIREMENTS OF SECTION 3010. MANSAND IS NOT ALLOWED. ALL BACKFILL MATERIAL IS INCLUDED IN THE PRICE OF THE PIPE. F. REFER TO C SERIES SHEETS FOR PIPE SUMMARY TABLE. G. FOR PVC INLET PIPING, TRENCH BEDDING CLASS SHALL BE CLASS F-3 ACCORDING TO SUDAS FIGURE 3010.103. USE CLASS 1 BEDDING MATERIAL ACCORDING TO 3010 2.02A. CONSOLIDATE AND COMPACT BEDDING MATERIAL. H. INTERNAL VIDEO INSPECTION OF STORM SEWERS ARE REQUIRED AND PAID AS A SEPARATE ITEM. I. MAINTAINING AND CONTROLLING STORM WATER FLOW IS REQUIRED BY CONTRACTOR. TEMPORARY PIPE CONNECTIONS MAY BE NEEDED. CONTRACTOR TO SUBMIT PLAN TO CITY FOR REVIEW. J. UNSUITABLE EXCAVATED TRENCH MATERIAL MUST BE HAULED AWAY AND DISPOSED OF AT A SITE TO BE DETERMINED BY THE CONTRACTOR. CITY'S RAVINE FILL SITE NEAR LOCUST STREET IS NOT AVAILABLE. DISPOSAL OF TRENCH SPOIL MATERIAL IS INCLUDED IN THE PRICE OF THE PIPE.
45	4020-A-1	LF	STORM SEWER, 12", CLASS IV RCP A. REFER TO 2.01 A; PIPE SHALL CONFORM TO ASTM C76 WITH RUBBER O-RING OR PROFILE GASKETS MEETING ASTM C443. OUTSIDE JOINT WRAP NOT REQUIRED. B. USE FOR ALL INLET PIPING AND MAINLINE STORM SEWER.
46	4020-A-1	LF	STORM SEWER, 15", CLASS IV RCP A. REFER TO 2.01 A; PIPE SHALL CONFORM TO ASTM C76 WITH RUBBER O-RING OR PROFILE GASKETS MEETING ASTM C443. OUTSIDE JOINT WRAP NOT REQUIRED. B. USE FOR ALL INLET PIPING AND MAINLINE STORM SEWER.
47	4020-A-1	LF	STORM SEWER, 18", CLASS IV RCP A. REFER TO 2.01 A; PIPE SHALL CONFORM TO ASTM C76 WITH RUBBER O-RING OR PROFILE GASKETS MEETING ASTM C443. OUTSIDE JOINT WRAP NOT REQUIRED.
48	4020-A-1	LF	STORM SEWER, 21", CLASS IV RCP A. REFER TO 2.01 A; PIPE SHALL CONFORM TO ASTM C76 WITH RUBBER O-RING OR PROFILE GASKETS MEETING ASTM C443. OUTSIDE JOINT WRAP NOT REQUIRED.
49	4020-A-1	LF	STORM SEWER, 24", CLASS IV RCP A. REFER TO 2.01 A; PIPE SHALL CONFORM TO ASTM C76 WITH RUBBER O-RING OR PROFILE GASKETS MEETING ASTM C443. OUTSIDE JOINT WRAP NOT REQUIRED.
50	4020-A-1	LF	STORM SEWER, 30", CLASS IV RCP A. REFER TO 2.01 A; PIPE SHALL CONFORM TO ASTM C76 WITH RUBBER O-RING OR PROFILE GASKETS MEETING ASTM C443. OUTSIDE JOINT WRAP NOT REQUIRED.
51	4020-A-1	LF	STORM SEWER, 48" ELLIPTICAL (38"HX60"W), CLASS IV RCP A. REFER TO 2.01 C; PIPE SHALL CONFORM TO ASTM C507 WITH RUBBER O-RING OR PROFILE GASKETS MEETING ASTM C443. OUTSIDE JOINT WRAP NOT REQUIRED. B. USE CLASS R-5 TRENCH BEDDING CONDITION FOR REINFORCED HORIZONTAL ELLIPTICAL PIPE, FIGURE 3010.102. CLASS I BEDDING MATERIAL SHALL BE PLACED TO 1' ABOVE THE PIPE.
52	4020-A-1	LF	STORM SEWER INLET PIPING, 12" PVC (ASTM F949) A. ITEM IS CORRUGATED EXTERIOR, SMOOTH INTERIOR PIPING (ASTM F949) ACCORDING TO 2.01 E., 1. A. 1). B. USE AS AN INLET PIPING OPTION UPON APPROVAL OF CITY ENGINEER. C. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE.
53	4020-A-1	LF	STORM SEWER INLET PIPING, 15" PVC (ASTM F949) A. ITEM IS CORRUGATED EXTERIOR, SMOOTH INTERIOR PIPING (ASTM F949) ACCORDING TO 2.01 E., 1. A. 1). B. USE AS AN INLET PIPING OPTION UPON APPROVAL OF CITY ENGINEER. C. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE.
54	4030-B	EA	PIPE APRON, FOOTING, GUARD A. PROVIDE PIPE APRON AND FOOTING FOR STORM SEWER OUTLETS. PROVIDE PIPE APRON AND GUARD FOR STORM SEWER INLETS. PIPE INLET LOCATIONS CAN BE FOUND ON M.03, M.15, M.16. PIPE OUTLET LOCATION CAN BE FOUND ON M.07. B. INCLUDES ALL ITEMS AS LISTED IN 1.08 B, C, AND D FOR PIPE APRON, FOOTING, AND GUARD. C. APRONS SHALL BE CONCRETE ACCORDING TO FIGURE 4030.222. SEE FIGURE 4030.221 FOR APRON FOOTING, AND FIGURE 4030.224 FOR GUARD.
55	4040-A	LF	TYPE 1 SUBDRAINS (LONGITUDINAL) CORRUGATED PE, 4" A. SUBDRAINS SHALL BE INSTALLED UNDER ALL NEW PCC PAVEMENT ON BOTH SIDES. DRAWINGS DO NOT SHOW LOCATION OF REQUIRED SUBDRAIN. SEE TYPICAL PAVEMENT SECTION ON PLAN SHEET B.01. B. POROUS BACKFILL MATERIAL SHALL BE IN ACCORDANCE WITH 4040, 2.04 A., CRUSHED STONE OR PROCESSED GRAVEL. ENGINEERING FABRIC SHALL BE IN CONFORMANCE WITH 4040, 2.07. PLACEMENT OF SUBDRAIN MAY VARY DEPENDING ON LOCATION OF EXISTING UTILITIES. REFER TO SUDAS FIGURE 4040.231 FOR LOCATION OPTIONS. C. INCLUDES ITEMS LISTED IN 1.08 PLUS FURNISHING AND PLACING POROUS BACKFILL MATERIAL, ENGINEERING FABRIC, SPECIAL FITTINGS. SOCKED PIPE IS ACCEPTABLE IN LIEU OF ENGINEERING FABRIC.

NO.	REVISIONS	DSGN	CHKD	APVD	DATE
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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SEWER
ESTIMATE REFERENCE NOTES**

DESIGNED <u>KK HEIM</u>	SCALE: AS NOTED
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	C.04
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	

NOTES

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3. MEASUREMENT AND PAYMENT DESCRIPTIONS IN PART 1.08 UNDER EACH SUDAS STANDARD SPECIFICATION SECTION SHALL BE REVIEWED IN CONJUNCTION WITH THESE ESTIMATE REFERENCE NOTES.

ESTIMATE REFERENCE NOTES			
ITEM NO	ITEM CODE	UNIT	DESCRIPTION
56	4040-D-1	EA	SUBDRAIN OUTLETS AND CONNECTIONS A. REFER TO FIGURE 4040.233 FOR CONNECTIONS TO OUTLET STRUCTURE AND RODENT GUARD. B. INCLUDES ALL ITEMS WITHIN 1.08 PLUS CONNECTION TO STRUCTURE, EXTENSION OF SUBDRAIN INTO STRUCTURE, CORE DRILLING.
57	4050-A-2	LF	PRE-REHABILITATION CLEANING AND INSPECTION, ALL DIAMETERS A. INCLUDES ITEMS LISTED IN 1.08. B. LOCATION DEVITT AVENUE AND EISENHOWER STREET LINING. C. SEE SECTION 4050 FOR REQUIREMENTS INCLUDING SUBMITTALS AND SPECIAL PUBLIC NOTIFICATION REQUIREMENTS.
58	4050-C-1	LF	CIPP MAIN LINING, 12" A. INCLUDES ITEMS LISTED IN 1.08. B. LOCATION DEVITT AVENUE AND EISENHOWER STREET LINING. C. SEE SECTION 4050 FOR REQUIREMENTS INCLUDING SUBMITTALS SUCH AS THICKNESS DESIGN CALCULATIONS AND SPECIAL PUBLIC NOTIFICATION REQUIREMENTS. D. USE PRODUCTS MANUFACTURED WITH A FLAME BONDED SEAM. DO NOT USE PRODUCTS THAT REQUIRE TAPE ON THE SEAMS.
59	4050-C-1	LF	CIPP MAIN LINING, 15" A. INCLUDES ITEMS LISTED IN 1.08. B. LOCATION DEVITT AVENUE AND EISENHOWER STREET LINING. C. SEE SECTION 4050 FOR REQUIREMENTS INCLUDING SUBMITTALS SUCH AS THICKNESS DESIGN CALCULATIONS AND SPECIAL PUBLIC NOTIFICATION REQUIREMENTS. D. USE PRODUCTS MANUFACTURED WITH A FLAME BONDED SEAM. DO NOT USE PRODUCTS THAT REQUIRE TAPE ON THE SEAMS.
60	4050-C-2	EA	BUILDING SANITARY SEWER SERVICE REINSTATEMENT A. INCLUDES ITEMS LISTED IN 1.08. B. LOCATION DEVITT AVENUE AND EISENHOWER STREET LINING. C. SEE SECTION 4050 FOR REQUIREMENTS INCLUDING SUBMITTALS AND SPECIAL PUBLIC NOTIFICATION REQUIREMENTS.
61	4050-G	LS	BYPASS PUMPING, HAGERMAN DRIVE STORM A. COMBINED SEWAGE FLOW MUST BE MAINTAINED AT ALL TIMES TO PERFORM UWBS REPLACEMENT ON HAGERMAN DRIVE. BYPASS PUMPING, FLOW DIVERISION, SANDBAGGING, TEMPORARY CONNECTIONS MAY BE NECESSARY TO MAINTAIN FLOW. B. INCLUDES ALL ITEMS LISTED IN 1.08 G AND ALL COSTS TO PERFORM BYPASS AND MAINTENANCE OF SEWAGE FLOW DURING PIPE PLACEMENT. SEWAGE FLOW CAN BE MAINTAINED IN OTHER WAYS BESIDES BYPASS. ALL COSTS TO PERFORM SEWAGE FLOW CONTROL ON HAGERMAN DRIVE ARE INCLUDED IN THIS ITEM.
62	4060-XX	LF	INTERNAL VIDEO INSPECTION (ALL SEWER) A. REFER TO SECTION 4060 FOR VIDEO INSPECTION REQUIREMENTS. INSPECTION REPORTING AND CODING DOCUMENTATION SHALL CONFORM TO CURRENT NASSCO PACP REQUIREMENTS AND WORKERS TRAINED IN NASSCO METHODS. B. ITEM INCLUDES, BUT IS NOT LIMITED TO, ALL COSTS FOR LABOR, MATERIAL, AND EQUIPMENT FOR VIDEO INSPECTION AND RECORDING OF ALL NEWLY CONSTRUCTED SEWERS (SANITARY AND STORM) 8" AND LARGER, EXCLUDES BUILDING SERVICES. C. REFER TO 3.02 A; VIDEO INSPECTION MUST BE PERFORMED 1 WEEK PRIOR TO PAVING AND AFTER ALL BACKFILLING UNLESS OTHERWISE AUTHORIZED BY THE CITY IN WRITING. REPLACE BROKEN, CRACKED, OR OTHERWISE DEFECTIVE PIPE OR OFFSET JOINTS AND RESTORE SURFACE AT NO COST TO CITY. D. FLOW SHALL NOT EXCEED 20 PERCENT OF PIPE DIAMETER DURING INSPECTION. BYPASS PUMPING IS INCIDENTAL TO THIS ITEM. E. MEASUREMENT AND PAYMENT FOR THIS ITEM WILL BE AT THE UNIT PRICE PER LINEAL FOOT MEASURED ALONG CENTERLINE OF PIPE WITH NO DEDUCTIONS FOR MANHOLES. F. PLACING PAVEMENT PRIOR TO TELEVISION IS CONTRACTORS RISK AND IS NOT ADVISED. G. IF CONTRACTOR OR SUBCONTRACTOR PERFORMING THE VIDEO INSPECTION DISCOVERS A DEFECT, THEY MUST INFORM THE CITY IMMEDIATELY. H. NOTE VIDEO INSPECTION FOR PRE AND POST INSPECTION OF PIPE LINING AREA IS INCLUDED WITH LINING ITEMS.
63	5010-E-1	LF	WATER SERVICE PIPE, COPPER, 1" A. REPLACE WATER SERVICES WHEN IN DIRECT CONFLICT WITH SEWER INSTALLATION OR IF THEY ARE LEAD OR GALVANIZED. SERVICE LINE REPLACEMENT MUST BE APPROVED BY THE CITY. B. INCLUDES ITEMS LISTED IN 1.08 PLUS REMOVAL OF EXISTING SERVICES, GRANULAR BACKFILL WHEN IN THE STREET AND REMOVAL AND DISPOSAL OF TRENCH SPOILS, DISINFECTION, PRESSURE, LEAKAGE TESTING, AND BACTERIOLOGICAL TESTING. C. WORK SHALL BE PERFORMED UNDER SUPERVISION OF MPW INSPECTOR. D. MATERIAL SHALL MEET MPW'S STANDARD SPECIFICATIONS ISSUED IN 2023. E. SERVICE LINE SHALL BE 1-INCH TYPE K (HEAVY), SOFT ANNEALED, SEAMLESS COPPER. CONNECTIONS TO EXISTING SERVICE LINES SHALL BE 3 PIECE COMPRESSION TYPE, MUELLER 110 CONDUCTIVE COMPRESSION CONNECTION.
64	5010-E-2	EA	WATER SERVICE CORPORATION A. SEE REQUIREMENTS LISTED UNDER WATER SERVICE PIPE. B. SEE 1.08 FOR DESCRIPTION AND PAYMENT METHODS. C. CORPORATION SHALL BE MPW'S SPEC, MUELLER NO. B-25008, 1-INCH BRASS. CORPORATIONS WILL BE PROVIDED BY MPW.
65	5010-E-3	EA	WATER SERVICE CURB STOP AND BOX A. SEE REQUIREMENTS LISTED UNDER WATER SERVICE PIPE. B. SEE 1.08 E.3 FOR DESCRIPTION AND PAYMENT METHODS. C. CURB STOPS AND BOX SHALL BE MPW'S SPEC, LEAD FREE BRASS MUELLER H-10314 CURB STOP BOX AND VALVE WITH 5' LONG CURB BOX, EXTENSION TYPE, ARCH PATTERN BASE, ONE PIECE LID WITH ROD, UPPER SECTION LID TO BY TWO HOLE.
66	5020-C	EA	FIRE HYDRANT ASSEMBLY A. INCLUDES ALL ITEMS LISTED IN 1.08 C AND J TO COVER ALL COSTS FOR REMOVAL AND REPLACEMENT OF HYDRANT SEE SHEET M.03 FOR LOCATION OF HYDRANT REPLACEMENT ON HAGERMAN DRIVE. SEE MPW SPEC FOR HYDRANT REQUIREMENTS AND DETAIL.

ESTIMATE REFERENCE NOTES			
ITEM NO	ITEM CODE	UNIT	DESCRIPTION
67	6010-A	EA	SANITARY MANHOLE, ECCENTRIC, SW-301, 5' DIAMETER (8' DEEP) A. REFER TO SUDAS SECTION 6010 FOR REQUIREMENTS. B. INCLUDES ALL ITEMS LISTED IN 1.08, PLUS ADDITIONAL ITEMS NOTED BUT NOT LIMITED TO, DEWATERING, PIPE CAPS, PLUGGING EXISTING PIPE ENDS, NEW STUB PIPE CONNECTIONS, COUPLERS AND FITTINGS, FLEXIBLE WATERTIGHT CONNECTIONS, BACKFILLING, COMPACTION, TRENCH SPOILS REMOVAL, TESTING, CLEANING, INSPECTIONS, CONNECTIONS TO EXISTING SYSTEMS IF REQUIRED, AND MISCELLANEOUS ASSOCIATED WORK FOR MANHOLES ZERO TO 8' DEEP MEASURED FROM TOP OF COVER TO INVERT OF LOWEST SEWER C. PAYMENT WILL BE MADE FOR VARIOUS MANHOLE CONFIGURATIONS LISTED D. SANITARY AND STORM MANHOLE JOINTS SHALL BE RUBBER O-RING OR PROFILE GASKET CONFORMING TO ASTM C443. JOINT SEALANT WRAP NOT REQUIRED. E. ALL SANITARY MANHOLES SHALL INCLUDE A MOLDED SHIELD INFILTRATION BARRIER. PAVEMENT BOXOUTS SHALL BE INSTALLED. DO NOT INSTALL MANHOLE STEPS. F. ALL CASTINGS FOR ECCENTRIC TOP AND FLAT TOP SHALLOW MANHOLES SHALL BE EAST JORDAN NO 1045Z WITH NO SUBSTITUTIONS. CASTINGS SHALL BE STANDARD DUTY TYPE A - TWO-PIECE FIXED CASTING WITH GASKET SEAL AND CONCEALED PICKHOLE. CASTINGS SHALL BE PLAIN LID NOT INCLUDE ANY SPECIAL WORDING. G. SALVAGE EXISTING CASTINGS OR COVER PLATES AND DELIVER TO PUBLIC WORKS FACILITY ON WASHINGTON STREET H. ALL ADJUSTMENT RINGS SHALL BE REINFORCED CONCRETE RINGS. A MINIMUM OF 4-INCHES ADJUSTMENT RING STACK HEIGHT IS REQUIRED. MINIMUM THICKNESS OF A SINGLE ADJUSTING RING IS 2-INCHES. DO NOT EXCEED 12-INCHES OF ADJUSTMENT RING STACK HEIGHT. I. REFER TO SUDAS FIGURE 6010.301 FOR TYPICAL ECCENTRIC CONE SANITARY MANHOLE DETAIL. J. REFER TO C SERIES SHEETS FOR MANHOLE SUMMARY TABLE. K. COMPLY WITH REQUIREMENTS IN SECTION 6030 CLEANING, INSPECTION, AND TESTING OF STRUCTURES L. SEVERAL MANHOLES ON THE PLANS HAVE BOLT DOWN COVERS. THIS ITEM SHALL COVER THE USE OF BOLT DOWN COVERS FOR MANHOLES CALLED OUT ON PLANS. M. WHEN PIPE CENTERLINE IS LOCATED UNDER, OR WITHIN 2-FEET OF THE OUTER EDGE OF PAVEMENT, BACKFILL ABOVE THE PIPE BEDDING ZONE SHALL BE CLASS II GRANULAR BACKFILL MATERIAL MEETING THE REQUIREMENTS OF SECTION 3010. ALL BACKFILL MATERIAL IS INCLUDED IN THE PRICE OF THE PIPE OR MANHOLE. UNSUITABLE TRENCH SPOILS SHALL BE HAULED AWAY AND DISPOSED OF BY THE CONTRACTOR. CITY'S RAVINE FILL SITE IS UNAVAILABLE.
68	6010-A	LF	SANITARY MANHOLE, EXTRA DEPTH, 5' DIAMETER A. ITEM INCLUDES ALL COSTS FOR DEPTH IN EXCESS OF 8' FOR ECCENTRIC OR FLAT TOP MANHOLES AS MEASURED FROM TOP OF COVER TO INVERT OF LOWEST SEWER. B. MEASUREMENT AND PAYMENT FOR THIS ITEM WILL BE AT THE UNIT PRICE PER VERTICAL FOOT EXCEEDING 8'.
69	6010-A	EA	SANITARY MANHOLE, SW-301 FLAT TOP, 5' DIAMETER A. ITEM INCLUDES ALL COSTS FOR FURNISHING AND INSTALLING A FLAT TOP SANITARY MANHOLE INCLUDING THE SAME ITEMS OF WORK LISTED UNDER "SANITARY MANHOLE, ECCENTRIC" ABOVE. B. CONSTRUCT ACCORDING TO SW-301 EXCEPT SWAPING OUT THE ECCENTRIC CONE WITH A VERTICAL RISER SECTION LIKE SW-401.
70	6010-A	EA	STORM MANHOLE, FLAT TOP, SW-401, 5' DIAMETER (UP TO 8' DEEP) A. ITEM INCLUDES ALL COSTS FOR FURNISHING AND INSTALLING FLAT TOP STORM MANHOLE INCLUDING THE SAME ITEMS OF WORK LISTED UNDER "SANITARY MANHOLE, ECCENTRIC" ABOVE EXCLUDING INFILTRATION BARRIERS. B. SEE SUDAS FIGURE 6010.401 (SW-401) FOR CIRCULAR FLAT TOP STORM SEWER MANHOLE. SEE C SERIES SHEETS FOR TABULATION. REFER TO M SERIES SHEETS FOR LOCATIONS.
71	6010-A	LF	STORM MANHOLE, EXTRA DEPTH, 5' DIAMETER A. ITEM INCLUDES ALL COSTS FOR DEPTH IN EXCESS OF 8' FOR ECCENTRIC OR FLATTOP MANHOLES AS MEASURED FROM TOP OF COVER TO INVERT OF LOWEST SEWER. B. MEASUREMENT AND PAYMENT FOR THIS ITEM WILL BE THE UNIT PRICE PER VERTICAL FOOT EXCEEDING 8'.
72	6010-A	LF	STORM MANHOLE, SW-401, 8' DIAMETER A. CIRCULAR 8-FOOT DIAMETER MANHOLE FOR SEVERAL STORM STRUCTURES ON HAGERMAN DRIVE. REFER TO SUDAS FIGURE 6010.401 (SW-401). REFER TO M SERIES SHEETS FOR LOCATIONS. B. INCLUDES ALL ITEMS LISTED ABOVE FOR STORM MANHOLES.
73	6010-A	EA	STORM MANHOLE, SW-401, 8' DIAMETER WITH 4' DIAMETER RISER A. INCLUDES ALL ITEMS LISTED UNDER STORM MANHOLE 8' DIAMETER EXCEPT RISER SECTION TO GRADE IS 4-FOOT DIAMETER. B. CONNECT RISER SECTION TO BASE SECTION ACCORDING TO DETAIL ON A.04 AND SW-404 CONNECTION DETAIL BETWEEN INTERMEDIATE TOP AND RISER SECTION.
74	6010-A	LF	MANHOLE REPLACEMENT SECTION, 3' RISER A. REPLACE VERTICAL RISER SECTION ABOVE SEWER STRUCTURE WITH PRECAST BARREL SECTIONS MATCHING SIZE OF MANHOLE OPENING IN UPPER WEST BRANCH SEWER. INSTALL CHIMNEY AND NEW CASTING SIMILAR TO REQUIREMENTS UNDER SANITARY SEWER MANHOLES. B. ITEM INCLUDES ALL COST TO REBUILD MANHOLE ACCESSES AS NEEDED, TIE NEW RISERS TO STRUCTURE, AND PROTECT EXISTING SEWER. C. SEE DRAWING A.04 FOR DETAIL TO TIE INTO THE EXISTING UWBS.
75	6010-A	EA	STORM MANHOLE, SW-406, SHALLOW RECTANGULAR (8'X8') A. SHALLOW RECTANGULAR STORM MANHOLE. SEE SHEET M.03 FOR LOCATION OFF HAGERMAN DRIVE CUL-DE-SAC. REFER TO SUDAS FIGURE 6010.406 (SW-406) FOR DETAIL. B. INCLUDES ALL ITEMS LISTED UNDER STORM MANHOLE.
	6010-B	EA	STORM INTAKE/INLET, GENERAL APPLIES TO 76-80 A. INCLUDES ITEMS LISTED IN 1.08 PLUS ALL INCIDENTAL WORK TO COMPLETE CONSTRUCTION OF EACH INLET TYPE LISTED. INSTALLATION SHALL INCLUDE RE-GRADING AND SHAPING AREA TO PROVIDE POSITIVE DRAINAGE TO THE INLET. B. REFER TO SUDAS FIGURES REFERENCED. C. SEE SHEET M.00 NOTE 6 FOR DESCRIPTION OF INLET STRUCTURE PLACEMENT IN CURB LINE.
76	6010-B	EA	STORM INLET, SW-501 A. RECTANGULAR INLET STRUCTURE WITH CURB BOX AND GRATE. SEE C. SERIES SHEETS FOR INLET TYPE TABULATION. REFER TO SUDAS FIGURE 6010.501 (SW-501) AND CASTING SW-603 TYPE R. REFER TO M SERIES SHEETS FOR LOCATIONS.

NO.	REVISIONS	DGSN	CHKD	APVD	DATE
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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SEWER
ESTIMATE REFERENCE NOTES**

DESIGNED <u>KK HEIM</u>	SCALE: AS NOTED
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	C.05
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	

NOTES

1. ALL SUDAS REFERENCES ARE TO SUDAS SPECIFICATIONS 2025 EDITION.
2. FOR EACH ITEM, CONTRACTOR SHALL CAREFULLY REVIEW THE REFERENCED SUDAS SPECIFICATION IN ITS ENTIRETY. SUDAS SPEC, ESTIMATE REFERENCE NOTES, SPECIAL PROVISIONS SECTION 00 75 00, AND THE DRAWINGS MUST BE REVIEWED TOGETHER FOR EACH PROJECT ITEM. UNLESS NOTED OTHERWISE IN THESE CONTRACT DOCUMENTS, ALL PROVISIONS OF SUDAS APPLY.
3. MEASUREMENT AND PAYMENT DESCRIPTIONS IN PART 1.08 UNDER EACH SUDAS STANDARD SPECIFICATION SECTION SHALL BE REVIEWED IN CONJUNCTION WITH THESE ESTIMATE REFERENCE NOTES.

ESTIMATE REFERENCE NOTES			
ITEM NO	ITEM CODE	UNIT	DESCRIPTION
77	6010-B	EA	STORM INLET, SW-502, 5' DIAMETER A. CIRCULAR 5' DIAMETER INLET STRUCTURE WITH CURB BOX AND GRATE. REFER TO C SERIES SHEETS FOR INLET STRUCTURE TABULATION. REFER TO SUDAS FIGURE 6010.502 (SW-502) AND CASTING SW-603 TYPE R. REFER TO M SERIES SHEETS FOR LOCATIONS.
78	6010-B	EA	STORM INLET, SW-507 A. SUDAS SINGLE OPEN THROAT CURB INLET SMALL BOX. REFER TO SUDAS FIGURE 6010.507 (SW-507). REFER TO C SERIES SHEETS FOR INLET STRUCTURE TABULATION. REFER TO M SERIES SHEETS FOR LOCATIONS.
79	6010-B	EA	STORM INLET, SW-509 A. SUDAS DOUBLE OPEN THROAT CURB INLET SMALL BOX. REFER TO SUDAS FIGURE 6010.509 (SW-509). REFER TO C SERIES SHEETS FOR INLET STRUCTURE TABULATION. REFER TO M SERIES SHEETS FOR LOCATIONS.
80	6010-B	EA	STORM INLET, SW-512, 24" DIAMETER, 604 TYPE 5 A. SEE SHEET M.08 FOR LOCATION. B. SUDAS CIRCULAR AREA INTAKE, RCP RISER PIPE WITH CASTING IN PIPE BELL. REFER TO FIGURE 6010.512 (SW-512). REFER TO C SERIES SHEETS FOR INLET STRUCTURE TABULATION.
81	6010-C-1	EA	SANITARY INTERNAL DROP CONNECTION A. REFER TO MODIFIED SUDAS DETAIL FIGURE 6010.308 (SW-308) ON SHEET A.04 FOR INTERNAL DROP CONNECTION REQUIREMENTS. REPLACE RECEIVING BOWL FOR PIPE TEE WITH TOP OF PIPE CUT OUT. B. INCLUDES LISTED ITEMS IN 1.08 PLUS INTERNAL PIPE TEE, ALL PIPE AND FITTINGS, AND MISCELLANEOUS WORK TO CONSTRUCT DROP CONNECTION. C. PIPE MATERIAL OF DROP PIPE SHALL BE PVC IN ACCORDANCE WITH SUDAS SECTION 6010, 2.16, A, 3.
82	6010-H	EA	REMOVE MANHOLE OR INTAKE A. INCLUDES LISTED ITEMS IN 1.08 TO REMOVE EXISTING MANHOLES AND INTAKES IN THEIR ENTIRETY PLUS EXCAVATION, DEWATERING, SHEETING, SHORING, TRANSPORTATION, AND DISPOSAL OF REMOVED STRUCTURE, AND EXCAVATED MATERIAL AND INCIDENTAL WORK. B. REMOVAL AND SALVAGE OF EXISTING FRAME AND LID SHALL BE CONSIDERED INCIDENTAL WORK AND TAKEN TO CITY STORAGE YARD. STRUCTURES SHALL NOT BE FILLED WITH FLOWABLE MORTAR BUT REMOVED COMPLETELY. ALL PIPE ENDS OF PIPES TO ABANDONED SHALL BE PLUGGED AND FILLED WITH CONCRETE ACCORDING TO 3.07. C. SEE SHEET C.09 FOR TABULATION.
83	6010-X	EA	CURB OPENING CASTING A. USE FOR CONNECTING EXISTING DOWNSPOUT AND STORM WATER DRAINS TO CURB, ONLY WHEN APPROVED BY THE CITY. CITY PREFERENCE IS OVERLAND FLOW TO THE STREET. B. ITEM INCLUDES ALL COSTS TO INSTALL CASTING IN THE CURB BEFORE OR AFTER THE CONCRETE CURB HAS BEEN PLACED. CASTING SHALL BE MODEL NEENAH R-3262. C. PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE.
84	6010-X	EA	MANHOLE CASTING A. SEE SHEET MSA.04 AND MSA.17 FOR EX MH 5455 RISER REMOVAL AND CASTING REPLACEMENT ON EXISTING UWBS. B. ITEM INCLUDES ALL LABOR, MATERIALS, EQUIPMENT TO REMOVE EXISTING MANHOLE RISER AND REPLACE WITH NEW CASTING TO MATCH SIZE OF EXISTING OPENING. C. CASTING SHALL BE EAST JORDAN 1045Z MEETING THE REQUIREMENTS FOR THIS LOCATION.
85	7010-A	SY	PCC PAVEMENT, 7-INCH MACHINE PAVING IS REQUIRED UNLESS CITY ENGINEER APPROVES OTHER PLACEMENT METHODS. A. SEE SHEET B.01 FOR TYPICAL SECTIONS. REFER TO D SHEETS FOR LAYOUT. REFER TO L SHEETS FOR JOINTING AT INTERSECTIONS. B. IOWA DOT C4-WR-C15-S20 CONCRETE MIX SHALL BE USED. SUBSTITUTE MIX DESIGNS TO BE APPROVED BY CITY ENGINEER. MIXES WITH FLY ASH AND SLAG MAYBE ACCEPTABLE UPON APPROVAL. C. PAYMENT FOR THIS ITEM WILL BE SUBJECT TO LIMITATIONS OUTLINED AS FOLLOWS: a. NO PAYMENT WILL BE MADE FOR PAVEMENT REPLACEMENT OUTSIDE THE LIMITS SHOWN ON PLANS UNLESS AUTHORIZED BY CITY ENGINEER. b. COLD WEATHER AND RAIN PROTECTION IS INCIDENTAL TO STREET PAVEMENT REPLACEMENT AND NO ADDITIONAL PAYMENT WILL BE MADE WHEN PROTECTION IS REQUIRED. SEE SECTION 7010, 3.04. c. ITEM INCLUDES QUANTITIES FOR CURB AND GUTTER SECTIONS CONNECTED TO PAVEMENT. d. ITEM INCLUDE ALL LABOR AND MATERIALS FOR INSTALLATION OF REINFORCEMENT. SEE FIGURE 7010.101 FOR JOINT DETAILS. 7" PCC SHALL HAVE TYPE L-1, KT-1 OR BT-1 LONGITUDINAL JOINTS DEPENDING ON PAVING SEQUENCE. 7" PCC TRANSVERSE JOINTS SHALL HAVE EPOXY COATED DOWELS. e. REFER TO 1.08 FOR MEASUREMENT AND PAYMENT DESCRIPTION.
86	7010-I	LS	PCC PAVEMENT SAMPLES AND TESTING A. REFER TO SUDAS SECTION 7010, 3.07 FOR TESTING QUALITY CONTROL. B. INCLUDES ITEMS LISTED IN 1.08 PLUS SLUMP AND AIR TESTING, PAVEMENT SMOOTHNESS STRAIGHTEDGE TESTING AND OTHER TESTS AT CONTRACTOR DISCRETION. C. CERTIFIED PLANT INSPECTION AND MATURITY TESTING ARE REQUIRED ACCORDING TO SECTION 3.07 A. D. SLUMP AND AIR CONTENT TESTING ARE REQUIRED ACCORDING TO SECTION 3.07 A AND B. CITY WILL PERFORM INDEPENDENT ON GRADE SLUMP AND AIR FIELD TESTING. E. PAVEMENT SMOOTHNESS STRAIGHTEDGE TESTING SHALL BE PROVIDED ACCORDING TO SECTION 3.07, C. 1. F. PROFILOGRAPH TESTING IS NOT REQUIRED. PAVEMENT THICKNESS TESTING IS NOT REQUIRED. G. CONTRACTOR SHALL PERFORM TESTS AT THEIR DISCRETION FOR QUALITY ASSURANCE.
87	7020-A	TON	ASPHALT PAVEMENT BY TON A. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE. B. INCLUDED ITEMS ARE LISTED IN 1.08 PLUS ALL COSTS FOR LABOR, MATERIALS AND EQUIPMENT FOR MIX DESIGN, PRODUCING, PLACING AND TESTING THE BITUMINOUS PAVING MIXTURE. INCLUDES DEVELOPMENT OF MIX DESIGN, PREPARATION AND CLEANING OF THE ROADBED, APPLICATION OF TACK COATS, PLACEMENT AND COMPACTION OF LEVELING AND SURFACE COURSES, AND TESTING OF EACH LIFT PER SECTION 7020. C. ITEM MAY BE USED FOR TEMPORARY ROADWAYS UPON CITY APPROVAL.
88	7030-A-3	SY	REMOVAL OF DRIVEWAY/ALLEY A. INCLUDED ITEMS ARE AS LISTED IN 1.08 B. SEE R (DEMOLITION) DRAWINGS FOR LIMITS OF DRIVEWAY, AND ALLEY REMOVAL. C. PAYMENT OF DRIVEWAY/ALLEY PAVEMENT REMOVED WILL BE BASED ON THE ACTUAL QUANTITY OF PAVEMENT REMOVED UP TO THE MAXIMUM LIMITS DEFINED ON DRAWINGS UNLESS ADDITIONAL AREAS HAVE BEEN AUTHORIZED BY CITY ENGINEER. ESTIMATED QUANTITY INCLUDES SIDEWALK PANELS THAT FALL WITHIN THE DRIVEWAY.

ESTIMATE REFERENCE NOTES			
ITEM NO	ITEM CODE	UNIT	DESCRIPTION
89	7030-A-1	SY	REMOVAL OF SIDEWALK A. SEE R (DEMOLITION) DRAWINGS FOR LIMITS OF SIDEWALK REMOVAL. B. UNIT PRICE INCLUDES ALL ITEMS LISTED IN 1.08 AND INCLUDES CAREFUL REMOVAL AND SALVAGE OF DECORATIVE SIDEWALK IF ENCOUNTERED ON THE PROJECT OR DIRECTED BY THE ENGINEER. DECORATIVE SIDEWALK PAVERS SHALL BE SALVAGED AND STOCKPILED FOR PROPERTY OWNER AT A LOCATION AGREED UPON WITH PROPERTY OWNER. C. PAYMENT FOR SIDEWALK REMOVED WILL BE BASED ON ACTUAL QUANTITY OF SIDEWALK REMOVED NOT TO EXCEED LIMITS DEFINED ON DRAWINGS UNLESS ADDITIONAL AREAS HAVE BEEN AUTHORIZED BY CITY ENGINEER.
90	7030-B	LF	REMOVAL OF CURB, LIMESTONE CURB A. ITEM INCLUDES, BUT IS NOT LIMITED TO, ALL COSTS FOR LABOR, MATERIALS AND EQUIPMENT FOR REMOVING AND SALVAGING LIMESTONE CURB UNITS. INCLUDES EXCAVATION, CAREFUL REMOVAL, LOADING, HAULING, UNLOADING AND STACKING CURB UNITS AT CITY'S PUBLIC WORKS FACILITY ON WASHINGTON STREET. B. LOCATIONS WITH LIMESTONE CURBS HAVE NOT BEEN IDENTIFIED ON THE DRAWINGS. IF ENCOUNTERED, SALVAGE AS INDICATED. C. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE.
91	7030-E	SY	PCC SIDEWALK, 4-INCH A. INCLUDES ITEMS LISTED IN 1.08. B. SEE D SERIES SHEETS FOR LIMITS OF SIDEWALK PLACEMENT. C. PAYMENT WILL BE BASED ON THE ACTUAL AREA INSTALLED UP TO THE MAXIMUM LIMITS SHOWN ON THE DRAWINGS UNLESS ADDITIONAL SIDEWALK REPLACEMENT IS AUTHORIZED BY CITY ENGINEER. D. COLD WEATHER AND RAIN PROTECTION IS INCIDENTAL. NO ADDITIONAL PAYMENT WILL BE MADE WHEN REQUIRED. E. SIDEWALK SHALL BE THICKENED AT LOCATIONS OF DETECTABLE WARNING TILE INSTALLATIONS AND PAID FOR SEPARATELY AS 6-INCH PCC SIDEWALK.
92	7030-E	SY	PCC SIDEWALK, 6-INCH A. SAME NOTES APPLY TO THIS ITEM AS LISTED UNDER PCC SIDEWALK, 4-INCH. B. THIS ITEM IS SOLELY FOR THICKENED SIDEWALK AT LOCATIONS OF DETECTABLE WARNING TILE INSTALLATION. C. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE.
93	7030-G	SF	DETECTABLE WARNINGS A. INCLUDES ALL ITEMS LISTED IN 1.08. B. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE. C. SEE SUDAS DETAILS FOR PLACEMENT AND REQUIREMENTS. D. MANUFACTURER SHALL BE ENGINEERED PLASTICS, INC. WILLIAMSVILLE, NY, ARMOR-TILE OR EQUAL. COLOR SHALL BE BRICK RED AND MATERIAL SHALL BE VITRIFIED POLYMER COMPOSITE (VPC).
94	7030-H-1	SY	PAVED DRIVEWAYS, AND ALLEYS, PCC, 6-INCH A. INCLUDES ALL ITEMS LISTED IN 1.08. B. SEE D SERIES SHEETS FOR LIMITS OF DRIVEWAY/ALLEY PLACEMENT. C. PAYMENT FOR THIS ITEM WILL BE BASED ON THE ACTUAL AREA INSTALLED UP TO THE MAXIMUM LIMITS SHOWN ON THE DRAWINGS. NO PAYMENT WILL BE MADE BEYOND THE MAXIMUM LIMITS SHOWN ON THE DRAWINGS UNLESS AUTHORIZED BY CITY ENGINEER. D. COLD WEATHER AND RAIN PROTECTION IS INCIDENTAL. NO ADDITIONAL PAYMENT WILL BE MADE WHEN REQUIRED. E. SEE TABLE IN C SERIES SHEETS FOR LIST OF DRIVEWAY REMOVALS AND REPLACEMENTS.
95	7040-G	SY	MILLING A. INCLUDES ALL ITEMS LISTED IN 1.08 PLUS PERFORMING CLEANUP AND PROVIDING SAFE DRIVABLE SURFACES FOR RESIDENTIAL ACCESS AFTER MILLING BUT PRIOR TO EXISTING SUBBASE REMOVAL. B. MILLINGS SHALL BE HAULED TO CITY LOT ON WASHINGTON STREET. C. ASPHALT REMOVAL PERFORMED WITH EXCAVATOR WILL NOT BE PAID FOR AND IS INCIDENTAL TO SEWER OR PAVEMENT INSTALLATION.
96	7040-H	SY	PAVEMENT REMOVAL, CONCRETE A. INCLUDES ALL ITEMS LISTED IN 1.08. B. REMOVED CONCRETE SHALL BE SALVAGED, HAULED AND UNLOADED AT THE CITY LOT ON WASHINGTON STREET. C. PAYMENT WILL BE MADE FOR THE ACTUAL QUANTITY OF PAVEMENT REMOVED UP TO THE MAXIMUM LIMITS SHOWN ON DRAWINGS. NO PAYMENT WILL BE MADE FOR PAVEMENT REMOVED OUTSIDE THE LIMITS SHOWN ON THE DRAWINGS UNLESS AUTHORIZED BY THE CITY ENGINEER.
97	7040-XX	SY	SUBBASE MATERIAL REMOVAL AFTER MILLING A. REFER TO SUDAS SECTION 7040, 1.08, H; AND 3.08. B. ITEM INCLUDES, BUT IS NOT LIMITED TO, ALL COSTS FOR LABOR, MATERIALS AND EQUIPMENT REQUIRED TO REMOVE THE BASE MATERIAL UNDERNEATH THE TOP DRIVING SURFACE (ASPHALT OR CONCRETE PAVING). BASE MATERIAL COULD BE CONCRETE OR PAVING BRICKS BELOW THE STREET SURFACE. INCLUDES SAW-CUTTING, BREAKING, LOADING, HAULING AND DISPOSAL OF PAVEMENT MATERIALS, DEBRIS REMOVED, AND BRICKS SALVAGED. C. MEASUREMENT AND PAYMENT FOR THIS ITEM WILL BE AT THE UNIT PRICE PER SQUARE YARD FOR THE ACTUAL QUANTITY OF SUBBASE MATERIAL REMOVED UP TO THE MAXIMUM LIMITS SHOWN IN THE DRAWINGS. NO PAYMENT WILL BE MADE FOR SUBBASE MATERIAL REMOVED OUTSIDE THE LIMITS SHOWN ON THE DRAWINGS UNLESS AUTHORIZED BY THE CITY ENGINEER. D. ITEM INCLUDES REMOVING, CAREFULLY SALVAGING, LOADING PAVING BRICK UNITS AT THE PROJECT SITE. ITEM INCLUDES HAULING, AND UNLOADING PAVING BRICK UNITS, AT PUBLIC WORKS FACILITY ON WASHINGTON STREET. E. ITEM DOES NOT INCLUDE EXCAVATION OF AGGREGATES UNDER THE DRIVING SURFACE WHICH IS PAID FOR ACCORDING TO ITEM CLASS 10 EXCAVATION.
98	8020-C	STA	PAINTED PAVEMENT MARKINGS, DURABLE A. SEE D SHEETS FOR PAVEMENT MARKING PROPOSED LOCATIONS. LOGAN STREET HAS EXISTING PAVEMENT MARKINGS. B. SEE SECTION 8020, 1.03 FOR SUBMITTAL REQUIREMENTS. C. PRIOR TO BEGINNING OF STREET DEMOLITION, CONTRACTOR TO RECORD LOCATION OF EXISTING PAVEMENT MARKINGS. COORDINATE WITH CITY PRIOR TO PLACEMENT OF NEW MARKINGS. D. INCLUDES ALL ITEMS LISTED IN 1.08. E. CONSTRUCTION TO MATCH EXISTING USING DURABLE PAINT WITH GLASS BEADS. PAYMENT WILL BE MADE FOR ALL TYPES OF MARKINGS BASED ON LENGTH, MEASURED IN STATIONS (STA).

NO.	REVISIONS	DSGN	CHKD	APVD	DATE
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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SEWER
ESTIMATE REFERENCE NOTES**

DESIGNED <u>KK HEIM</u>	SCALE: AS NOTED
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	C.06
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	

NOTES

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2. FOR EACH ITEM, CONTRACTOR SHALL CAREFULLY REVIEW THE REFERENCED SUDAS SPECIFICATION IN ITS ENTIRETY. SUDAS SPEC, ESTIMATE REFERENCE NOTES, SPECIAL PROVISIONS SECTION 00 75 00, AND THE DRAWINGS MUST BE REVIEWED TOGETHER FOR EACH PROJECT ITEM. UNLESS NOTED OTHERWISE IN THESE CONTRACT DOCUMENTS, ALL PROVISIONS OF SUDAS APPLY.
3. MEASUREMENT AND PAYMENT DESCRIPTIONS IN PART 1.08 UNDER EACH SUDAS STANDARD SPECIFICATION SECTION SHALL BE REVIEWED IN CONJUNCTION WITH THESE ESTIMATE REFERENCE NOTES.

ESTIMATE REFERENCE NOTES			
ITEM NO	ITEM CODE	UNIT	DESCRIPTION
99	8030-A	LS	TEMPORARY TRAFFIC CONTROL A. SEE J SERIES TRAFFIC CONTROL AND STAGING SHEETS FOR REQUIREMENTS. B. INCLUDES ALL ITEMS LISTED IN 1.08 FOR ALL TEMPORARY TRAFFIC CONTROL TO COMPLETE PROJECT. CONTRACTOR TO SUPPLY 'NO PARKING' TRAFFIC CONES THE DURATION OF THE PROJECT. CONTRACTOR SHALL REPLACE LOST OR MISPLACED CONES AT NO ADDITIONAL COST TO THE CITY. C. CONTRACTOR TO SUBMIT PROJECT SCHEDULE ALONG WITH CONTRACTOR'S TRAFFIC CONTROL PLAN. CITY RESERVES THE RIGHT TO RESTRICT TOTAL LENGTH OF WORK ZONES. ALL TRAFFIC CONTROL PLANS MUST BE REVIEWED AND ACCEPTED BY CONTRACTOR WITH ALL CHANGES APPROVED BY THE CITY. D. REFER TO SPECIAL PROVISIONS SECTION 00 75 00 FOR CONSTRUCTION STAGING CONSTRAINTS.
100	8030-XX	SF	SPECIAL SIGNAGE A. REFER TO SUDAS SECTION 8030 AND MUTCD FOR SIGN STANDARDS. B. ITEM IS USED FOR THE TWO PROJECT CONSTRUCTION SIGNS SHOWN ON SHEET A.02 AND DETAILED IN PROJECT MANUAL SECTION 01 50 00. C. THIS ITEM MAY BE USED FOR SPECIAL TEMPORARY SIGNAGE BEYOND THOSE SHOWN ON DRAWINGS. SPECIAL SIGNAGE COULD INCLUDE SPECIAL LETTERING NOT FOUND ON STANDARD SIGNS. LETTERING SHALL BE BLACK ON WHITE SIGN. USE OF ITEM MUST BE AUTHORIZED BY CITY. D. MEASUREMENT AND PAYMENT FOR THIS ITEM WILL BE AT THE UNIT PRICE PER SQUARE FOOT OF SIGN.
101	9010-A	SF	SEEDING, FERTILIZING & MULCHING FOR CONVENTIONAL SEEDING, RESIDENTIAL (TYPE 1) A. SEE ENTIRE DESCRIPTION UNDER "SEEDING, FERTILIZING, & MULCHING FOR HYDRAULIC SEEDING, RESIDENTIAL (TYPE 1)" B. ITEM CAN BE USED INSTEAD OF HYDRAULIC SEEDING AT CITY'S DISCRETION.
102	9010-B	SF	SEEDING, FERTILIZING, & MULCHING FOR HYDRAULIC SEEDING, RESIDENTIAL (TYPE 1) A. FOR SUBMITALS REFER TO SUDAS SECTION 9010.1.03. B. SEED AREAS DISTURBED BY CONSTRUCTION. SEEDING AREAS USED IN QUANTITY ESTIMATE ARE SHOWN ON D SERIES SHEETS. DO NOT DISTURB AREAS OUTSIDE OF PROJECT LIMITS. AREAS DAMAGED OUTSIDE OF CONSTRUCTION LIMITS THAT HAVE NOT BEEN AUTHORIZED AS A WORK AREA SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE. C. INCLUDES THOSE ITEMS LISTED IN 1.08 IN ADDITION TO MAINTENANCE AND MOWING UNTIL ACCEPTED BY CITY, CLEAN-UP, RESEEDING NECESSARY UNTIL SEEDING IS ESTABLISHED, AND INCIDENTALS FOR RE-ESTABLISHING LAWNS AND GRASS AREAS.
103	9010-B	SF	SEEDING, FERTILIZING, & MULCHING FOR HYDRAULIC SEEDING, NOT MOWED MIX (TYPE 2) A. FOR SUBMITALS REFER TO SUDAS SECTION 9010.1.03. B. INCLUDES THOSE ITEMS LISTED IN 1.08 IN ADDITION TO MAINTENANCE, CLEAN UP, RESEEDING NECESSARY UNTIL SEEDING IS ESTABLISHED, AND INCIDENTALS FOR ESTABLISHING GRASS AREAS IN THE UNMOWED WOODED AREA BETWEEN HAGERMAN AND EISENHOWER. C. SEED FOR THIS SPECIFIC AREA IS INTENDED IS TO PRODUCE A LOW GROWING GRASS GROUND COVER THAT REQUIRES MINIMAL MAINTENANCE AND CAN THRIVE IN A SHADY ENVIRONMENT. D. FERTILIZER MAY BE APPLIED PRIOR TO THE APPLICATION OF SEED, OR AS PART OF THE HYDROSEEDING/HYDROMULCHING OPERATION. E. MULCH WITH TACKIFIER SHALL BE UTILIZED FOR THIS ITEM.
104	9030-A	SF	PLANTS, LANDSCAPING BY AREA A. SEE 1.08 FOR DESCRIPTION OF ITEM. B. MEASUREMENT AND PAYMENT UNIT IS SQUARE FOOT AREA. C. SEE SHEET C.19 FOR KNOWN AREAS WITH PLANTINGS. D. PROTECT EXISTING PLANTS AND LANDSCAPING WHEN POSSIBLE. WHEN NOT POSSIBLE SALVAGE PLANTS IF THEY CAN BE REPLANTED. DOCUMENT TYPE AND LOCATION OF EXISTING PLANTS AND LANDSCAPE FEATURES WITH PHOTOS PRIOR TO REMOVAL. REPLACE PLANTS TO MATCH EXISTING CONDITION. E. ONCE PLANTS ARE REPLANTED MAINTENANCE WILL RETURN TO PROPERTY OWNER.
105	9040-A-2	LS	SWPPP MANAGEMENT A. REFER TO SUDAS SECTION 9040, 1.07 FOR SPECIAL REQUIREMENTS. SEE 3.02, AND 3.03 FOR SWPPP MANAGEMENT AND INSPECTION REQUIREMENTS. B. INCLUDES ALL ITEMS LISTED IN 1.08 A.2. AND CONTRACTOR/INSTALLER/INSPECTOR/WORKER TRAINING, WEEKLY INSPECTIONS OF EROSION/SEDIMENT CONTROL MEASURES, AND UPDATES AND MAINTENANCE OF SWPPP REQUIRED DOCUMENTATION UNTIL NOTICE OF DISCONTINUATION. C. FILING OF NPDES GENERAL PERMIT NO. 2 APPLICATION, FEES, PUBLIC NOTICES, AND NOTICE OF INTENT WILL BE PERFORMED BY ENGINEERING CONSULTANT PRIOR TO BEGINNING CONSTRUCTION. D. CONTRACTOR'S SWPPP MANAGER SHALL BE FAMILIAR WITH IOWA STORMWATER MANAGEMENT MANUAL AND BMP'S, AND SHALL BE RESPONSIBLE FOR PREPARING AND MAINTAINING ALL NECESSARY PAPERWORK REQUIRED BY NPDES PERMIT. E. REFER TO PROJECT MANUAL FOR SWPPP MANAGEMENT DOCUMENTATION FORMS.
106	9040-D	LF	FILTER SOCKS A. INCLUDES ALL ITEMS LISTED IN 1.08 D1 AND D2 FOR INSTALLATION AND REMOVAL OF ANY SIZE OF FILTER SOCK AND ACCESSORIES REQUIRED FOR COMPLETE INSTALLATION TO REDUCE EROSION AND CONTAINMENT OF SEDIMENTATION RESULTING FROM CONSTRUCTION. INCLUDES REQUIRED MAINTENANCE, REPLACEMENT AS REQUIRED AND REMOVAL OF FILTER SOCKS FOLLOWING ESTABLISHMENT OF PERMANENT GROUND COVER. B. REFER TO SUDAS SECTION 9040; 2.03 FOR FILTER MATERIAL. C. FILTER SOCKS ARE NOT RECOMMENDED FOR INLET PROTECTION. SEE FIGURE 9040.102 FOR FILTER BERM AND FILTER SOCK INSTALLATION. D. QUANTITY CALCULATED IS BASED ON FILTER SOCKS PLACED ON EACH SIDE OF STREET TO PROTECT TOPSOIL FROM EROSION.
107	9040-E	SY	TEMPORARY ROLLED EROSION CONTROL PRODUCTS (RECP) TYPE 4.B (LONG TERM) A. SEE RR SHEETS FOR SUGGESTED LOCATIONS ON SLOPES. ITEM USE MUST BE AUTHORIZED BY CITY. B. INCLUDES ALL ITEMS LISTED IN 1.09 E PLUS MAINTENANCE AND REPLACEMENT OF PRODUCT DURING PROJECT DURATION. C. PRODUCT SHALL BE LONG TERM OF 36 MONTHS OR MORE AND NATURALLY DEGRADING. D. SEE FIGURE 9040.103 AND 9040.104 FOR INSTALLATION OF RECP ON SLOPES OR CHANNELS.

ESTIMATE REFERENCE NOTES			
ITEM NO	ITEM CODE	UNIT	DESCRIPTION
108	9040-J	TONS	RIPRAP, CLASS D AND CLASS E REVETMENT A. INCLUDES ALL ITEMS LISTED IN 1.08 INCLUDING ENGINEERING FABRIC. B. GRADATION LARGER THAN 3-INCHES WITH TOP SIZE OF 250 POUNDS. SEE IDOT 4130.02 FOR GRADATION. C. USE WHEN APPROVED BY CITY ENGINEER FOR CHANNEL AND SLOPE RESTORATION. D. ENGINEERING FABRIC SHALL COMPLY WITH 2.22 AND IOWA DOT ARTICLE 4196.01, B.3. E. PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE.
109	9040-J	CY	RIPRAP, EROSION STONE A. INCLUDES ALL ITEMS LISTED IN 1.08 INCLUDING ENGINEERING FABRIC. B. USE FOR CREEK CROSSING ON SHEET MSA.07 AND M.07 AND CHANNEL STABILIZATION AT PIPE OUTLETS, SEE DETAIL 9040.111. C. AGGREGATE SHALL MEET REQUIREMENTS IDOT 4130.04 AND .05, FOR 3-INCH TO 6-INCH EROSION STONE. D. ITEM INCLUDES BUT IS NOT LIMITED TO, MATERIAL AND LABOR TO FURNISH AND PLACE STONE AND ENGINEERING FABRIC. E. ENGINEERING FABRIC SHALL COMPLY WITH 2.22 AND IOWA DOT ARTICLE 4196.01, B.3.
110	9040-N	LF	SILT FENCE OR SILT FENCE DITCH CHECK A. INCLUDES ALL ITEMS LISTED 1.08 N. 1, 2, AND 3 FOR INSTALLATION, SEDIMENT REMOVAL, AND DEVICE REMOVAL. B. REFER TO SUDAS FIGURE 9040.119. C. REFER TO RR SHEETS WITH SUGGESTED SILT FENCE LOCATIONS.
111	9040-O	EA	STABILIZED CONSTRUCTION EXIT A. REFER TO SUDAS SECTION 9040; 2.15 FOR STONE AND SUBGRADE STABILIZATION MATERIAL (FABRIC). B. REFER TO FIGURE 9040.120 FOR TYPICAL SIZE AND THICKNESS FOR STONE TRACK OUT CONTROL. C. INCLUDES ALL COST OF LABOR, MATERIALS AND EQUIPMENT FOR COMPLETE CONSTRUCTION AND MAINTENANCE OF STABILIZED CONSTRUCTION EXIT. INCLUDES SUBGRADE PREPARATION, AGGREGATE MATERIAL AND SUBGRADE STABILIZATION MATERIAL, MAINTENANCE THROUGH PROJECT DURATION, MATERIAL REPLACEMENT AS NEEDED AND MEASURE REMOVAL FOLLOWING PROJECT COMPLETION. D. REFER TO RR SHEETS FOR SUGGESTED EXIT LOCATIONS.
112	9040-Q-2	ACRE	EROSION CONTROL MULCHING, HYDROMULCHING A. INCLUDES ALL ITEMS LISTED IN 1.08, AND IS NOT LIMITED TO, ALL COSTS FOR FURNISHING AND INSTALLING EROSION CONTROL HYDRO-MULCHING USING BONDED FIBER MATRIX SHOULD PERMANENT SEEDING NOT BE COMPLETED WITHIN SEEDING DATES. CITY MUST AUTHORIZE USE OF THIS ITEM. PERMANENT SEEDING IS INTENDED TO BE COMPLETED WITHIN PROJECT SEEDING DATES.
113	9040-T	EA	INLET PROTECTION DEVICE, DROP IN PROTECTION A. INCLUDES ITEMS LISTED IN 1.08 T.1 AND 2 PLUS MAINTENANCE THROUGH PROJECT DURATION. B. ITEM WILL BE COUNTED ONE TIME FOR AN INLET PROTECTION DEVICE INSTALLED, MAINTAINED, AND REMOVED IN AN INDIVIDUAL INLET THROUGH LENGTH OF PROJECT. C. REFER TO M AND RR SHEETS FOR LOCATIONS OF INLETS. REFER TO C SHEETS FOR TABLES OF EXISTING AND PROPOSED INLET STRUCTURES IN THE PROJECT. PROTECT EXISTING AND NEW INLETS.
114	9040-T	LF	INLET PROTECTION DEVICE, OPEN-THROAT CURB INTAKE SEDIMENT FILTER, EC-602 A. INCLUDES ITEMS LISTED IN 1.08 T.1 AND 2 PLUS MAINTENANCE THROUGH PROJECT DURATION. B. ITEM WILL BE COUNTED ONE TIME FOR AN INLET PROTECTION DEVICE INSTALLED, MAINTAINED, AND REMOVED IN AN INDIVIDUAL INLET THROUGH LENGTH OF PROJECT. MEASUREMENT SHALL BE LINEAR FEET OF INSTALLED FILTER. C. REFER TO RR SHEETS FOR LOCATIONS OF INLETS. D. REFER TO IOWA DOT STANDARD ROAD PLAN DETAIL EC-602 FOR SEDIMENT FILTER. FILTER MAY BE USED FOR OPEN THROAT INTAKE PROTECTION UPON APPROVAL OF CITY.
115	9040-XX	SF	TURF REINFORCMENT MESH (TEMPORARY) A. MATERIAL SHALL BE INSTALLED FOR TEMPORARY CONSTRUCTION AND RESIDENT VEHICLE ACCESS ROUTES IN EXISTING TURF AREAS PARALLEL TO PAVEMENTS UNDER CONSTRUCTION, AS AND WHERE DIRECTED BY THE CITY IN THE FIELD. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE. B. ITEM INCLUDES, BUT IS NOT LIMITED TO, ALL COSTS FOR LABOR, MATERIAL, AND EQUIPMENT NECESSARY FOR FURNISHING, PLACING, ANCHORING, AND REMOVAL OF THE GRID MATERIAL AND ANCHORS. C. MATERIAL SHALL BE THE HEAVY DUTY VERSION OF: TYPAR "GrassProtecta" GRASS REINFORCEMENT MESH, TENAX GRASS PROTECTION GRID, OR APPROVED EQUAL. D. REFER TO MANUFACTURER'S INSTRUCTIONS FOR MAT INSTALLATION REQUIREMENTS.
116	9060-D	LF	REMOVAL AND REINSTALLATION OF EXISTING FENCE A. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE. B. ITEM INCLUDES ALL ITEMS LISTED IN 1.08 D. ITEM USE MAY INCLUDE REMOVAL AND REPLACEMENT OF ANY TYPE OF EXISTING FENCES IN CITY ROW OR ON PRIVATE PROPERTY TO COMPLETE PROJECT CONSTRUCTION. CONTRACTOR SHALL DOCUMENT CONDITION AND TYPE OF EXISTING FENCE PRIOR TO REMOVAL. FENCING DAMAGED BY CONTRACTOR SHALL BE REPLACED AT NO ADDITIONAL COST TO CITY. C. CONTRACTOR SHALL WORK WITH CITY TO ACCOMMODATE PROPERTY OWNER ACCESS AND ADEQUATELY INFORM PROPERTY OWNERS WITH PETS AND CHILDREN ON SCHEDULE OF FENCE DISTURBANCE AND REPLACEMENT. D. CITY ENGINEER TO AUTHORIZE USE OF THIS ITEM.
117	9070-A	SF	RETAINING WALL ALL TYPES A. SEE SUDAS 9070 1.08 A, B, AND C FOR MEASUREMENT AND PAYMENT REQUIREMENTS. B. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE. C. UTILIZE APPLICABLE SUDAS SPECS AND DETAILS FOR RETAINING WALL TYPE ENCOUNTERED. D. LANDSCAPING TABLE ON SHEET C.19 SUMMARIZES LOCATIONS OF KNOW LANDSCAPING RETAINING WALLS.
118	9080-A	SF	CONCRETE STEPS A. SEE 1.08 FOR MEASUREMENT AND PAYMENT REQUIREMENTS. B. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE. C. SEE FIGURES 9080.101 AND 9080.102 FOR TYPICAL DETAILS.

NO.	REVISIONS	DSGN	CHKD	APVD	DATE
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225 Iowa Avenue, Muscatine, Iowa 52761-3764
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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SEWER
ESTIMATE REFERENCE NOTES**

DESIGNED	KK HEIM	SCALE:	AS NOTED
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	JM BRADY		
APPROVED	KK HEIM		
DATE	MARCH 12, 2025		

C.07 0

NOTES

1. ALL SUDAS REFERENCES ARE TO SUDAS SPECIFICATIONS 2025 EDITION.
2. FOR EACH ITEM, CONTRACTOR SHALL CAREFULLY REVIEW THE REFERENCED SUDAS SPECIFICATION IN ITS ENTIRETY. SUDAS SPEC, ESTIMATE REFERENCE NOTES, SPECIAL PROVISIONS SECTION 00 75 00, AND THE DRAWINGS MUST BE REVIEWED TOGETHER FOR EACH PROJECT ITEM. UNLESS NOTED OTHERWISE IN THESE CONTRACT DOCUMENTS, ALL PROVISIONS OF SUDAS APPLY.
3. MEASUREMENT AND PAYMENT DESCRIPTIONS IN PART 1.08 UNDER EACH SUDAS STANDARD SPECIFICATION SECTION SHALL BE REVIEWED IN CONJUNCTION WITH THESE ESTIMATE REFERENCE NOTES.

ESTIMATE REFERENCE NOTES

ITEM NO	ITEM CODE	UNIT	DESCRIPTION
119	9080-B	SF	HANDRAIL A. SEE 1.08 FOR MEASUREMENT AND PAYMENT REQUIREMENTS. B. THIS PROVISIONAL ITEM IS INCLUDED TO ESTABLISH A UNIT PRICE. C. SEE FIGURES 9080.101 AND 9080.102 FOR TYPICAL DETAILS.
120	11.010-A	LS	CONSTRUCTION SURVEY A. REFER TO SUDAS SECTION 11.010 AND SPECIAL PROVISIONS SECTION 00 75 00 FIELD ENGINEERING. B. INCLUDES ALL ITEMS LISTED IN 1.08 A INCLUDING COSTS FOR NEEDED FOR SURVEY AND STAKING TO INSTALL ALL ASPECTS OF THE PROJECT INCLUDING BUT NOT LIMITED TO SANITARY AND STORM SEWER AND PROPOSED PAVEMENT, DRIVEWAYS AND SIDEWALKS, CONSTRUCTION LIMITS AND EASEMENTS. ITEM INCLUDES VERIFICATION OF DESIGN SURVEY CONTROL, ESTABLISHMENT OF ANY ADDITIONAL CONTROL REQUIRED BY CONTRACTOR TO PERFORM WORK, RE-ESTABLISHMENT OF SURVEY MONUMENTS, CONTROL POINTS ENCOUNTERED DURING CONSTRUCTION AND REPLACEMENT OF PROPERTY PINS DISTURBED DURING CONSTRUCTION. C. ITEM REQUIRES CONSTRUCTION SURVEY TO BE PERFORMED BY A LICENSED LAND SURVEYOR HIRED BY THE CONTRACTOR. A LICENSED LAND SURVEYOR WILL NOT BE PROVIDED BY THE CITY FOR THESE WORK ITEMS.
121	11.010-XX	LS	RECORD DRAWINGS A. REFER TO DRAWINGS AND SPECIAL PROVISIONS SECTION 00 75 00 AND SECTION 01 77 00 FOR REQUIREMENTS. B. ITEM INCLUDES COLLECTING AS-BUILT ELEVATIONS AND INFORMATION ON NEW SEWERS, SERVICES, UTILITIES AND RECORD DRAWING PRODUCTION BY A LICENSED LAND SURVEYOR AND CONTRACTOR. CONTRACTOR IS REQUIRED TO HIRE A LICENSED LAND SURVEYOR. A LICENSED LAND SURVEYOR FOR THESE WORK ITEMS WILL NOT BE PROVIDED BY CITY.
122	11.020-A	LS	MOBILIZATION A. ITEM WILL BE MEASURED AND PAID FOR ACCORDING TO SUDAS SECTION 11.020 MOBILIZATION. B. ITEM INCLUDES MOVEMENT OF PERSONNEL, EQUIPMENT, AND SUPPLIES TO PROJECT SITE; CONTRACTOR FIELD OFFICES, STORAGE CONTAINERS, PORTABLE TOILETS, PROJECT FACILITIES, AND PERMITTING. ITEM ALSO INCLUDES DE-MOBILIZATION COSTS INCLUDING PREPARATION OF FINAL CONTRACT CLOSEOUT DOCUMENTS. SEE PROJECT MANUAL SECTION 01 77 00 FOR CLOSEOUT REQUIREMENTS.
123	11.020-A	EA	MOBILIZATION, EROSION CONTROL A. ITEM WILL BE MEASURED AND PAID FOR ACCORDING TO SUDAS SECTION 11.020 MOBILIZATION. B. ITEM INCLUDES MOVEMENT OF PERSONNEL, EQUIPMENT, AND SUPPLIES TO PROJECT SITE WHEN EROSION CONTROL ITEMS ARE INITIALLY INSTALLED, AND EACH TIME EROSION CONTROL ITEMS MUST BE RELOCATED OR REPAIRED. C. USE OF ITEM AFTER INITIAL EROSION CONTROL MOBILIZATION WILL REQUIRE CITY APPROVAL. D. ESTIMATED QUANTITY IS BASED STAGES NOTED ON J SHEETS.
124	11.020-XX	LS	EXISTING CONDITIONS VIDEO RECORD A. SEE SPECIAL PROVISIONS SECTION 00 75 00 FOR VIDEO REQUIREMENTS. B. LUMP SUM ITEM INCLUDES ALL COSTS FOR LABOR, MATERIAL, AND EQUIPMENT FOR TELEVISIONING AND COMPLETE VIDEOTAPING OF EXISTING FEATURES ALONG AND ADJACENT TO ROUTES OF ALL SEWERS PRIOR TO BEGINNING CONSTRUCTION. DIGITAL COPY SHALL BE PROVIDED TO THE CITY. VIDEO RECORD SHALL INCLUDE ALL HAUL ROUTES USED BY THE CONTRACTOR.
125	11.030-A	LS	MAINTENANCE OF POSTAL SERVICE A. INCLUDES ALL ITEMS LISTED IN 1.08 AND FOR MAINTAINING POSTAL AND DELIVERY SERVICES DURING CONSTRUCTION. INCLUDES FURNISHING, INSTALLING, MAINTAINING, AND REMOVING TEMPORARY CLUSTER MAILBOXES OR TEMPORARY INDIVIDUAL MAILBOXES PLUS REMOVAL, SALVAGE AND REINSTALLATION OF PERMANENT MAILBOXES. INSTALL AT POSTMASTER APPROVED LOCATIONS FOR THOSE RESIDENTS WHOSE NORMAL MAIL DELIVERY IS IMPACTED DURING CONSTRUCTION. CONTRACTOR TO PROVIDE TEMPORARY ACCESS TO POSTAL AND DELIVERY SERVICES TO ACCESS PERMANENT OR TEMPORARY MAILBOXES. SEE R SHEETS FOR LOCATION OF EXISTING MAILBOXES.
126	11.030-B	LS	MAINTENANCE OF SOLID WASTE COLLECTION A. INCLUDES ALL ITEMS LISTED IN 1.08 FOR TRANSPORTING GARBAGE AND RECYCLING CONTAINERS FROM RESIDENTS HOMES TO AN ALTERNATIVE COLLECTION LOCATION SPECIFIED BY THE CITY AND RETURNING THE EMPTIED CONTAINERS BACK TO THE RESIDENCES DURING CONSTRUCTION ACTIVITIES THAT PREVENT NORMAL REFUSE COLLECTION. B. CONTRACTOR'S PLAN FOR MAINTAINING SOLID WASTE COLLECTION MUST BE APPROVED BY CITY.
127	11.050-A	LS	CONCRETE WASHOUT A. INCLUDES ALL ITEMS LISTED IN 1.08 FOR FURNISHING, INSTALLING, MAINTAINING, AND REMOVING A CITY APPROVED CONCRETE WASHOUT SYSTEM INCLUDING CONTAINMENT, COLLECTION, AND DISPOSAL. REFER TO EPA STORM WATER BEST MANAGEMENT PRACTICES. HTTPS://WWW3.EPA.GOV/NPDES/PUBS/CONCRETEWASHOUT.PDF B. DO NOT DRAIN CONCRETE WASHOUT WATER INTO STORM SEWERS, DITCHES, AND WATER BODIES. C. IF CONTRACTOR DOES NOT USE AN APPROVED CONCRETE WASHOUT SYSTEM, THIS ITEM WILL NOT BE PAID.

NO.	REVISIONS	DSGN	CHKD	APVD	DATE



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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SEWER
ESTIMATE REFERENCE NOTES**

DESIGNED <u>KK HEIM</u>	SCALE: AS NOTED
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	
APPROVED <u>KK HEIM</u>	C.08
DATE <u>MARCH 12, 2025</u>	0

NOTES

1. DETAILED QUANTITY TABULATIONS ARE PROVIDED FOR CONVENIENCE OF CONTRACTOR AND CITY. REFER TO PLANS FOR SPECIFIC REQUIREMENTS. IF DISCREPANCIES ARE FOUND, PLAN DRAWINGS INFORMATION GOVERNS. DISCREPANCIES SHOULD BE BROUGHT TO DESIGN ENGINEER TO CONFIRM DESIGN INTENT.

REMOVAL MANHOLE OR INTAKE						
SHEET NUMBER	EXISTING STRUCTURE NAME	STREET	NOTES	LOCATION	EXISTING TYPE	COUNT
M.02, M.13	CB 4213	HAGERMAN DR	BY HOUSE # 518	INLET IN CURB	OPEN THROAT CURB CASTING, CONCRETE STRUCTURE	1
M.02, M.13	CB 4212	HAGERMAN DR	BY HOUSE # 519	INLET IN CURB	OPEN THROAT CURB CASTING, CONCRETE STRUCTURE	1
M.02	MH 4214	HAGERMAN DR	BY HOUSE # 530+531	MH IN STREET PAVEMENT	BRICK/CONCRETE RISER ON UWBS	1
M.03	MH 4215	HAGERMAN DR	BY HOUSE # 546+547	MH IN STREET PAVEMENT	BRICK RISER ON UWBS	1
M.03, M.13	CB 5460	HAGERMAN DR	BY HOUSE # 601	INLET OPEN THROAT	EXTENDED OPEN THROAT CURB OPENING, BRICK STRUCTURE	1
M.03, M.13	CB 5459	HAGERMAN DR	BY HOUSE # 602	INLET OPEN THROAT	EXTENDED OPEN THROAT CURB OPENING, BRICK STRUCTURE	1
M.03	CB 5458	OFF HAGERMAN	618 PROPERTY	GRASS	RECTANGULAR CONCRETE AREA INTAKE WITH GRATE	1
M.03	MH 5456	OFF HAGERMAN	ST MARY'S PROPERTY	GRASS	CASTING AND BRICK RISER ON UWBS	1
MSA.04	MH 5455	OFF HAGERMAN	897 NEWELL PROPERTY	GRASS, ON UWBS	CASTING AND BRICK RISER ON UWBS	1
MSA.06	MH 5450	OFF LOGAN	900 EISENHOWER PROPERTY	GRASS	EXISTING BRICK MANHOLE	1
MSA.07	MH 5449	OFF EISENHOWER	926 CEMETERY PROP	GRASS	EXISTING BRICK MANHOLE	1
MSA.07	MH 3995	EISENHOWER ST	BY HOUSE # 904	GRASS	EXISTING BRICK MANHOLE WITH 1" OPENINGS FOR STORM WATER	1
MSA.08	MH 3993	EISENHOWER ST	INTERSECTION OF EISENHOWER AND DEVITT	GRASS	EXISTING BRICK MANHOLE	1
M.08, M.16	CB 3992	DEVITT AVE	BY HOUSE #930	IN STREET PAVEMENT	INLET IN CURB WITH GRATE, CONCRETE STRUCTURE	1
M.08, M.16	CB 3994	DEVITT AVE	BY HOUSE # 1450	IN CURB LINE	CIRCULAR INLET CASTING IN CURB LINE, CONCRETE STRUCTURE	1
M.09	CB 4004	DEVITT AVE	BY HOUSE # 1419	IN STREET PAVEMENT	INLET IN CURB WITH GRATE	1
M.09	CB 4005	DEVITT AVE	BY HOUSE # 1414	IN STREET PAVEMENT	INLET IN CURB WITH GRATE	1
MSA.09	MH 4006	DEVITT AVE	BY HOUSE # 1410	IN STREET PAVEMENT	EXISTING BRICK MANHOLE	1
MSA.11	MH 4282	LOGAN ST	BY HOUSE # 1224	IN STREET PAVEMENT	EXISTING PRECAST CONCRETE MANHOLE	1
M.11, M.14	MH 4281	LOGAN ST	BY HOUSE # 1223	IN STREET PAVEMENT	BRICK RISER ON UWBS	1
M.14	CB 4279	LOGAN ST	BY HOUSE # 1223	INLET IN CURB	EXTENDED OPEN THROAT CURB OPENING, CONCRETE STRUCTURE	1
M.14	CB 4280	LOGAN ST	BY HOUSE #1224	INLET IN CURB	EXTENDED OPEN THROAT CURB OPENING, CONCRETE STRUCTURE	1
MSA.11	MH 4278	LOGAN ST	BY HOUSE # 1211	IN STREET PAVEMENT	EXISTING CONCRETE STRUCTURE	1
MSA.12	MH 4026	LOGAN ST	BY HOUSE # 1204	IN STREET PAVEMENT	EXISTING BRICK MANHOLE	1
TOTAL						24

SANITARY DROP CONNECTIONS								
SHEET	MANHOLE	IE IN	IE OUT	DROP LENGTH, FT	COUNT	INTERNAL OR EXTERNAL	DROP DIRECTION	SIZE, INCHES
MSA.06, .11	SS D19	662.25	651.50	10.8	1	INTERNAL	NORTHWEST	8
MSA.08	SS D16	702.24	693.66	8.6	1	INTERNAL	NORTH	8
MSA.15	SS D21	632.11	628.00	4.1	1	INTERNAL	NORTH	8
TOTAL				23.4	3			
TOTAL INTERNAL DROP CONNECTIONS					3			
TOTAL EXTERNAL DROP CONNECTIONS					0			

NOTE:
REFER TO MSA SERIES SHEETS FOR LOCATION AND ELEVATIONS OF DROP.
IF DISCREPANCY IS FOUND, MSA SHEETS GOVERN.

NO.	REVISIONS	DSGN	CHKD	APVD	DATE



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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SEWER
MISCELLANEOUS TABLES**

DESIGNED <u>KK HEIM</u>	SCALE: AS NOTED
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV. 0
APPROVED <u>JM BRADY</u>	C.09
APPROVED <u>KK HEIM</u>	
DATE <u>MARCH 12, 2025</u>	

LOAD D3-RS

SANITARY STRUCTURE TABLE

STRUCTURE NAME	PHASE	STRUCTURE STATION	ALIGNMENT	RIM ELEVATION	MANHOLE DEPTH	INVERT IN	INVERT OUT	NORTHING	EASTING
EXST B1	BEND	STA	SAN-ALIGN-6D-SERV-MAIDEN-LN	RIM E 657.04		INV IN: +656.50	INV OUT: +656.50	528746.99	2309458.11
REV-6C-SS10	PH6C	STA 100+04	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +617.53	20.53'	INV IN: +604.17 INV IN: +610.00 INV IN: +608.75	INV OUT: +597.00	529522.12	2310002.38
REV-6C SS19	PH6C	STA 101+11	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +620.15	15.45'	INV IN: +604.80	INV OUT: +604.70	529442.58	2309930.93
SS D1	301	STA 103+31	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +619.85	13.95'	INV IN: +606.00	INV OUT: +605.90	529315.29	2309751.59
SS D2	301	STA 107+30	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +626.42	10.16'	INV IN: +616.36 INV IN: +616.86	INV OUT: +616.26	529040.35	2309462.95
SS D3	301	STA 108+86	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +629.43	8.53'	INV IN: +621.00 INV IN: +622.35	INV OUT: +620.90	528931.05	2309350.83
SS D4	301	STA 112+06	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +636.45	9.37'	INV IN: +627.18	INV OUT: +627.08	528707.44	2309121.68
SS D5	301	STA 113+80	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +637.34	7.55'	INV IN: +629.89	INV OUT: +629.79	528584.28	2308998.60
SS D6	301-FLATTOP	STA 116+31	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +641.19	6.29'	INV IN: +635.00	INV OUT: +634.90	528402.98	2308825.86
SS D7	301	STA 117+50	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +645.78	7.21'	INV IN: +638.67	INV OUT: +638.57	528318.13	2308742.50
SS D8	301	STA 119+84	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +649.96	7.31'	INV IN: +642.75	INV OUT: +642.65	528309.95	2308508.67
SS D9	301	STA 121+64	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +659.66	11.25'	INV IN: +648.50	INV OUT: +648.40	528308.56	2308328.15
SS D10	301	STA 123+00	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +663.96	13.76'	INV IN: +650.87	INV OUT: +650.20	528372.81	2308208.38
SS D11	301	STA 124+64	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +662.37	8.39'	INV IN: +654.07	INV OUT: +653.97	528380.32	2308045.34
SS D12	301	STA 127+24	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +665.96	8.96'	INV IN: +657.10	INV OUT: +657.00	528507.82	2307818.53
SS D13	301	STA 129+79	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +670.62	9.72'	INV IN: +661.00	INV OUT: +660.90	528631.05	2307595.40
SS D14	301	STA 130+66	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +675.92	13.61'	INV IN: +664.21	INV OUT: +662.31	528631.90	2307508.20
SS D15	301	STA 132+05	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +694.96	10.70'	INV IN: +686.16	INV OUT: +684.26	528632.56	2307369.01
SS D16	301	STA 136+05	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +709.53	15.97'	INV IN: +694.72 INV IN: +695.53 INV IN: +702.24	INV OUT: +693.56	528632.31	2306968.99
SS D17	301	STA 138+55	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +711.47	14.48'	INV IN: +697.09	INV OUT: +696.99	528383.01	2306969.63
SS D18	301	STA 141+99	SAN-ALIGN-HAGERMAN-TO-DEVITT	RIM ELEV: +707.18	6.78'	INV IN: +700.69	INV OUT: +700.40	528038.23	2306970.60
SS D19	301	STA 300+24	SAN-ALIGN-LOGAN	RIM ELEV: +669.25	17.85'	INV IN: +652.27 INV IN: +651.50 INV IN: +662.25	INV OUT: +651.40	528373.63	2308101.70
SS D20	301	STA 304+17	SAN-ALIGN-LOGAN	RIM ELEV: +673.55	11.65'	INV IN: +663.79 INV IN: +664.05 INV IN: +664.90	INV OUT: +661.90 INV OUT: +663.79	527980.55	2308106.88
SS D21	301	STA 83+12	SAN-ALIGN-539-HAGERMAN	RIM ELEV: +637.51	9.51'	INV IN: +632.11	INV OUT: +628.00	529257.65	2309239.52
SS D22	301	STA 300+07	SAN-ALIGN-LOGAN	RIM ELEV: +669.88	7.28'	INV IN: +662.92	INV OUT: +662.60	528389.36	2308093.82
SS D23 (FUT)	301	STA 91+32	SAN-ALIGN-6D-SERV-MAIDEN-LN	RIM ELEV: +638.11	11.26'		INV OUT: +626.85	528819.08	2309420.14

NOTES

1. DETAILED QUANTITY TABULATIONS ARE PROVIDED FOR CONVENIENCE OF CONTRACTOR AND OWNER. REFER TO PLANS FOR SPECIFIC REQUIREMENTS. IF DISCREPANCIES ARE FOUND, PLAN DRAWINGS INFORMATION GOVERNS. DISCREPANCIES SHOULD BE BROUGHT TO DESIGN ENGINEER TO CONFIRM DESIGN INTENT.
2. SEE SHEET C.11 FOR SANITARY SEWER PIPE TABLE.
3. ITEMS WITH EXISTING, FUTURE, OR PHASE 6C IN THE STRUCTURE NAME ARE NOT INCLUDED IN QUANTITY TABULATION FOR PHASE 6D.

NO.	REVISIONS	DSGN	CHKD	APVD	DATE
 Stanley Consultants Inc. 225 Iowa Avenue, Muscatine, Iowa 52761-3764 www.stanleyconsultants.com					
CITY OF MUSCATINE - PHASE 6D WEST HILL AREA SANITARY AND STORM SEWER SEPARATION MUSCATINE, IOWA					
SANITARY SEWER STRUCTURE TABLE					
DESIGNED	KK HEIM	SCALE: AS NOTED			
DRAWN	GM REEVES	NO. 17660.60.30		REV.	
CHECKED	ER SCHALLERT	C.10		0	
APPROVED	JM BRADY				
APPROVED	KK HEIM				
DATE	MARCH 12, 2025				

LOAD D3-RS

SANITARY SEWER PIPE TABLE

PIPE ID	START MANHOLE	END MANHOLE	PIPE DIAMETER (INCHES)	PIPE LENGTH, FT	PIPE SLOPE	START INVERT	END INVERT	START STATION	END STATION	NOTE	ALIGNMENT
EX-P-SRV-324R			4	59	1.00%	+610.17	+610.76	100+61	100+88	EXST SRV	SAN-ALIGN-HAGERMAN-TO-DEVITT
P-SRV-324R			6	63	0.78%	+609.81	+610.30	100+23	100+68	NEW SRV	SAN-ALIGN-HAGERMAN-TO-DEVITT
P-SRV-1410D	SS D18		6	22	1.00%	+700.69	+700.91	141+99	141+99	PVC SRV STUB	SAN-ALIGN-HAGERMAN-TO-DEVITT
P-SRV-P-502H			6	95	7.31%	+604.50	+611.46	101+67	101+66	EXST SRV	SAN-ALIGN-HAGERMAN-TO-DEVITT
P-SRV-P-506H			6	66	8.72%	+606.50	+612.29	102+29	102+27	EXST SRV	SAN-ALIGN-HAGERMAN-TO-DEVITT
P-SRV-P-703M (2)	EXST B1		6	91	0.00%	+656.50	+656.50		91+22	EXST SRV	SAN-ALIGN-6D-SERV-MAIDEN-LN
P-SRV-P-703M (3)		EXST B1	6	226	0.00%	+656.50	+656.50			EXST SRV	SAN-ALIGN-6D-SERV-MAIDEN-LN
P - 1		SS D1	15	188	0.50%	+604.96	+605.90	101+43	103+31	PVC	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 2	SS D1	SS D2	15	399	2.57%	+606.00	+616.26	103+31	107+30	PVC	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 3	SS D2	SS D3	15	157	2.90%	+616.36	+620.90	107+30	108+86	PVC	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 4	SS D3	SS D4	15	320	1.90%	+621.00	+627.08	108+86	112+06	PVC	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 5	SS D4	SS D5	15	174	1.50%	+627.18	+629.79	112+06	113+80	PVC	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 6	SS D5	SS D6	15	250	2.00%	+629.89	+634.90	113+80	116+31	PVC	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 7	SS D6	SS D7	15	119	3.00%	+635.00	+638.57	116+31	117+50	PVC	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 8	SS D7	SS D8	15	234	1.70%	+638.67	+642.65	117+50	119+84	PVC	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 9	SS D8	SS D9	15	181	3.13%	+642.75	+648.40	119+84	121+64	PVC	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 10	SS D9	SS D10	15	136	1.25%	+648.50	+650.20	121+64	123+00	PVC	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 11	SS D10	SS D19	15	107	0.50%	+650.87	+651.40	123+00	124+07	PVC	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 12	SS D19	SS D11	15	57	3.00%	+652.27	+653.97	124+07	124+64	PVC	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 13	SS D11	SS D12	15	260	1.12%	+654.07	+657.00	124+64	127+24	PVC	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 14	SS D12	SS D13	15	255	1.49%	+657.10	+660.90	127+24	129+79	PVC	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 15	SS D13	SS D14	15	87	1.50%	+661.00	+662.31	129+79	130+66	DIP	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 16	SS D14	SS D15	15	139	14.40%	+664.21	+684.26	130+66	132+05	PVC	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 17	SS D15	SS D16	15	400	1.85%	+686.16	+693.56	132+05	136+05	LINE	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 18	SS D16	SS D17	12	249	0.91%	+694.72	+696.99	136+05	138+55	LINE	SAN-ALIGN-HAGERMAN-TO-DEVITT
P - 19	SS D17	SS D18	12	345	0.96%	+697.09	+700.40	138+55	141+99	LINE	SAN-ALIGN-HAGERMAN-TO-DEVITT
Pipe - (800)	SS D19	SS D22	8	18	2.00%	+662.25	+662.60	300+24	300+07	PVC	SAN-ALIGN-LOGAN
Pipe - (801)	SS D22		8	5	5.17%	+662.92	+663.17	300+07	300+02	PVC	SAN-ALIGN-LOGAN
Pipe - (802)			16	15	2.65%	+651.53	+651.93	300+29	300+44	CASING	SAN-ALIGN-LOGAN
Pipe - (805)	REV-6C-SS10	REV-6C SS19	15	107	0.50%	+604.17	+604.70	100+04	101+11	PH6C	SAN-ALIGN-HAGERMAN-TO-DEVITT
Pipe - (806)	REV-6C SS19		15	32	0.50%	+604.80	+604.96	101+11	101+43	PH6C	SAN-ALIGN-HAGERMAN-TO-DEVITT
Pipe - (808)	REV-6C-SS10		8	4	3.07%	+610.00	+610.14	100+04	100+04	PH6C	SAN-ALIGN-HAGERMAN-TO-DEVITT
Pipe - (809)	REV-6C-SS10		8	5	2.85%	+608.75	+608.89	100+04	100+05	PH6C	SAN-ALIGN-HAGERMAN-TO-DEVITT
Pipe - (810)		REV-6C-SS10	18	4	0.95%	+596.96	+597.00	100+00	100+04	PH6C	SAN-ALIGN-HAGERMAN-TO-DEVITT
Pipe - (811)	SS D2	SS D21	8	312	3.57%	+616.86	+628.00	80+00	83+12	PVC	SAN-ALIGN-539-HAGERMAN
Pipe - (813)	SS D3	SS D23 (FUT)	6	132	3.42%	+622.35	+626.85	90+00	91+32	FUTURE	SAN-ALIGN-6D-SERV-MAIDEN-LN
Pipe - (817)	SS D21		8	8	10.35%	+632.11	+632.93	83+12	83+20	PVC STUB	SAN-ALIGN-539-HAGERMAN
Pipe - (818)	SS D20		12	10	2.33%	+663.79	+664.02	304+17	304+27	PVC STUB	SAN-ALIGN-LOGAN
Pipe - (819)	SS D20		18	14	1.00%	+664.05	+664.19	304+17	304+25	PVC STUB	SAN-ALIGN-LOGAN
Pipe - (820)	SS D19	SS D20	12	393	2.65%	+651.50	+661.90	300+24	304+17	PVC	SAN-ALIGN-LOGAN
Pipe - (821)		SS D20	18	5	12.06%	+663.18	+663.79	304+14	304+17	PVC STUB	SAN-ALIGN-LOGAN
Pipe - (822)	SS D20		12	8	1.00%	+664.90	+664.98	304+17	304+25	PVC STUB	SAN-ALIGN-LOGAN
Pipe - 20	SS D16		8	10	0.59%	+702.24	+702.30	136+05	136+05	PVC STUB	SAN-ALIGN-HAGERMAN-TO-DEVITT
Pipe - 25	SS D16		15	10	0.32%	+695.53	+695.56	136+05	136+05	PVC STUB	SAN-ALIGN-HAGERMAN-TO-DEVITT

NOTES

1. DETAILED QUANTITIES TABULATIONS ARE PROVIDED FOR CONVENIENCE OF CONTRACTOR AND OWNER. REFER TO PLANS FOR SPECIFIC REQUIREMENTS. IF DISCREPANCIES ARE FOUND, PLAN DRAWINGS INFORMATION GOVERNS. DISCREPANCIES SHOULD BE BROUGHT TO ENGINEER TO CONFIRM DESIGN INTENT.
2. SEE SHEET C.10 FOR SANITARY STRUCTURE TABLE.

NO.	REVISIONS	DSGN	CHKD	APVD	DATE
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Stanley Consultants Inc.

225 Iowa Avenue, Muscatine, Iowa 52761-3764
www.stanleyconsultants.com

CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SEWER
PIPE TABLES**

DESIGNED <u>KK HEIM</u>	SCALE: AS NOTED
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	
APPROVED <u>KK HEIM</u>	C.11
DATE <u>MARCH 12, 2025</u>	0

CADD D3-RS

STORM STRUCTURES TABLE

STRUCTURE NAME	PHASE / STRUCTURE	STRUCTURE STATION	ALIGNMENT	RIM ELEVATION	STRUCTURE DEPTH	INVERT IN	INVERT OUT	NORTHING	EASTING
C5455	CASTING	STA	6D-ALIGN-ST-HAGERMAN	RIM ELEV: +642.49	1.00'			528391.47	2308832.23
D1	502-5'	STA 126+92	6D-ALIGN-ST-EISENHOWER-DEVITT	RIM ELEV: +710.12	10.43'	INV IN: +699.79	INV OUT: +699.69	528611.26	2306959.77
D2	507	STA 510+36	6D-ALIGN-INLETS-DEV-1	RIM ELEV: +710.89	4.89'	INV IN: +708.53	INV OUT: +706.00	528620.07	2306929.17
D3	507	STA 132+12	6D-ALIGN-ST-EISENHOWER-DEVITT	RIM ELEV: +708.11	4.87'	INV IN: +703.34	INV OUT: +703.24	528091.60	2306970.00
D4	507	STA 132+54	6D-ALIGN-ST-EISENHOWER-DEVITT	RIM ELEV: +708.02	4.12'		INV OUT: +703.90	528057.46	2306945.13
D5	512-24", 604-Type 5	STA 510+44	6D-ALIGN-INLETS-DEV-1	RIM ELEV: +711.11	2.30'		INV OUT: +708.81	528620.12	2306921.13
E3	502-5'	STA 122+46	6D-ALIGN-ST-EISENHOWER-DEVITT	RIM ELEV: +693.93	7.06'	INV IN: +686.97 INV IN: +688.39	INV OUT: +686.87	528637.55	2307379.02
E4	502-5'	STA 512+46	6D-ALIGN-INLETS-EIS-2	RIM ELEV: +695.45	4.05'		INV OUT: +691.40	528665.52	2307342.19
E5	502-5'	STA 125+09	6D-ALIGN-ST-EISENHOWER-DEVITT	RIM ELEV: +705.06	7.26'	INV IN: +697.90 INV IN: +700.93	INV OUT: +697.80	528637.44	2307116.13
E6	501	STA 513+28	6D-ALIGN-INLETS-EIS-3	RIM ELEV: +705.24	3.74'		INV OUT: +701.50	528665.44	2307111.91
FES 1	FES	STA 142+40	6D-ALIGN-ST-539-HAGERMAN	RIM ELEV: +624.90			INV OUT: +622.57	529185.50	2309282.52
H1	509	STA 500+06	6D-ALIGN-INLETS-HAG-1	RIM ELEV: +621.16	4.11'		INV OUT: +617.05	529253.87	2309676.46
H2	509	STA 500+36	6D-ALIGN-INLETS-HAG-1	RIM ELEV: +621.11	3.39'		INV OUT: +617.72	529235.71	2309700.83
H3	509	STA 505+07	6D-ALIGN-INLETS-HAG-2	RIM ELEV: +631.11	5.02'		INV OUT: +626.09	528893.33	2309304.77
H4	509	STA 505+37	6D-ALIGN-INLETS-HAG-2	RIM ELEV: +630.96	5.87'	INV IN: +625.19	INV OUT: +625.09	528874.94	2309328.96
H5	509	STA 505+75	6D-ALIGN-INLETS-HAG-2	RIM ELEV: +630.04	4.48'	INV IN: +625.66	INV OUT: +625.56	528900.89	2309355.73
L1	509	STA 503+43	6D-ALIGN-INLETS-LOGAN-1	RIM ELEV: +668.38	4.08'		INV OUT: +664.30	528329.44	2308127.27
L2	509	STA 503+04	6D-ALIGN-INLETS-LOGAN-1	RIM ELEV: +668.60	4.60'		INV OUT: +664.00	528325.71	2308091.73
L3	507	STA 514+39	6D-ALIGN-INLETS-LOGAN-3	RIM ELEV: +673.52	3.41'		INV OUT: +670.11	528010.79	2308132.68
L4	507	STA 514+02	6D-ALIGN-INLETS-LOGAN-3	RIM ELEV: +673.87	6.47'		INV OUT: +667.40	528014.27	2308096.63
ST 1	401-8' BASE	STA 254+52	6D-ALIGN-ST-HAGERMAN	RIM ELEV: +615.34	4.84'	INV IN: +610.81	INV OUT: +610.50	529245.23	2309688.75
ST 1A	401-4' RISER	STA 254+52	6D-ALIGN-ST-HAGERMAN	RIM ELEV: +620.82	5.16'	INV IN: +616.30 INV IN: +616.95		529245.23	2309688.75
ST 2	401-8	STA 256+37	6D-ALIGN-ST-HAGERMAN	RIM ELEV: +624.32	8.65'	INV IN: +615.66 INV IN: +615.75	INV OUT: +615.66	529116.86	2309555.23
ST 3	401-8	STA 257+65	6D-ALIGN-ST-HAGERMAN	RIM ELEV: +626.75	7.75'	INV IN: +618.99 INV IN: +620.46	INV OUT: +618.99	529028.70	2309463.53
ST 4	401-8	STA 259+69	6D-ALIGN-ST-HAGERMAN	RIM ELEV: +630.66	6.30'	INV IN: +624.46 INV IN: +625.64 INV IN: +624.91	INV OUT: +624.36	528886.77	2309315.91
ST 5	406	STA 263+95	6D-ALIGN-ST-HAGERMAN	RIM ELEV: +641.00	7.15'	INV IN: +634.34 INV IN: +633.85 INV IN: +634.84	INV OUT: +633.85	528586.80	2309014.28
ST 6	401-3'D RISER	STA 100+15	6D-ALIGN-ST-LOGAN-UWBS-TO-NEWELL	RIM ELEV: +668.58	9.58'	INV IN: +660.96		528361.33	2308117.11
ST 7	401	STA 100+43	6D-ALIGN-ST-LOGAN-UWBS-TO-NEWELL	RIM ELEV: +668.30	6.68'	INV IN: +661.72 INV IN: +663.44 INV IN: +664.10	INV OUT: +661.62	528335.18	2308107.66
ST 8	401	STA 103+61	6D-ALIGN-ST-LOGAN-UWBS-TO-NEWELL	RIM ELEV: +673.52	7.23'	INV IN: +666.39 INV IN: +666.90 INV IN: +669.89	INV OUT: +666.29	528016.48	2308111.98
ST 9	401	STA 126+65	6D-ALIGN-ST-EISENHOWER-DEVITT	RIM ELEV: +710.00	10.55'	INV IN: +699.56 INV IN: +705.34	INV OUT: +699.46	528638.01	2306959.82
ST 10	401	STA 129+11	6D-ALIGN-ST-EISENHOWER-DEVITT	RIM ELEV: +710.98	10.09'	INV IN: +700.99	INV OUT: +700.89	528391.63	2306959.82
ST 11	401	STA 121+22	6D-ALIGN-ST-EISENHOWER-DEVITT	RIM ELEV: +680.05	10.12'	INV IN: +670.03	INV OUT: +669.93	528626.31	2307501.23
ST 12	401	STA 141+49	6D-ALIGN-ST-539-HAGERMAN	RIM ELEV: +630.50	8.72'	INV IN: +621.88	INV OUT: +621.78	529133.21	2309357.49
ST E1	401-GRATED-LID	STA 121+71	6D-ALIGN-ST-EISENHOWER-DEVITT	RIM ELEV: +691.48	11.25'	INV IN: +680.32	INV OUT: +680.22	528638.38	2307454.07

NOTES

1. DETAILED QUANTITY TABULATIONS ARE PROVIDED FOR CONVENIENCE OF CONTRACTOR AND CITY. REFER TO PLANS FOR SPECIFIC REQUIREMENTS. IF DISCREPANCIES ARE FOUND, PLAN DRAWINGS INFORMATION GOVERNS. DISCREPANCIES SHOULD BE BROUGHT TO DESIGN ENGINEER TO CONFIRM DESIGN INTENT.
2. PROPOSED INLET RIM ELEVATIONS ARE TAKEN FROM PROPOSED OR EXISTING SURFACE IN THE MIDDLE OF THE STRUCTURE. CENTER OF STRUCTURE PLACEMENT FOR SW-501 AND SW-502 STYLE INLETS IS 1' IN FRONT OF BACK OF CURB. FOR SW-507 AND 509 STYLE INLETS CENTER OF STRUCTURE IS 1.5' BEHIND BACK OF CURB. RIM ELEVATIONS SHALL BE ADJUSTED TO MATCH ELEVATIONS OF AS PLACED PAVEMENT WITH ADJUSTMENT RINGS. SEE DETAIL ON SHEET A.05 FOR INNER TUBE TECHNIQUE TO INSTALL CASTINGS FLUSH WITH PAVEMENT.

NO.	REVISIONS	DSGN	CHKD	APVD	DATE
 Stanley Consultants Inc. 225 Iowa Avenue, Muscatine, Iowa 52761-3764 www.stanleyconsultants.com					
CITY OF MUSCATINE - PHASE 6D WEST HILL AREA SANITARY AND STORM SEWER SEPARATION MUSCATINE, IOWA					
STORM SEWER STRUCTURE TABLE					
DESIGNED	KK HEIM		SCALE: AS NOTED		
DRAWN	GM REEVES		NO. 17660.60.30		
CHECKED	ER SCHALLERT		REV.		
APPROVED	JM BRADY		C.12		
APPROVED	KK HEIM		0		
DATE	MARCH 12, 2025				

STORM SEWER PIPE TABLE									
PIPE ID	START MANHOLE	END MANHOLE	PIPE DIAMETER (INCHES)	PIPE LENGTH (FT)	PIPE SLOPE	START INVERT	END INVERT	NOTE	ALIGNMENT
P-106	ST 2		24	14	1.36%	+615.75	+615.94	RCP	6D-ALIGN-ST-HAGERMAN
P-107	ST 3	ST 12	24	149	0.88%	+620.46	+621.78	RCP	6D-ALIGN-ST-539-HAGERMAN
Pipe - (1)	ST 6	ST 7	30	28	2.38%	+660.96	+661.62	RCP	6D-ALIGN-ST-LOGAN-UWBS-TO-NEWELL
Pipe - (2)	ST 7	ST 8	30	319	1.43%	+661.72	+666.29	RCP	6D-ALIGN-ST-LOGAN-UWBS-TO-NEWELL
Pipe - (4)	ST 8		30	36	2.60%	+666.39	+667.34	RCP	6D-ALIGN-ST-LOGAN-UWBS-TO-NEWELL
Pipe - (11)		ST 11	18	62	5.00%	+666.82	+669.93	RCP	6D-ALIGN-ST-EISENHOWER-DEVITT
Pipe - (12)	ST 11	ST E1	18	49	20.94%	+670.03	+680.22	RCP	6D-ALIGN-ST-EISENHOWER-DEVITT
Pipe - (13)	ST E1	E3	18	75	8.72%	+680.32	+686.87	RCP	6D-ALIGN-ST-EISENHOWER-DEVITT
Pipe - (14)	E3	E5	18	263	4.12%	+686.97	+697.80	RCP	6D-ALIGN-ST-EISENHOWER-DEVITT
Pipe - (15)	E5	ST 9	18	156	0.99%	+697.90	+699.46	RCP	6D-ALIGN-ST-EISENHOWER-DEVITT
Pipe - (16)	ST 9	D1	18	27	0.49%	+699.56	+699.69	RCP	6D-ALIGN-ST-EISENHOWER-DEVITT
Pipe - (17)	D1	ST 10	18	220	0.50%	+699.79	+700.89	RCP	6D-ALIGN-ST-EISENHOWER-DEVITT
Pipe - (18)	ST 10	D3	18	300	0.75%	+700.99	+703.24	RCP	6D-ALIGN-ST-EISENHOWER-DEVITT
Pipe - (19)	D3	D4	15	42	1.33%	+703.34	+703.90	RCP	6D-ALIGN-ST-EISENHOWER-DEVITT
Pipe - (24)	ST 5		15	53	4.94%	+634.84	+637.49	RCP	6D-ALIGN-INLETS-HAG-3
Pipe - (25)	ST 5		24	13	9.49%	+634.34	+635.53	RCP	6D-ALIGN-INLETS-HAG-3
Pipe - (26)	H5		21	9	9.84%	+625.66	+626.54	RCP	6D-ALIGN-INLETS-HAG-2
Pipe - (27)	H4	H5	15	37	1.00%	+625.19	+625.56	RCP	6D-ALIGN-INLETS-HAG-2
Pipe - (28)	ST 4	H3	15	13	3.50%	+625.64	+626.09	RCP	6D-ALIGN-INLETS-HAG-2
Pipe - (29)	ST 4	H4	15	18	1.00%	+624.91	+625.09	RCP	6D-ALIGN-INLETS-HAG-2
Pipe - (30)	ST 1A	H1	15	15	5.00%	+616.30	+617.05	RCP	6D-ALIGN-INLETS-HAG-1
Pipe - (31)	ST 1A	H2	15	15	5.00%	+616.95	+617.72	RCP	6D-ALIGN-INLETS-HAG-1
Pipe - (32)	ST 7	L1	15	20	1.00%	+664.10	+664.30	RCP	6D-ALIGN-INLETS-LOGAN-1
Pipe - (33)	ST 7	L2	15	19	3.00%	+663.44	+664.00	RCP	6D-ALIGN-INLETS-LOGAN-1
Pipe - (35)	ST 9	D2	15	36	1.87%	+705.34	+706.00	RCP	6D-ALIGN-INLETS-DEV-1
Pipe - (36)	D2	D5	12	8	3.50%	+708.53	+708.81	RCP	6D-ALIGN-INLETS-DEV-1
Pipe - (37)		E2	15	24	2.00%	+687.39	+687.87	RCP	6D-ALIGN-INLETS-EIS-1
Pipe - (38)	E3	E4	15	46	6.50%	+688.39	+691.40	RCP	6D-ALIGN-INLETS-EIS-2
Pipe - (39)	E5	E6	15	28	2.00%	+700.93	+701.50	RCP	6D-ALIGN-INLETS-EIS-3
Pipe - (40)	ST 8	L4	15	16	3.20%	+666.90	+667.40	RCP	6D-ALIGN-INLETS-LOGAN-3
Pipe - (41)	ST 8	L3	15	21	1.00%	+669.89	+670.11	RCP	6D-ALIGN-INLETS-LOGAN-3

STORM SEWER PIPE TABLE									
PIPE ID	START MANHOLE	END MANHOLE	PIPE SIZE (FT)	PIPE LENGTH (FT)	PIPE SLOPE	START INVERT	END INVERT	NOTE	ALIGNMENT
P-100		ST 1	3.2 X 5.0	278	2.57%	+603.34	+610.50	RCP ELL	6D-ALIGN-ST-HAGERMAN
P-101	ST 1	ST 2	3.2 X 5.0	185	2.62%	+610.81	+615.66	RCP ELL	6D-ALIGN-ST-HAGERMAN
P-102	ST 2	ST 3	3.2 X 5.0	127	2.62%	+615.66	+618.99	RCP ELL	6D-ALIGN-ST-HAGERMAN
P-103	ST 3	ST 4	3.2 X 5.0	205	2.62%	+618.99	+624.36	RCP ELL	6D-ALIGN-ST-HAGERMAN
P-104	ST 4	ST 5	3.2 X 5.0	425	2.21%	+624.46	+633.85	RCP ELL	6D-ALIGN-ST-HAGERMAN
P-105	ST 5		4.0 X 4.0	7	1.65%	+633.85	+633.97	STUB CONN TO EXST	6D-ALIGN-ST-HAGERMAN

NOTES

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NO.	REVISIONS	DSGN	CHKD	APVD	DATE
 Stanley Consultants Inc. 225 Iowa Avenue, Muscatine, Iowa 52761-3764 www.stanleyconsultants.com					
CITY OF MUSCATINE - PHASE 6D WEST HILL AREA SANITARY AND STORM SEWER SEPARATION MUSCATINE, IOWA					
STORM SEWER PIPE TABLES					
DESIGNED	KK HEIM	SCALE: AS NOTED			
DRAWN	GM REEVES	NO. 17660.60.30		REV.	
CHECKED	ER SCHALLERT	C.13		0	
APPROVED	JM BRADY				
APPROVED	KK HEIM				
DATE	MARCH 12, 2025				

CAADD D3-RS

SANITARY SERVICE LINES					
ADDRESS NUMBER	LENGTH OF SERVICE, FT NOTE 1	LENGT H AFTER 10' FT NOTE 4	LINING REINSTATEMEN T	SERVICE CONNECTIO N	SERVICE OUTSIDE OF ROW NOTE 2
900 EISENHOWER ST		5.0		1	
903 EISENHOWER ST			1		
904 EISENHOWER ST			1		
908 EISENHOWER ST			1		
909 EISENHOWER ST			1		
913 EISENHOWER ST			1		
916 EISENHOWER ST			1		
920 EISENHOWER ST			1		
921 EISENHOWER ST			1		
924 EISENHOWER ST			1		
927 EISENHOWER ST			1		
928 EISENHOWER ST			1		
929 EISENHOWER ST			1		
930 EISENHOWER ST	15.0	5.0	1	1	
931 EISENHOWER ST			1		
1450 DEVITT AVE	43.0	33.0	1	1	
1446 DEVITT AVE	43.0	33.0	1	1	
1438 DEVITT AVE			1		
1437 DEVITT AVE			1		
1434 DEVITT AVE			1		
1433 DEVITT AVE			1		
1431 DEVITT AVE			1		
1430 DEVITT AVE			1		
1427 DEVITT AVE			1		
1426 DEVITT AVE			1		
1423 DEVITT AVE			1		
1422 DEVITT AVE			1		
1421 DEVITT AVE			1		
1419 DEVITT AVE			1		
1418 DEVITT AVE			1		
1414 DEVITT AVE			1		
1410 DEVITT AVE	13.0	3.0		1	9
1230 LOGAN ST	0.0	0.0		1	
1224 LOGAN ST	14.6	4.6		1	
1223 LOGAN ST	28.0	18.0		1	64
1220 LOGAN ST	14.0	4.0		1	
1219 LOGAN ST	29.0	19.0		1	
1216 LOGAN ST	13.6	3.6		1	
1215 LOGAN ST	29.0	19.0		1	
1211 LOGAN ST	29.0	19.0		1	31
1210 LOGAN ST	13.5	3.5		1	
1207 LOGAN ST	29.0	19.0		1	40
1205 LOGAN ST	29.0	19.0		1	34
1204 LOGAN ST	13.3	3.3		1	25
941 NEWELL AVE	11.2	1.2		1	43
TOTAL THESE ADDRESSES	212.2		30	18	246.0

SANITARY SERVICE LINES, NOTE 3			
ADDRESS NUMBER	LENGTH OF SERVICE , FT NOTE 1	LENGTH AFTER 10' FT NOTE 4	SERVICE CONNECTIO N
502 HAGERMAN DR	35.5	25.5	1
506 HAGERMAN DR	25.9	15.9	1
510 HAGERMAN DR	22.6	12.6	1
514 HAGERMAN DR	25.7	15.7	1
515 HAGERMAN DR	11.6	1.6	1
518 HAGERMAN DR	26.6	16.6	1
519 HAGERMAN DR	11.0	1.0	1
522 HAGERMAN DR	26.5	16.5	1
523 HAGERMAN DR	10.4	0.4	1
526 HAGERMAN DR	27.4	17.4	1
527 HAGERMAN DR	10.0	0.0	1
530 HAGERMAN DR	27.8	17.8	1
531 HAGERMAN DR	9.5	0.0	1
535 HAGERMAN DR	8.7	0.0	1
534 HAGERMAN DR	28.6	18.6	1
538 HAGERMAN DR	28.4	18.4	1
539 HAGERMAN DR	0.0	0.0	0
542 HAGERMAN DR	29.2	19.2	1
543 HAGERMAN DR	8.2	0.0	1
546 HAGERMAN DR	28.9	18.9	1
547 HAGERMAN DR	8.3	0.0	1
601 HAGERMAN DR	8.8	0.0	1
602 HAGERMAN DR	28.2	18.2	1
605 HAGERMAN DR	8.8	0.0	1
606 HAGERMAN DR	28.5	18.5	1
609 HAGERMAN DR	9.2	0.0	1
610 HAGERMAN DR	28.0	18.0	1
614 HAGERMAN DR	28.0	18.0	1
618 HAGERMAN DR	33.0	23.0	1
TOTAL THESE ADDRESSES	311.8	211.8	28

- NOTE 1 LENGTH OF SANITARY SERVICE LISTED IS A HORIZONTAL ESTIMATE FROM NEW SEWER MAIN ACROSS PAVEMENT TO A POINT 5' BEHIND BACK OF CURB. SEE NOTE 18 ON MSA.00 FOR SANITARY SERVICE LINE REPLACEMENT APPROACH. REPLACE EXISTING SERVICE UNDER ROAD WHEN SERVICE LINE IS IN POOR CONDITION OR WHEN MATERIAL IS NOT PVC OR DIP. CONNECT NEW PIPE TO EXISTING PIPE IN SOUND CONDITION.
- NOTE 2 1223 LOGAN, 1211 LOGAN, 1207 LOGAN, 1205 LOGAN MAY REQUIRE INTERNAL HOME REPLUMBING. PIPE LENGTH IS INCLUDED IN THIS TABLE FOR LENGTH ESTIMATE OUTSIDE OF ROW IN YARD.
- NOTE 3 TRENCHLESS INSTALLATION OF SERVICES UNDER UWBS ON HAGERMAN DRIVE MAY BE UTILIZED ON SOUTH SIDE EVEN NUMBER SERVICES BETWEEN 502 AND 618 HAGERMAN DR.
- NOTE 4 SEE ESTIMATE REFERENCE NOTES FOR DESCRIPTION OF PAYMENT OF SANITARY SEWER SERVICE CONNECTIONS TO MAIN WHICH INCLUDES CONNECTION TO MAIN AND UP TO 10' OF SERVICE PIPING TO CONNECT MAIN TO SERVICE

NOTES

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NO.	REVISIONS	DSGN	CHKD	APVD	DATE
 Stanley Consultants Inc. 225 Iowa Avenue, Muscatine, Iowa 52761-3764 www.stanleyconsultants.com					
CITY OF MUSCATINE - PHASE 6D WEST HILL AREA SANITARY AND STORM SEWER SEPARATION MUSCATINE, IOWA					
SANITARY SERVICE LINES TABLE					
DESIGNED	KK HEIM	SCALE: AS NOTED			
DRAWN	GM REEVES	NO. 17660.60.30		REV.	
CHECKED	ER SCHALLERT	C.14		0	
APPROVED	JM BRADY				
APPROVED	KK HEIM				
DATE	MARCH 12, 2025				

ESTIMATED LANDSCAPING RESTORATION

NOTES

ADDRESS	DESCRIPTION	ESTIMATED QUANTITY	UNIT
518 HAGERMAN DR	PLANT NEXT TO MAILBOX ON EDGE OF DRIVEWAY	1	EA
614 HAGERMAN DR	SMALL PLANTS AROUND MAILBOX	6	EA
547 HAGERMAN DR	PLANT NEXT TO MAILBOX ON EDGE OF SIDEWALK	1	EA
535 HAGERMAN DR	PLANTS AROUND MAILBOX	5	EA
515 HAGERMAN DR	PLANT NEXT TO MAILBOX	1	EA
909 EISENHOWER ST	LARGE BUSH NEXT TO DRIVEWAY	1	EA
1419 DEVITT AVE	PLANTS NEAR BACK OF CURB	2	EA
1421 DEVITT AVE	LARGE BUSH NEXT TO DRIVEWAY	1	EA
	TOTAL PLANTS	18	EA
523 HAGERMAN DR	MULCH AND EDGERS AROUND MAILBOX	2	SF
534 HAGERMAN DR	PAVERS AROUND MAILBOX AND RR TIES ALONG DRIVEWAY	13	SF
546 HAGERMAN DR	PAVERS AROUND MAILBOX	6	SF
602 HAGERMAN DR	PAVERS AND ROCK AROUND MAILBOX	11	SF
606 HAGERMAN DR	BLOCK RETAINING WALL ALONG DRIVEWAY	40	SF
610 HAGERMAN DR	RIVER ROCK NEXT TO STREET AND RR TIES ALONG DRIVEWAY	26	SF
614 HAGERMAN DR	WOOD PAVER AROUND MAILBOX	13	SF
547 HAGERMAN DR	ROCK PAVERS AROUND MAILBOX AND WOODCHIPS	10	SF
543 HAGERMAN DR	PAVERS AROUND MAILBOX	6	SF
535 HAGERMAN DR	CONCRETE RETAINING WALL ALONG DRIVEWAY	12	SF
522 HAGERMAN DR	PAVERS AROUND MAILBOX AND RIVER ROCK	9	SF
1211 LOGAN ST	WOODCHIPS SURROUNDING MAILBOX	27	SF
1204 LOGAN ST	RR TIES AND RIVER ROCK NEXT TO SOUTH DRIVEWAY	28	SF
1204 LOGAN ST	RR TIE RETAINING WALL AND RIVER ROCK NEXT TO NORTH DRIVEWAY	21	SF
1210 LOGAN ST	RR TIES AND RIVER ROCK NEXT TO DRIVEWAY	30	SF
903 EISENHOWER ST	GRAVEL NEXT TO DRIVEWAY	118	SF
920 EISENHOWER ST	STONE RETAINING WALL NEXT TO DRIVEWAY	22	SF
1421 DEVITT AVE	MULCH NEXT TO DRIVEWAY	14	SF
	TOTAL LANDSCAPING	406	SF
535 HAGERMAN DR	LARGE ROCKS NEXT TO MAILBOX	4	EA
527 HAGERMAN DR	LARGE ROCK NEXT TO MAILBOX	1	EA
1223 LOGAN ST	LARGE ROCK	1	EA
909 EISENHOWER ST	LARGE ROCK	1	EA
908 EISENHOWER ST	SMALL ROCKS ALONG CURB	2	EA
	TOTAL LANDSCAPING ROCKS	9	EA

NO.	REVISIONS	DSGN	CHKD	APVD	DATE
 <p>Stanley Consultants Inc. 225 Iowa Avenue, Muscatine, Iowa 52761-3764 www.stanleyconsultants.com</p>					
CITY OF MUSCATINE - PHASE 6D WEST HILL AREA SANITARY AND STORM SEWER SEPARATION MUSCATINE, IOWA					
LANDSCAPING TABLES					
DESIGNED	PM JOHNSON	SCALE: AS NOTED			
DRAWN	GM REEVES	NO. 17660.60.30		REV.	
CHECKED	ER SCHALLERT				
APPROVED	PM JOHNSON				
DATE	MARCH 12, 2025	C.19		0	

CADDD 03-RS

STORMWATER POLLUTION PREVENTION PLAN FOR PHASE 6D:

ALL CONTRACTORS/SUBCONTRACTORS SHALL CONDUCT THEIR OPERATIONS IN A MANNER THAT MINIMIZES EROSION AND PREVENTS SEDIMENTS FROM LEAVING THE CITY'S RIGHT-OF-WAY AND/OR PROJECT SITE. THIS STORMWATER POLLUTION PREVENTION PLAN (SWPPP) ILLUSTRATES GENERAL MEASURES TO BE TAKEN FOR COMPLIANCE WITH THE NPDES PERMIT. THE CONTRACTOR MUST MAINTAIN THIS SWPPP AND DOCUMENTATION. CONTRACTOR MAY SUBMIT ALTERNATIVES TO THIS SWPPP FOR REVIEW BY THE CITY AND DESIGN ENGINEER.

THIS SWPPP INCLUDES THE FOLLOWING DOCUMENTS, SHEET CE.01 (SWPPP), DETAILS INCLUDED ON CE SHEETS IN THE DRAWING SET, SUDAS SPECIFICATIONS AND REQUIREMENTS AND DETAILS REFERENCED IN THE ESTIMATE REFERENCE NOTES AND CONTRACT DOCUMENTS, SWPPP SIGNED COMPLIANCE FORMS AS PROVIDED IN THE PROJECT MANUAL INCLUDING SWPPP OWNER CERTIFICATION, SWPPP CONTRACTOR AND SUBCONTRACTOR CERTIFICATION, SWPPP TRAINING LOG, STORMWATER CONSTRUCTION SITE INSPECTION REPORT, SWPPP AMENDMENT LOG, AND EROSION CONTROL SITE PLANS ON RR SERIES SHEETS. INSPECTION REPORTS, SIGNED CERTIFICATION STATEMENTS FROM THE OWNER AND CONTRACTOR AND ALL LISTED DOCUMENTATION BECOME PART OF THE SWPPP.

1. SITE DESCRIPTION:
 - A. THIS SWPPP COVERS THE 6D CONSTRUCTION OF SANITARY SEWER AND STORM SEWER SYSTEMS, DRINKING WATER SYSTEMS, REMOVAL AND REPLACEMENT OF PAVEMENT, SURFACE RESTORATION, AND OTHER RELATED WORK IN THE PHASE
 - B. THIS SWPPP COVERS APPROXIMATELY 6.2 ACRES WITH AN ESTIMATED 6.2 ACRES BEING DISTURBED ALONG STREET ROW AND EASEMENTS TO INSTALL SEWERS.
 - C. THE SWPPP IS LOCATED IN AN AREA OF THE FAYETTE AND MISSISSIPPI RIVER BOTTOM SOIL ASSOCIATION. THE ESTIMATED AVERAGE SOIL CONSERVATION SERVICE RUNOFF CURVE NUMBER FOR THIS SWPPP AFTER COMPLETION SHALL BE 82.
 - D. A SITE MAP IS SHOWN ON SHEET RR.0. EROSION CONTROL PLANS ARE SHOWN ON THE RR SERIES SHEETS.
 - E. A COPY OF THIS PLAN SHALL BE ON FILE AT THE CITY ENGINEER'S OFFICE AND AT THE CONSTRUCTION SITE. RUNOFF FROM THIS WORK WILL FLOW INTO THE MUSCATINE STORM SEWER SYSTEM WHICH FLOWS INTO THE PAPOOSE CREEK SEWER AND EVENTUALLY TO THE MISSISSIPPI RIVER NEAR SYCAMORE STREET.
 - F. POTENTIAL SOURCES OF POLLUTION: SOURCES OF POLLUTION GENERATED AS A RESULT OF THIS WORK RELATE TO SILTS AND SEDIMENT THAT MAY BE TRANSPORTED AS A RESULT OF A STORM EVENT.
2. CONTROLS:
 - A. AT LOCATIONS WHERE RUNOFF CAN MOVE OFFSITE, SILT FENCE AND/OR FILTER SOCKS AND/OR OTHER EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PLACED. INSTALL PRIOR TO BEGINNING PAVEMENT REMOVAL, GRADING, EXCAVATION OR CLEARING AND GRUBBING OPERATIONS. VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION SHALL BE PRESERVED. AS AREAS REACH THEIR FINAL GRADE, ADDITIONAL SILT FENCES, INTERCEPTING DITCHES, LETDOWNS, AND EARTH DIKES AND/OR OTHER EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AS SPECIFIED IN THE PLANS AND/OR AS REQUIRED BY THE PROJECT ENGINEER. TEMPORARY STABILIZING SEEDING SHALL BE COMPLETED AS THE DISTURBED AREAS ARE CONSTRUCTED. INITIALIZE SOIL STABILIZATION MEASURES IMMEDIATELY WHEN SOIL DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS.
 - B. STABILIZED CONSTRUCTION EXITS WILL BE INSTALLED AT EACH ACCESS LOCATION BEFORE EQUIPMENT LEAVES ROADWAYS AND CROSSES INTO VEGETATED OR GRASSED AREAS. EXITS SHALL BE MAINTAINED OVER THE PROJECT DURATION.
 - C. STOCKPILED MATERIALS SUCH AS AGGREGATES USED FOR PIPE BEDDING, PIPE BACKFILL, ROAD SUBBASE, AND TOPSOIL FROM ONSITE OR OFFSITE SHALL BE CONTAINED AND SEDIMENT FROM STOCKPILE PROTECTED WITH EROSION CONTROLS TO PREVENT MIGRATION OF MATERIAL INTO DRAINAGE PATHS.
 - D. SOIL DISTURBED THROUGHOUT THE CONSTRUCTION SITE SHALL BE CONTAINED AND PROTECTED FROM WASHING INTO DRAINAGE PATHWAYS.
 - E. TOPSOIL PLACED FOR RESTORATION SHALL BE PROTECTED FROM EROSION UNTIL TEMPORARY AND/OR PERMANENT SEEDING IS ESTABLISHED.
 - F. AS THE WORK PROGRESSES, ADDITIONAL EROSION CONTROL ITEMS MAY BE REQUIRED AS DETERMINED BY THE OWNER OR ENGINEER AFTER FIELD INVESTIGATION. THE CONTRACTOR SHALL COMPLETE THE CONSTRUCTION WITH THE ESTABLISHMENT OF PERMANENT PERENNIAL VEGETATION IN ALL DISTURBED EARTHEN AREAS.
 - G. EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO THE IOWA STATEWIDE URBAN DESIGN AND SPECIFICATIONS (SUDAS) REQUIREMENTS AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS. IN CASE OF CONFLICTS BETWEEN REQUIREMENTS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
 - H. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF EROSION CONTROL MATERIALS/METHODS ONCE FINAL STABILIZATION IS ACHIEVED.
3. OTHER CONTROLS:
 - A. CONTRACTOR DISPOSAL OF UNUSED CONSTRUCTION MATERIALS AND CONSTRUCTION MATERIAL WASTES SHALL COMPLY WITH APPLICABLE STATE AND LOCAL WASTE DISPOSAL, SANITARY SEWER, OR SEPTIC SYSTEM REGULATIONS. IN THE EVENT OF A CONFLICT WITH OTHER GOVERNMENTAL LAWS, RULES AND REGULATIONS, THE MORE RESTRICTIVE LAWS, RULES OR REGULATIONS SHALL APPLY.
 - B. STREETS ADJACENT TO THE CONSTRUCTION SITE SHALL BE INSPECTED DAILY AND CLEANED AS NECESSARY TO REMOVE EXCESS MUD, DIRT, OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE SITE SHALL BE PROPERLY COVERED WITH A TARPULIN. CONTRACTOR SHALL PROVIDE AND USE A VEHICLE WASH-RACK AT EXIT LOCATIONS IF NECESSARY TO DECREASE SEDIMENT TRANSPORT OFF-SITE.
 - C. APPROVED STATE OR LOCAL PLANS: DURING THE COURSE OF THIS CONSTRUCTION, IT IS POSSIBLE THAT SITUATIONS WILL ARISE WHERE UNKNOWN MATERIALS WILL BE ENCOUNTERED. WHEN SUCH SITUATIONS ARE ENCOUNTERED, THEY SHALL BE HANDLED ACCORDING TO ALL FEDERAL, STATE, AND LOCAL REGULATIONS IN EFFECT AT THE TIME.
 - D. THE LOCATIONS OF ENTRANCES, TOILET FACILITIES, AND OTHER CONTROLS SHALL BE DETERMINED AT THE PRECONSTRUCTION CONFERENCE WHEN REVIEWING THE CONSTRUCTION PLAN.
 - E. CONTRACTOR SHALL PROVIDE PARKING AREAS FOR CONSTRUCTION PERSONNEL. THESE MAY BE ON-SITE ON TEMPORARY GRAVEL OR PERMANENT SURFACES OR ALONG THE ROADWAYS IF PARKING IS ALLOWED BY THE OWNER.
 - F. IF THE CONTRACTOR USES ON-SITE CONSTRUCTION TRAILERS, THEY SHALL BE PLACED ON-SITE UPON TEMPORARY GRAVEL OR PERMANENT SURFACES.

STORMWATER POLLUTION PREVENTION PLAN NOTES (CONTINUED):

4. INSPECTION AND MAINTENANCE: CONTRACTOR IS REQUIRED TO MAINTAIN ALL TEMPORARY EROSION CONTROL MEASURES IN PROPER WORKING ORDER, INCLUDING CLEANING, REPAIRING, OR REPLACING THEM THROUGHOUT THE CONTRACT PERIOD. THE FOLLOWING INSPECTION AND MAINTENANCE PRACTICES SHALL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS AND STABILIZATION MEASURES:
 - A. ALL CONTROL MEASURES SHALL BE INSPECTED JOINTLY BY THE CONTRACTOR AND THE CONTRACTING AUTHORITY AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT OF 0.5 INCHES OR GREATER.
 - B. ALL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS OF THE INSPECTION.
 - C. ANY BUILT-UP SEDIMENT SHALL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-HALF OF THE HEIGHT OF THE FENCE.
 - D. SILT FENCES SHALL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, UNDERCUTTING, ETC., TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE SECURELY FASTENED IN THE GROUND.
 - E. EROSION CONTROL DEVICES SHALL BE CLEANED WHEN LOSS OF 50% CAPACITY OCCURS.
 - F. TEMPORARY AND PERMANENT SEEDING AND PLANTING SHALL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
 - G. AN INSPECTION REPORT FORM (FOUND IN PROJECT MANUAL) SHALL BE COMPLETED AFTER EACH INSPECTION AND RECORDED ON THE INSPECTION FORM. THESE REPORTS SHALL BE RETAINED AS PART OF THE SWPPP. THE REPORT SHALL CONTAIN:
 - 1) SCOPE OF THE INSPECTION.
 - 2) NAME OF THE PERSON MAKING THE INSPECTION AND DATE.
 - 3) MAJOR OBSERVATIONS RELATING TO THE SWPPP.
 - 4) CORRECTIVE ACTION NEEDED.
 - 5) CERTIFICATION AND SIGNATURE.
 - H. CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING A "QUALIFIED" INSPECTOR TO CONDUCT THE INSPECTIONS. "QUALIFIED" IS DEFINED AS A PERSON KNOWN/DEGREEABLE IN THE PRINCIPLES AND PRACTICES OF EROSION AND SEDIMENT CONTROLS. THEY SHALL POSSESS THE SKILLS NECESSARY TO ASSESS CONDITIONS AT THE CONSTRUCTION SITE THAT COULD IMPACT STORMWATER QUALITY. THEY SHALL ASSESS THE EFFECTIVENESS OF ANY SEDIMENT AND EROSION CONTROL MEASURES SELECTED.
 - I. CONTRACTOR SHALL UPDATE/CHANGE THE SWPPP AS NEEDED AND MAINTAIN A RECORD OF SWPPP AMENDMENTS. AMENDMENT LOG FORM MAY BE FOUND IN THE PROJECT MANUAL.
 - J. CONTRACTOR SHALL MAINTAIN RECORDS OF CONSTRUCTION ACTIVITIES, INCLUDING:
 - 1) DATES OF MAJOR GRADING ACTIVITIES.
 - 2) DATES WHEN ACTIVITIES CEASE IN AN AREA.
 - 3) DATES WHEN AREAS ARE STABILIZED.
 - 4) RECORDS SHALL BE KEPT FOR THREE (3) YEARS FROM THE DATE OF FINAL STABILIZATION
5. MATERIALS MANAGEMENT PLAN: THIS SWPPP ALSO PROVIDES FOR OTHER OPERATIONS THAT MAY AFFECT STORMWATER RUNOFF AND MAY NEED TO BE ADDRESSED.
 - A. THE FOLLOWING IS A LIST OF MATERIALS OR SUBSTANCES EXPECTED TO BE PRESENT ON-SITE DURING CONSTRUCTION:
 - 1) CONCRETE.
 - 2) FERTILIZERS.
 - 3) SOLIDS AND CONSTRUCTION WASTES.
 - 4) DIESEL FUEL AND LUBRICANTS.
 - B. MATERIAL MANAGEMENT PRACTICES: THE FOLLOWING IS A LIST OF MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO MINIMIZE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORMWATER RUNOFF.
 - 1) GOOD HOUSEKEEPING:
 - i. AN EFFORT SHALL BE MADE TO STORE ON-SITE ONLY ENOUGH PRODUCTS REQUIRED TO COMPLETE THE JOB.
 - ii. ALL MATERIALS STORED ON-SITE SHALL BE KEPT IN A NEAT ORDERLY MANNER AND IN THEIR APPROPRIATE CONTAINERS. IF POSSIBLE, PRODUCTS SHALL BE KEPT UNDER A ROOF OR OTHER ENCLOSURE.
 - iii. MATERIALS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
 - iv. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
 - v. WHENEVER POSSIBLE, ALL OF A PRODUCT SHALL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
 - vi. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED.
 - vii. THE JOB SITE SUPERINTENDENT SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS.

STORMWATER POLLUTION PREVENTION PLAN NOTES (CONTINUED):

- 2) HAZARDOUS PRODUCTS:
 - i. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
 - ii. THE ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS SHALL BE KEPT FOR EACH OF THE MATERIALS, AS THEY CONTAIN IMPORTANT PRODUCT INFORMATION.
 - iii. DISPOSAL OF ANY EXCESS PRODUCT SHALL BE DONE IN A MANNER THAT FOLLOWS ALL MANUFACTURERS, FEDERAL, STATE, AND LOCAL RECOMMENDED METHODS FOR PROPER DISPOSAL.
- C. PRODUCT SPECIFIC PRACTICES: THE FOLLOWING IS A LIST OF POTENTIAL SOURCES OF POLLUTION AND SPECIFIC PRACTICES TO REDUCE POLLUTANT DISCHARGES FROM MATERIALS OR SOURCES EXPECTED TO BE PRESENT DURING CONSTRUCTION:
 - 1) PETROLEUM STORAGE TANKS: ALL ON-SITE VEHICLES SHALL BE INSPECTED AND MONITORED FOR LEAKS AND RECEIVE PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. STEPS SHALL BE TAKEN BY THE CONTRACTOR TO ELIMINATE CONTAMINANTS FROM STORAGE TANKS FROM ENTERING THE SOIL. ANY PETROLEUM STORAGE TANKS KEPT ON-SITE SHALL BE LOCATED WITH AN IMPERVIOUS SURFACE BETWEEN THE TANK AND THE SOIL.
 - 2) FERTILIZERS SHALL BE APPLIED IN MINIMAL AMOUNTS AS RECOMMENDED BY THE IOWA SUDAS STANDARDS. IT SHALL BE WORKED INTO THE SOIL SO AS TO MINIMIZE CONTACT WITH STORMWATER DISCHARGES.
 - 3) CONCRETE TRUCKS SHALL BE ALLOWED TO WASHOUT OR DISCHARGE EXCESS CONCRETE IN SPECIFICALLY DESIGNATED AREAS WHICH HAVE BEEN PREPARED TO MINIMIZE CONTACT BETWEEN THE CONCRETE AND STORMWATER DISCHARGES FROM THE SITE. THE HARDENED PRODUCT FROM THE CONCRETE WASHOUT AREAS SHALL BE DISPOSED OF AS OTHER NON-HAZARDOUS WASTE MATERIALS OR MAY BE BROKEN UP AND USED ON THE SITE FOR OTHER APPROPRIATE USES.
 - 4) SOLID AND CONSTRUCTION WASTES: ALL TRASH AND CONSTRUCTION DEBRIS SHALL BE DEPOSITED INTO A COVERED DUMPSTER THAT SHALL BE EMPTIED AS NECESSARY. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON-SITE. THE DUMPSTERS MUST BE PUT IN A LOCATION WHERE CONTACT WITH STORMWATER DISCHARGE IS MINIMIZED.
 - 5) SANITARY WASTES: IF CONTRACTOR PROVIDES PORTABLE RESTROOM FACILITIES LOCATED ON-SITE AT ALL TIMES, WASTES SHALL BE COLLECTED AND DISPOSED OF IN COMPLETE COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. THIS FACILITY SHALL BE LOCATED IN AN AREA WHERE CONTACT WITH STORMWATER DISCHARGE IS MINIMAL.
 - D. SPILL PREVENTION AND RESPONSE PROCEDURES: CONTRACTOR IS RESPONSIBLE FOR TRAINING ALL PERSONNEL IN THE PROPER HANDLING AND CLEANUP OF SPILLED MATERIALS. NO SPILLED HAZARDOUS MATERIALS OR WASTES SHALL BE ALLOWED TO COME INTO CONTACT WITH STORMWATER DISCHARGES. IF CONTACT DOES OCCUR, THE STORMWATER DISCHARGE SHALL BE CONTAINED ON-SITE UNTIL APPROPRIATE MEASURES FOR COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS ARE FOLLOVED TO DISPOSE OF THE HAZARDOUS SUBSTANCE. THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
 - 1) IN ADDITION TO THE PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES SHALL BE DONE TO MINIMIZE THE POTENTIAL FOR HAZARDOUS MATERIAL SPILLS AND TO REDUCE THE RISK OF THE SPILL COMING IN CONTACT WITH STORMWATER.
 - i. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE TRAINED REGARDING THESE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
 - ii. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CONTROL, CONTAINMENT, AND CLEANUP SHALL BE PROVIDED ON-SITE IN A MATERIAL STORAGE AREA. EQUIPMENT AND MATERIALS SHALL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS.
 - 2) IN THE EVENT OF A SPILL, THE FOLLOWING PROCEDURES SHALL BE FOLLOWED:
 - i. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
 - ii. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH THE HAZARDOUS SUBSTANCE.
 - iii. SPILLS OF TOXIC OR HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENTAL AGENCY AND TO THE PROJECT MANAGER AND ENGINEER, REGARDLESS OF THE SIZE OF THE SPILL. SPILLS OF AMOUNTS THAT EXCEED REPORTABLE QUANTITIES OF CERTAIN SUBSTANCES SPECIFICALLY MENTIONED IN FEDERAL REGULATIONS MUST BE IMMEDIATELY REPORTED TO THE EPA NATIONAL RESPONSE CENTER (1-800-424-8802) THE JOB SITE SUPERINTENDENT SHALL BE RESPONSIBLE FOR CONTACTING THE EPA AND ANY OTHER GOVERNMENTAL AGENCIES.

STORMWATER POLLUTION PREVENTION PLAN NOTES (CONTINUED):

- iv. IF THE SPILL EXCEEDS A REPORTABLE QUANTITY, THE SWPPP MUST BE MODIFIED WITHIN 14 DAYS AFTER THE SPILL AND A WRITTEN DESCRIPTION OF THE EVENTS MUST BE INCLUDED. THE MODIFICATION SHALL INCLUDE A DESCRIPTION OF THE RELEASE, THE DATE OF THE RELEASE, AN EXPLANATION OF WHY THE SPILL HAPPENED, A DESCRIPTION OF PROCEDURES TO PREVENT FUTURE SPILLS AND/OR RELEASES FROM HAPPENING, AND A DESCRIPTION OF RESPONSE PROCEDURES SHOULD THE SPILL OR RELEASE OCCUR AGAIN.
- v. CONTRACTOR'S SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS AND SHALL BE THE SPILL PREVENTION CLEANUP COORDINATOR. HE OR SHE SHALL DESIGNATE OTHER SITE PERSONNEL WHO SHALL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS SHALL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF THESE INDIVIDUALS SHALL BE POSTED IN THE MATERIAL STORAGE AREA AND IN THE OFFICE TRAILER.
6. NON-STORMWATER DISCHARGES: THE FOLLOWING IS A LIST OF NON-STORMWATER DISCHARGES THAT MAY OCCUR AT THE JOB SITE. POLLUTANTS SHALL NOT BE ALLOWED TO COME INTO CONTACT WITH THESE WATER SOURCES PRIOR TO THEIR DISCHARGE FROM THE SITE:
 - A. WATER FROM FIRE-FIGHTING ACTIVITIES AND FIRE HYDRANT FLUSHING.
 - B. WATER USED TO CLEAN VEHICLES.
 - C. POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHING, IRRIGATION DRAINAGE, AND ROUTINE EXTERNAL BUILDING WASH-DOWNS EXCLUDING DETERGENTS.
 - D. PAVEMENT WASHWATERS WHERE SPILLS OR LEAKS OF HAZARDOUS MATERIALS HAVE NOT OCCURRED.
 - E. AIR CONDITIONING CONDENSATE
 - F. SPRINGS
 - G. FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS SUCH AS SOLVENTS.

EROSION PROTECTION NOTES:

1. CODE COMPLIANCE: CONTRACTOR SHALL COMPLY WITH SOIL EROSION CONTROL REQUIREMENTS OF THE IOWA CODE, THE IOWA DEPARTMENT OF NATURAL RESOURCES NPDES PERMIT, AND LOCAL ORDINANCES. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT AGAINST EROSION AND DUST POLLUTION ON THIS PROJECT SITE AND ALL OFF-SITE BORROW OR DEPOSIT/DISPOSAL AREAS DURING PERFORMANCE OR AS A RESULT OF PERFORMANCE.
2. DAMAGE CLAIMS: CONTRACTOR SHALL HOLD THE CITY AND ENGINEER HARMLESS FROM ANY AND ALL CLAIMS OF ANY TYPE WHATSOEVER RESULTING FROM DAMAGES TO ADJOINING PUBLIC OR PRIVATE PROPERTY, INCLUDING REASONABLE ATTORNEY FEES. FURTHER, IF CONTRACTOR FAILS TO TAKE NECESSARY STEPS TO PROMPTLY REMOVE EARTH SEDIMENTATION OR DEBRIS WHICH COMES ON TO ADJOINING PUBLIC OR PRIVATE PROPERTY, THE CITY MAY, BUT NEED NOT, REMOVE SUCH ITEMS AND DEDUCT THE COST THEREOF FROM AMOUNTS DUE THE CONTRACTOR.
3. PRIOR TO START OF ANY LAND DISTURBING ACTIVITY, CONTRACTOR AND SUBCONTRACTORS SHALL SUBMIT SIGNED CERTIFICATION FORM TO THE OWNER. FORM CAN BE FOUND IN PROJECT MANUAL.

STORM WATER DISCHARGE PERMIT NOTES:

1. THIS PROJECT REQUIRES OBTAINING AN NPDES GENERAL PERMIT NO. 2 FOR STORM WATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY FOR CONSTRUCTION ACTIVITIES FROM THE IOWA DEPARTMENT OF NATURAL RESOURCES (IDNR), AS REQUIRED BY THE ENVIRONMENTAL PROTECTION AGENCY. THE CITY SHALL OBTAIN THE PERMIT. THE PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE AND IMPLEMENTATION OF THE SWPPP FOR THEIR ENTIRE CONTRACT. THIS RESPONSIBILITY SHALL BE FURTHER SHARED WITH SUBCONTRACTORS WHOSE WORK IS A SOURCE OF POTENTIAL POLLUTION AS DEFINED IN THE SWPPP.
2. ALL DOCUMENTS RELATED TO THE STORM WATER DISCHARGE PERMIT SHALL BE KEPT ON SITE AT ALL TIMES AND MUST BE PRESENTED TO THE IDNR UPON REQUEST. DOCUMENTS INCLUDE THE NOTICE OF INTENT, PROOF OF PUBLICATION, SWPPP, PROJECT INSPECTION DIARY, AND OTHER ITEMS. FAILURE TO COMPLY WITH THE DISCHARGE REQUIREMENTS IS IN VIOLATION OF THE CLEAN WATER ACT AND THE CODE OF IOWA.
3. UPON FINAL STABILIZATION OF THE DISTURBED AREAS, CONTRACTOR SHALL NOTIFY THE CITY WITHIN 30 DAYS THAT FINAL STABILIZATION HAS BEEN ACHIEVED. A "NOTICE OF DISCONTINUATION" MUST BE FILED BY THE CITY WITH THE IDNR. ALL PLANS, INSPECTION REPORTS, AND OTHER DOCUMENTS MUST BE RETAINED FOR A PERIOD OF THREE YEARS AFTER PROJECT COMPLETION. CONTRACTOR SHALL RETAIN RECORD COPY, AND PROVIDE ORIGINAL DOCUMENTS TO THE CITY UPON ISSUANCE OF THE NOTICE OF DISCONTINUATION.

CONTRACTOR RESPONSIBILITIES NOTES:

1. CONTRACTORS TO PROVIDE TRAINING TO SITE PERSONNEL FOR EROSION AND SEDIMENT CONTROL INSTALLATION, MAINTENANCE REMOVAL, CONSTRUCTION WASTE DISPOSAL, HAZARDOUS WASTE DISPOSAL, SANITARY WASTE DISPOSAL, SPILL PREVENTION PRACTICES, AND HANDLING AND CLEANUP OF SPILLED MATERIALS. COMPLETE AND MAINTAIN SWPPP TRAINING LOG FOUND IN PROJECT MANUAL.
2. CONTRACTOR TO MAINTAIN A COPY OF THE SWPPP, INCLUDING REPORTS AND CERTIFICATIONS, AT THE CONSTRUCTION SITE FROM DATE OF PROJECT INITIATION TO DATE OF FINAL STABILIZATION.
3. CONTRACTOR IS RESPONSIBLE FOR CONTINUALLY MAINTAINING A SITE MAP (PLAN) OF THE PROJECT SITE WHICH REFLECTS THE CURRENT SITE CONDITIONS AND EROSION AND SEDIMENT CONTROL MEASURES IMPLEMENTED. ITEMS SUCH AS ALTERATIONS TO THE SWPPP, ADDITIONS AND MAINTENANCE OF THE EROSION AND SEDIMENT CONTROL MEASURES, AND AREAS THAT HAVE BEEN SEEDED OR PERMANENTLY STABILIZED SHALL BE DOCUMENTED. CONCRETE WASHOUT AREAS AND HAZARDOUS SUBSTANCE STORAGE AREAS SHALL BE IDENTIFIED ON THE SITE MAP (PLAN). THE CURRENT SITE CONDITION MAP SHALL BE MADE AVAILABLE AT ALL TIMES AT THE SITE.
4. CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO PREVENT PORTABLE RESTROOM FACILITY FROM BEING OVER-TURNED DUE TO ACCIDENT, HIGH WINDS, OR VANDALS.

NO.	REVISIONS	DSGN	CHKD	APVD	DATE



225 Iowa Avenue, Muscatine, Iowa 52761-3764
www.stanleyconsultants.com

CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

EROSION CONTROL STORMWATER POLLUTION PREVENTION PLAN

DESIGNED: <u>KK HEIM</u>	SCALE: AS NOTED
DRAWN: <u>GM REEVES</u>	NO. 17660.60.30
CHECKED: <u>ER SCHALLERT</u>	REV.
APPROVED: <u>JM BRADY</u>	
APPROVED: <u>KK HEIM</u>	CE.01
DATE: <u>MARCH 12, 2025</u>	0



CADD D3-RS

NOTES

1.

HAGERMAN DRIVE

NUMBER	START STA	END STA	PI STA	LENGTH	LINE/CHORD DIRECTION	RADIUS	DELTA	D	TANGENT LENGTH	START NORTHING	START EASTING	END NORTHING	END EASTING
L36	3000+00.00	3001+35.92		135.92	S63° 19' 53.87"W					529427.53	2309957.64	529366.53	2309836.18
C6	3001+35.92	3002+37.41	3001+87.06	101.49	S54° 36' 00.85"W	333.00	17° 27' 46.03"	17° 12' 21.38"	51.14	529366.53	2309836.18	529307.96	2309753.77
L37	3002+37.41	3012+18.60		981.19	S45° 52' 07.84"W					529307.96	2309753.77	528624.76	2309049.53

EISENHOWER STREET

NUMBER	START STA	END STA	PI STA	LENGTH	LINE/CHORD DIRECTION	RADIUS	DELTA	D	TANGENT LENGTH	START NORTHING	START EASTING	END NORTHING	END EASTING
L38	3100+00.00	3105+45.45		545.45	S89° 58' 43.68"W					528651.59	2307490.64	528651.38	2306945.19

DEVITT AVENUE

NUMBER	START STA	END STA	PI STA	LENGTH	LINE/CHORD DIRECTION	RADIUS	DELTA	D	TANGENT LENGTH	START NORTHING	START EASTING	END NORTHING	END EASTING
L39	3200+00.00	3206+41.06		641.06	S0° 51' 01.28"E					528729.90	2306944.03	528088.91	2306953.54
C7	3206+41.06	3207+10.53	3206+82.08	69.46	S39° 07' 09.77"E	52.00	76° 32' 16.99"	110° 11' 03.09"	41.02	528088.91	2306953.54	528038.93	2306994.18
L40	3207+10.53	3207+21.18		10.65	S77° 23' 18.27"E					528038.93	2306994.18	528036.61	2307004.57
C8	3207+21.18	3207+90.85	3207+62.37	69.67	S39° 00' 14.42"E	52.00	76° 46' 07.69"	110° 11' 03.09"	41.19	528036.61	2307004.57	527986.43	2307045.22
L41	3207+90.85	3209+48.82		157.98	S0° 37' 10.58"E					527986.43	2307045.22	527828.46	2307046.92

LOGAN STREET

NUMBER	START STA	END STA	PI STA	LENGTH	LINE/CHORD DIRECTION	RADIUS	DELTA	D	TANGENT LENGTH	START NORTHING	START EASTING	END NORTHING	END EASTING
L42	3300+00.00	3306+16.71		616.71	S0° 58' 28.78"E					528449.33	2308107.23	527832.71	2308117.72

ACCESS PATH

NUMBER	START STA	END STA	PI STA	LENGTH	LINE/CHORD DIRECTION	RADIUS	DELTA	D	TANGENT LENGTH	START NORTHING	START EASTING	END NORTHING	END EASTING
L43	3400+00.00	3400+02.65		2.65	S45° 42' 25.93"W					528709.29	2309123.57	528707.44	2309121.68
L51	3400+02.65	3400+57.60		54.95	S44° 39' 58.82"W					528707.44	2309121.68	528668.36	2309083.05
C17	3400+57.60	3400+69.88	3400+63.94	12.29	S27° 04' 07.32"W	20.00	35° 11' 43.02"	286° 28' 44.03"	6.34	528668.36	2309083.05	528657.59	2309077.55
L52	3400+69.88	3400+94.33		24.45	S9° 28' 15.81"W					528657.59	2309077.55	528633.48	2309073.52
C18	3400+94.33	3401+06.71	3401+00.73	12.38	S27° 11' 56.99"W	20.00	35° 27' 22.37"	286° 28' 44.03"	6.39	528633.48	2309073.52	528622.64	2309067.95
L44	3401+06.71	3403+36.34		229.64	S44° 55' 38.18"W					528622.64	2309067.95	528460.06	2308905.78
C16	3403+36.34	3403+43.10	3403+39.75	6.75	S54° 35' 55.89"W	20.00	19° 20' 35.42"	286° 28' 44.03"	3.41	528460.06	2308905.78	528456.17	2308900.31
L53	3403+43.10	3403+75.55		32.45	S64° 16' 13.60"W					528456.17	2308900.31	528442.08	2308871.07
C15	3403+75.55	3403+82.60	3403+79.11	7.06	S54° 09' 41.23"W	20.00	20° 13' 04.74"	286° 28' 44.03"	3.57	528442.08	2308871.07	528437.97	2308865.38
L54	3403+82.60	3405+50.39		167.78	S44° 03' 08.86"W					528437.97	2308865.38	528317.38	2308748.72
C9	3405+50.39	3405+61.72	3405+56.21	11.33	S60° 16' 56.53"W	20.00	32° 27' 35.34"	286° 28' 44.03"	5.82	528317.38	2308748.72	528311.84	2308739.01
L46	3405+61.72	3406+28.88		67.16	S76° 30' 44.20"W					528311.84	2308739.01	528296.18	2308673.70
C10	3406+28.88	3406+33.18	3406+31.04	4.30	S82° 40' 38.68"W	20.00	12° 19' 48.95"	286° 28' 44.03"	2.16	528296.18	2308673.70	528295.63	2308669.44
L47	3406+33.18	3409+63.16		329.98	S88° 50' 33.15"W					528295.63	2308669.44	528288.96	2308339.53
C11	3409+63.16	3409+73.40	3409+68.40	10.24	N76° 29' 22.40"W	20.00	29° 20' 08.90"	286° 28' 44.03"	5.23	528288.96	2308339.53	528291.33	2308329.68
L49	3409+73.40	3410+33.53		60.12	N61° 49' 17.95"W					528291.33	2308329.68	528319.72	2308276.68
C13	3410+33.53	3410+37.91	3410+35.73	4.38	N55° 32' 59.23"W	20.00	12° 32' 37.43"	286° 28' 44.03"	2.20	528319.72	2308276.68	528322.19	2308273.08
L50	3410+37.91	3410+87.54		49.63	N49° 16' 40.52"W					528322.19	2308273.08	528354.57	2308235.46
C14	3410+87.54	3410+89.99	3410+88.77	2.45	N52° 47' 31.92"W	20.00	7° 01' 42.81"	286° 28' 44.03"	1.23	528354.57	2308235.46	528356.06	2308233.51
L48	3410+89.99	3411+14.23		24.23	N56° 18' 23.33"W					528356.06	2308233.51	528369.50	2308213.35
C12	3411+14.23	3411+25.83	3411+20.20	11.61	N72° 56' 05.13"W	20.00	33° 15' 23.61"	286° 28' 44.03"	5.97	528369.50	2308213.35	528372.86	2308202.40
L45	3411+25.83	3412+23.31		97.48	N89° 33' 46.94"W					528372.86	2308202.40	528373.60	2308104.93

NO.	REVISIONS	DSGN	CHKD	APVD	DATE



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225 Iowa Avenue, Muscatine, Iowa 52761-3764
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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

ROADWAY ALIGNMENT TABLES

DESIGNED <u>PM JOHNSON</u>	SCALE:	REV.
DRAWN <u>GM REEVES</u>	NO. 17660.60.30	
CHECKED <u>ER SCHALLERT</u>		
APPROVED <u>KK HEIM</u>		
APPROVED <u>PM JOHNSON</u>	G.01	0
DATE <u>MARCH 12, 2025</u>		



LOAD D3-RS

SURVEY LEGEND:

- 600 ----- INDEX CONTOUR
- 596 ----- INTERMEDIATE CONTOUR
- PROPERTY LINES
- SANITARY SEWER
- STORM SEWER
- COMBINED SANITARY & STORM SEWER
- WATER MAIN OR SERVICE
- UNDERGROUND ELECTRIC
- OVERHEAD ELECTRIC
- UNDERGROUND GAS LINE
- OVERHEAD TELEPHONE
- UNDERGROUND FIBER OPTIC
- EXISTING FENCE
- LANDSCAPING
- TREE DRIPLINE
- TREELINE
- TREE
- BUSH OR HEDGE
- ◆ CONTROL POINT
- ⊕ SANITARY SEWER MANHOLE
- ⊕ PRIVATE SANITARY SEWER MANHOLE
- ⊕ STORM SEWER MANHOLE
- ⊕ STORM SEWER INTAKE
- ⊕ STORM SEWER INLET
- ⊕ COMBINED STORM/SANITARY SEWER MANHOLES
- CLEANOUT
- ⚡ POWER POLE
- ⊕ ELECTRIC HANDHOLE
- ⊕ ELECTRIC RISER
- ⊕ GUY WIRE
- ⊕ YARD LIGHT
- ⊕ WATER VALVE / CURB STOP
- ⊕ HYDRANT
- ⊕ GAS VALVE
- ⊕ SIGN
- ⊕ TELEPHONE RISER
- ⊕ MAILBOX
- WOODEN FENCE POST
- GUARDPOST

BENCH MARK LIST PHASE 6E (DATUM NAVD88)

NAME	ELEVATION	DESCRIPTION
NE 1	701.23	FIRE HYDRANT @ NW QUAD OF NEWELL AVE. & BROADWAY ST., BOLT IN THE WORD "MUELLER".
NE 2	708.36	FIRE HYDRANT BETWEEN MAIDEN LN. & BROADWAY ST. NORTH SIDE OF NEWELL AVE., SOUTH BOLT.
NE 3	701.24	FIRE HYDRANT @ NW QUAD OF MAIDEN LN. & NEWELL AVE., BOLT IN THE WORD "MUELLER".
NE 4	695.98	FIRE HYDRANT @ #879 NEWELL AVE., SOUTH BOLT
NE 5	692.40	FIRE HDRANT @ #897 NEWELL AVE., SOUTH BOLT.
NE 6	685.95	FIRE HYDRANT @ NE QUAD OF NEDIG ST. & NEWELL AVE., SOUTH BOLT.
NE 7	679.22	FIRE HYDRANT @ NW QUAD OF LOGAN ST. & NEWELL AVE., SOUTH BOLT.
NE 8	689.12	FIRE HYDRANT @ #971 NEWELL AVE., SOUTH BOLT.
NE 9	698.73	FIRE HYDRANT @ #987 NEWELL AVE., SOUTH BOLT.
NE 10	700.83	FIRE HYDRANT @ #989 NEWELL AVE., TAG BOLT.
NE 11	704.61	FIRE HYDRANT @ NE QUAD OF DEVITT AVE. & NEWELL AVE., SOUTH BOLT.
NE 12	710.16	FIRE HYDRANT @ #1031 NEWELL AVE., ARROW.
NE 13	722.98	FIRE HYDRANT @ NW QUAD OF KINDLER AVE. & NEWELL AVE., SOUTH BOLT.

BENCH MARK LIST PHASE 6D (NAVD88)

NAME	ELEVATION	DESCRIPTION
DE 1	715.27	FIRE HYDRANT @ 1434 DEVITT AVE., ARROW
EI 1	711.90	FIRE HYDRANT @ NE QUAD DEVITT AVE. & EISENHOWER ST., TAG BOLT
EI 2	695.65	FIRE HYDRANT @ END OF EISENHOWER ST., TAG BOLT
HA 1	637.28	FIRE HYDRANT @ NORTH SIDE OF HAGERMAN DR., SE BOLT
HA 2	632.43	FIRE HYDRANT @ 547 HAGERMAN DR., BOLT IN THE WORD "MUELLER"
HA 3	622.69	FIRE HYDRANT @ 515 HAGERMAN DR., BOLT IN THE WORD "MUELLER"
LO 2	670.41	BENCH TIE IN SOUTH FACE OF P.P. @ 1223 LOGAN ST.
R10	625.07	FIRE HYDRANT @ #401 ROSCOE AVE., WEST BOLT

CONTROL POINTS (IOWA STATE PLANE, SOUTH ZONE, NAD83 MODIFIED TO GROUND, SCALE FACTOR = 0.9999338456, SCALED ABOUT MUSCATINE COUNTY GPS POINT #315)

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
641	529310.37	2309782.20	620.29	SET 1/2" REBAR 3' SOUTH OF B/C AT 518 HAGERMAN DR
642	529011.90	2309420.41	627.98	SET 1/2" REBAR 6' NORTH OF B/C AT 543 HAGERMAN DR. BEHIND MAILBOX
643	528681.23	2309131.39	635.76	SET 1/2" REBAR 4' WEST OF B/C AT 618 HAGERMAN DR. AT END OF CUL-DE SAC
644	528548.34	2309013.87	641.00	SET 1/2" REBAR SW OF CP #643 AT BACK OF LOT OF 618 HAGERMAN DR.
645	528323.54	2308797.17	645.03	SET 1/2" REBAR SW OF CP #644 IN WOODED AREA
646	528238.77	2308505.63	650.47	SET 1/2" REBAR WEST OF CP #645 IN WOODED AREA
647	528297.67	2308139.65	668.96	SET 1/2" REBAR 3' NORTH OF DRIVEWAY, 6' EAST OF WALK AT 1223 LOGAN ST.
648	528358.21	2307983.45	669.75	SET 1/2" REBAR 40' NW OF NW CORNER OF 1224 LOGAN ST.
649	528628.22	2307415.15	692.71	SET 1/2" REBAR AT DEAD END ROAD AT 900 EISENHOWER ST.
650	528674.26	2307168.12	704.02	SET 1/2" REBAR 8' NORTH OF NORTH B/C 921 EISENHOWER ST.
651	528654.61	2306926.74	711.04	SET 1/2" REBAR 4' WEST OF WEST B/C AT 1450 DEVITT AVE.
652	528215.09	2306932.01	710.56	SET 1/2" REBAR 4' WEST OF WEST B/C AT 1422 DEVITT AVE.

CONTROL POINTS (IOWA STATE PLANE, SOUTH ZONE, NAD83 MODIFIED TO GROUND, SCALE FACTOR = 0.9999338456, SCALED ABOUT MUSCATINE COUNTY GPS POINT #315)

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
653	527808.55	2307069.33	702.20	CP 1/2" REBAR BETWEEN B/C & SIDEWALK SOUTH SIDE OF ST. @ #1006 NEWELL AVE.
654	527847.66	2306623.09	710.77	CP 1/2" REBAR BETWEEN B/C & SIDEWALK NORTH SIDE OF ST. @ #1033 NEWELL AVE.
655	527802.31	2306221.59	723.83	CP 1/2" REBAR IN ISLAND OF PARKING LOT @ INTERSECTION OF NEWELL AVE. & LUCAS ST.
656	527850.46	2307529.70	693.80	CP 1/2" REBAR BETWEEN B/C & SIDEWALK, NORTH SIDE OF ST. @ #982 NEWELL AVE.
657	527813.14	2308134.13	678.34	CP 1/2" REBAR BETWEEN B/C & SIDEWALK @ SE QUAD OF LOGAN ST. & NEWELL AVE.
658	527861.84	2308664.43	688.96	CP 1/2" REBAR BETWEEN B/C & SIDEWALK @ #913 NEWELL AVE.
659	527833.09	2309185.39	694.61	CP 1/2" REBAR BETWEEN B/C & SIDEWALK @ #878 NEWELL AVE.
660	527882.05	2309673.06	702.23	CP 1/2" REBAR @ NE QUAD OF MAIDEN LN. & NEWELL AVE., 3.5' NORTH OF B/C
661	527856.64	2309997.58	703.53	CP 1/2" REBAR BETWEEN B/C & SIDEWALK @ #708 NEWELL AVE.
662	527893.60	2310211.08	697.85	CP 1/2" REBAR BETWEEN B/C & SIDEWALK EAST SIDE OF BROADWAY ST. @ NEWELL AVE. INTERSECTION.
5001	528893.20	2309335.59	630.19	CP MAG NAIL
5096	528843.97	2309425.12	637.44	SET 10" RANDOM NAIL
5037	528794.96	2309096.35	646.23	SET 10" RANDOM NAIL
5038	528764.03	2309212.63	633.93	SET 10" RANDOM NAIL
704	528639.89	2307585.26	671.23	CP SPIKE
50037	528521.06	2307454.52	691.49	SET 10" RANDOM NAIL (AS SHOWN FOR EISENHOWER CONTROL)
5046	528626.96	2307456.75	691.32	SET 10" RANDOM NAIL
5083	528474.32	230741749	679.30	SET 10" RANDOM NAIL
5186	528733.68	2307478.11	674.46	SET 10" RANDOM NAIL
5191	528827.36	2307444.38	696.60	SET 10" RANDOM NAIL
5283	528818.44	2307791.32	700.39	SET 10" RANDOM NAIL
5285	528800.89	2308069.97	692.55	SET 10" RANDOM NAIL
640	529518.32	2309999.67	618.87	SET 1/2" REBAR WEST SIDE OF ROSCOE @ AMY DR. CL EXTENDED

NOTES

- SEE SEWER PLANS FOR LOCATION OF CONTROL POINTS AND BENCH MARKS.
- DESIGN SURVEY PERFORMED BY MARTIN AND WHITACRE SURVEYORS AND ENGINEERS, INC OF MUSCATINE, IOWA. SURVEY PERFORMED BETWEEN 2021 AND 2023.
- SEE DRAWING A.03 FOR PROPOSED FEATURES LEGEND.

NO.	REVISIONS	DSGN	CHKD	APVD	DATE

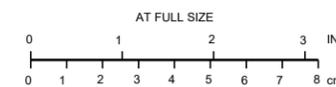


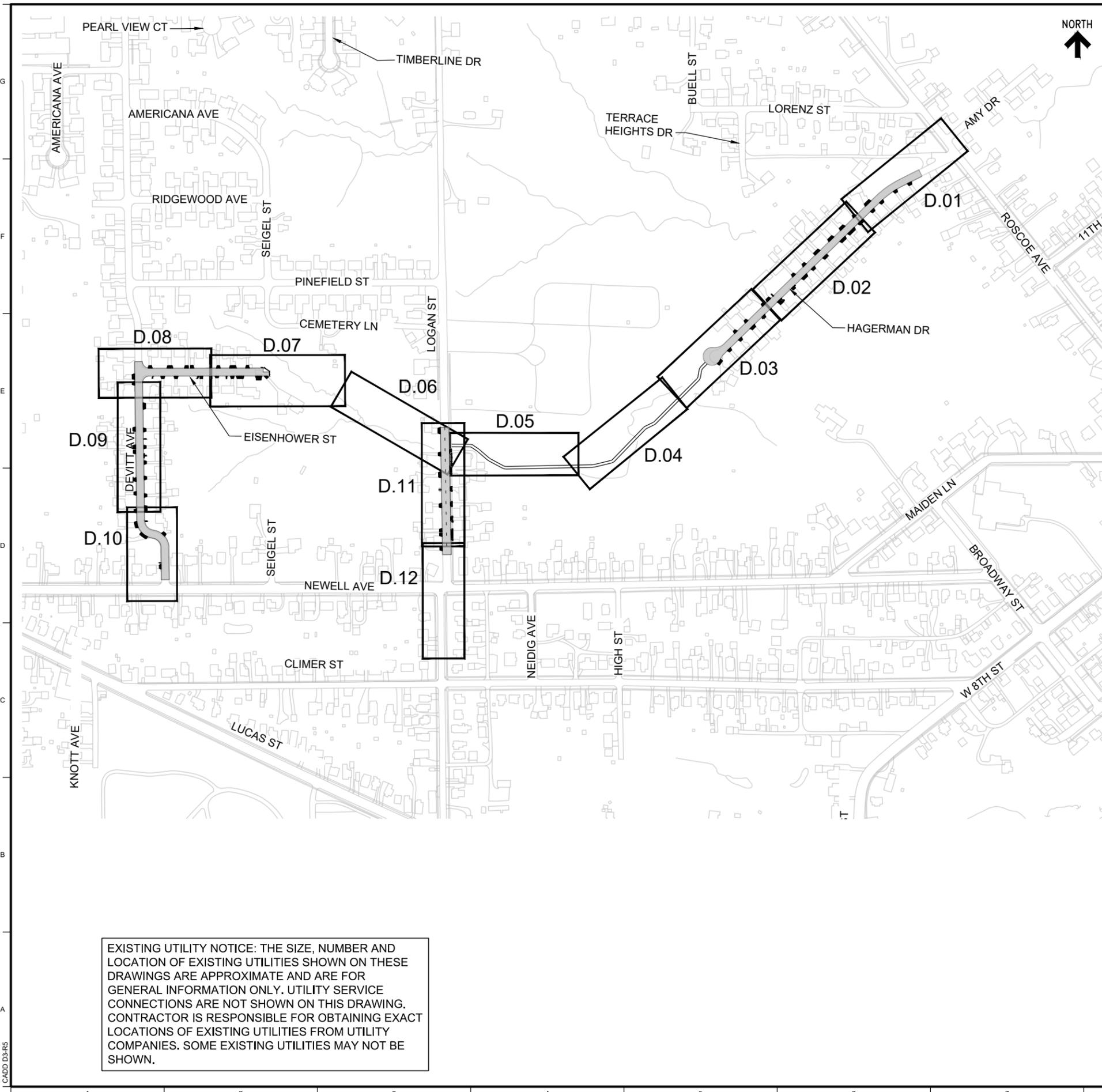
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www.stanleyconsultants.com

CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

TOPOGRAPHICAL SURVEY REFERENCE INFORMATION

DESIGNED <u>KK HEIM</u>	SCALE:
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	G.04
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	

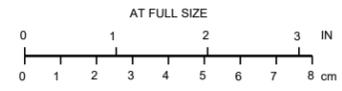




GENERAL NOTES

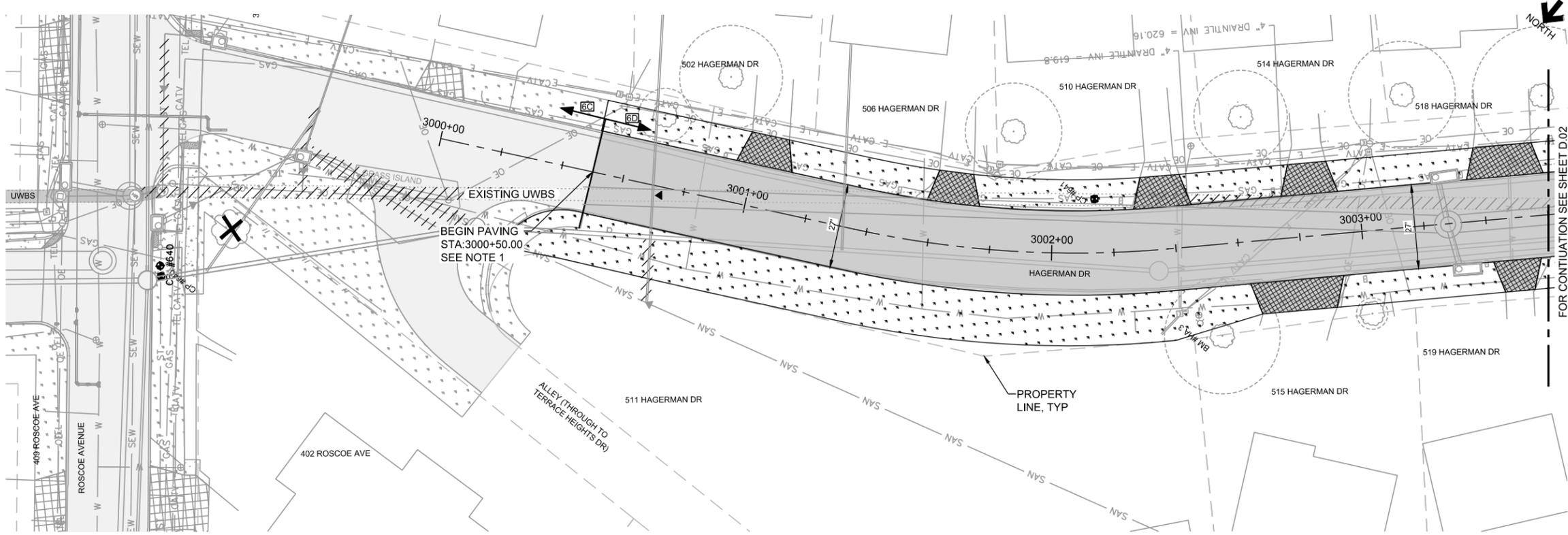
1. PROPERTY AND ROW LINES INDICATED ON PLANS ARE AT APPROXIMATE LOCATION. INFORMATION WAS OBTAINED FROM ONLINE SURVEY INFORMATION FROM MUSCATINE AREA GEOGRAPHICAL INFORMATION CONSORTIUM (MAGIC). PROPERTY SURVEY IS REQUIRED TO DETERMINE EXACT LOCATIONS.
2. TOPOGRAPHIC INFORMATION SHOWN ON PLANS HAS BEEN OBTAINED FROM MARTIN & WHITACRE SURVEY (SURVEY COMPLETED BETWEEN 2021 AND 2024). BUILDING OUTLINES SHOWN ARE FROM CITY OF MUSCATINE DATA SOURCE AND MAY NOT REFLECT CURRENT CONDITIONS.
3. ANY STREET SIGNS IN THE IMPACTED AREA SHOULD BE SALVAGED AND DELIVERED/STOCKPILED AT THE CITY PUBLIC WORKS STORAGE YARD IMMEDIATELY AFTER REMOVAL. IF SIGNS ARE DAMAGED OR MISSING, CONTRACTOR MAY BE SUBJECT TO FINES AS DETERMINED BY THE CITY.
4. ALL DISTURBED AREAS WITHIN ROW THAT ARE NOT RESTORED BY PAVEMENT SHALL MATCH EXISTING SURFACING MATERIAL OR BE SEEDED, FERTILIZED, AND MULCHED.
5. REFER TO PAVEMENT TYPICAL SECTIONS ON SHEET B.01.
6. TEMPORARY TRANSITION PAVEMENT TO MAINTAIN TRAFFIC BETWEEN PHASES WILL BE REQUIRED.
7. REFER TO SANITARY AND STORM SEWER PLAN DRAWINGS FOR PROPOSED SEWERS, MANHOLES, AND INLETS. ABANDONED OR REMOVED FACILITIES ARE HATCHED ON THE M AND MSA SERIES DRAWINGS.
8. RESTORE DISTURBED LANDSCAPING FEATURES WITHIN ROW AND EASEMENT LIMITS. REFER TO SHEET C.19 FOR TABULATION.
9. PRESERVE AND PROTECT TREES TO GREATEST EXTENT POSSIBLE. REFER TO R SHEETS FOR TREE REMOVAL LEGEND. COORDINATE WITH CITY ON DECISION TO REMOVE ADDITIONAL TREES.
10. SEE WATER DRAWINGS FOR PROPOSED WATER MAIN IMPROVEMENTS.
11. REFER TO SHEET C.18 FOR DRIVEWAY REPLACEMENT TABULATION.
12. REFER TO SHEET B.02 FOR PAVEMENT MARKING DETAILS. PAVEMENT MARKING TYPES AND LOCATIONS SHOWN ON D SHEETS.
13. REFER TO L SHEETS FOR PAVEMENT JOINTING LAYOUT AT INTERSECTIONS.
14. REFER TO W SHEETS FOR ROADWAY CROSS SECTIONS.
15. TEMPORARY AND PERMANENT EASEMENT LIMITS ARE SHOWN ON SANITARY SEWER (MSA) SHEETS. CONTRACTOR IS REQUIRED TO STAY WITHIN EASEMENTS AND CONSTRUCTION LIMITS. STAKING OF EASEMENTS AND CONSTRUCTION LIMITS IS THE RESPONSIBILITY OF THE CONTRACTOR. EASEMENT EXHIBITS, PLATS, AND SHAPES CAN BE PROVIDED ELECTRONICALLY TO CONTRACTOR.
16. SUBDRAIN IS NOT SHOWN ON PLAN DRAWINGS. SUBDRAIN IS REQUIRED UNDER PAVEMENT ACCORDING TO DETAIL ON SHEET B.01 AND ESTIMATE REFERENCE NOTES. SUBDRAIN SHALL BE OUTLET TO NEAREST INLET.
17. SEE R SHEETS FOR REMOVAL LIMITS AND EXISTING FEATURES SURVEY INCLUDING MATERIAL OF DRIVEWAY, SIDEWALK, LANDSCAPING FEATURES SUCH AS PLANTINGS AND RETAINING WALLS.
18. REFER TO G SHEETS FOR ROAD ALIGNMENT TABLE AND EXISTING SURVEY CONTROL.
19. PAVING MUST BE DONE USING A SLIP FORM PAVER, HAND POUR, OR OTHER SUDAS APPROVED METHOD. POWER/LASER SCREED WILL NOT BE ALLOWED ON MAINLINE DRIVING SURFACE.
20. RESTORE DISTURBED FENCING OR RETAINING WALLS TO MATCH EXISTING CONDITIONS.
21. IF UTILITY WORK OR SERVICE LINE WORK EXTENDS BEYOND THE LIMITS SHOWN ON THE DRAWINGS, RESTORE DISTURBED AREA TO MATCH EXISTING CONDITIONS.
22. TEMPORARY ACCESS TO RESIDENTS MUST BE PROVIDED TO THEIR HOMES AS CONSTRUCTION PROGRESSES. HAGERMAN DRIVE AND EISENHOWER STREET ARE DEAD END STREETS. TEMPORARY ACCESS MAY BE PROVIDED WITH TEMPORARY GRAVEL ACCESS ROADS, PAVING HALF THE ROAD AT A TIME, AND TEMPORARY DRIVEWAY APPROACHES TO MAINTAIN ACCESS. CONTRACTOR'S TEMPORARY ACCESS PLAN MUST BE AUTHORIZED BY THE CITY. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ADEQUATE LEVEL OF ACCESS FOR SERVICES SUCH AS MAIL, DELIVERY, GARBAGE, AND EMERGENCY SERVICES.

EXISTING UTILITY NOTICE: THE SIZE, NUMBER AND LOCATION OF EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND ARE FOR GENERAL INFORMATION ONLY. UTILITY SERVICE CONNECTIONS ARE NOT SHOWN ON THIS DRAWING. CONTRACTOR IS RESPONSIBLE FOR OBTAINING EXACT LOCATIONS OF EXISTING UTILITIES FROM UTILITY COMPANIES. SOME EXISTING UTILITIES MAY NOT BE SHOWN.



NO.	REVISIONS	DSGN	CHKD	APVD	DATE
 Stanley Consultants Inc. 225 Iowa Avenue, Muscatine, Iowa 52761-3764 www.stanleyconsultants.com					
CITY OF MUSCATINE - PHASE 6D WEST HILL AREA SANITARY AND STORM SEWER SEPARATION MUSCATINE, IOWA					
OVERALL SITE PAVEMENT RESTORATION & KEY PLAN					
DESIGNED	PM JOHNSON	SCALE: AS NOTED			
DRAWN	GM REEVES	NO. 17660.60.30		REV.	
CHECKED	ER SCHALLERT	D.00		0	
APPROVED	KK HEIM				
APPROVED	PM JOHNSON				
DATE	MARCH 12, 2025				

LADD D3-RS

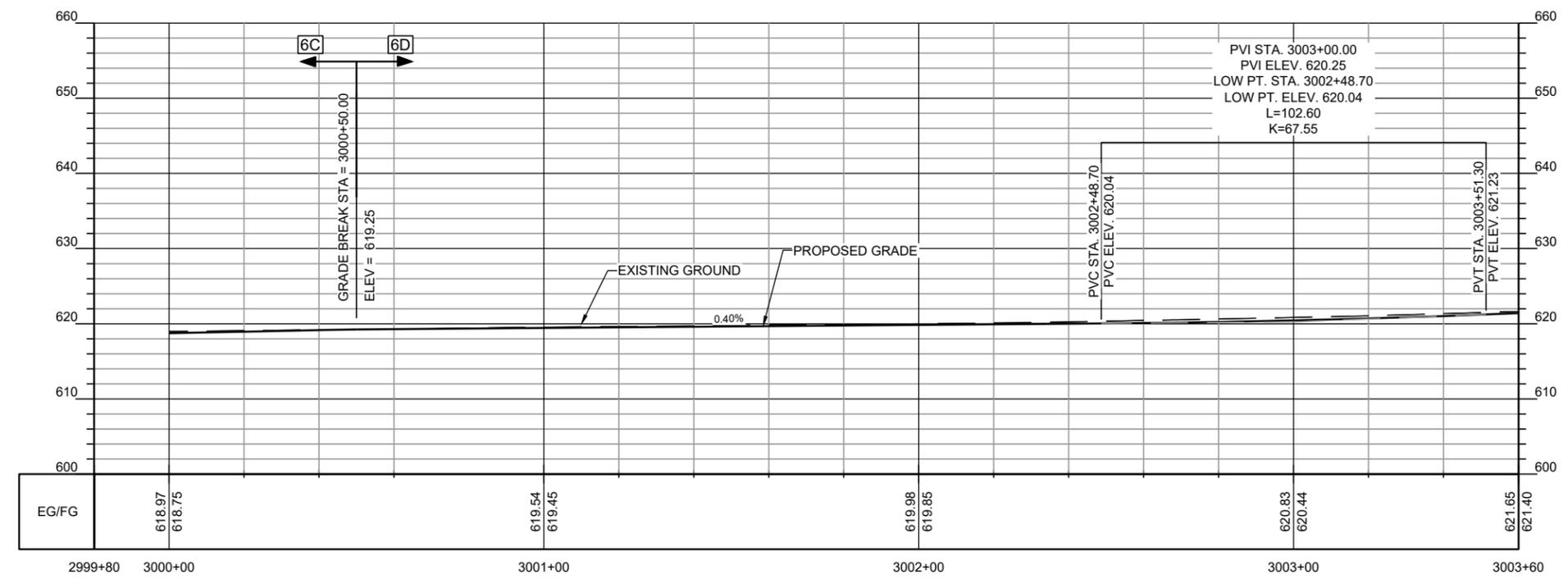


NOTES

1. LOCATE END OF PAVEMENT FROM PHASE 6C CONTRACT BY OTHERS AND CONTINUE PAVEMENT INSTALLATION IN THIS PHASE 6D CONTRACT.

LEGEND

-  7" PCC PAVEMENT REPLACEMENT
-  SIDEWALK REPLACEMENT
-  DRIVEWAY AND ALLEY REPLACEMENT
-  SEEDING
-  DETECTABLE WARNING SURFACE



NO.	REVISIONS	DSGN	CHKD	APVD	DATE

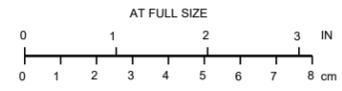


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 225 Iowa Avenue, Muscatine, Iowa 52761-3764
 www.stanleyconsultants.com

CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

**PAVEMENT
 PAVEMENT RESTORATION PLAN
 HAGERMAN DR - SHEET 1**

DESIGNED <u>PM JOHNSON</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>KK HEIM</u>	D.01
APPROVED <u>PM JOHNSON</u>	0
DATE <u>MARCH 12, 2025</u>	

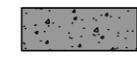
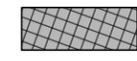
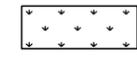
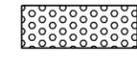


CAADD D3-RS

NOTES

1. INSTALL PIPE AND MAINLINE PAVING TO MILESTONE 1 LIMIT, BEYOND THE DRIVEWAYS FOR 522 AND 523 HAGERMAN DRIVE BEFORE THE MILESTONE 1 CONTRACT DATE.
2. COORDINATE WITH CITY FOR WORK ON 539 HAGERMAN DRIVE PARCEL.

LEGEND

-  7" PCC PAVEMENT REPLACEMENT
-  SIDEWALK REPLACEMENT
-  DRIVEWAY AND ALLEY REPLACEMENT
-  SEEDING
-  DETECTABLE WARNING SURFACE

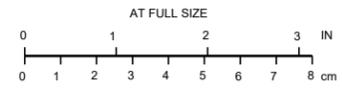
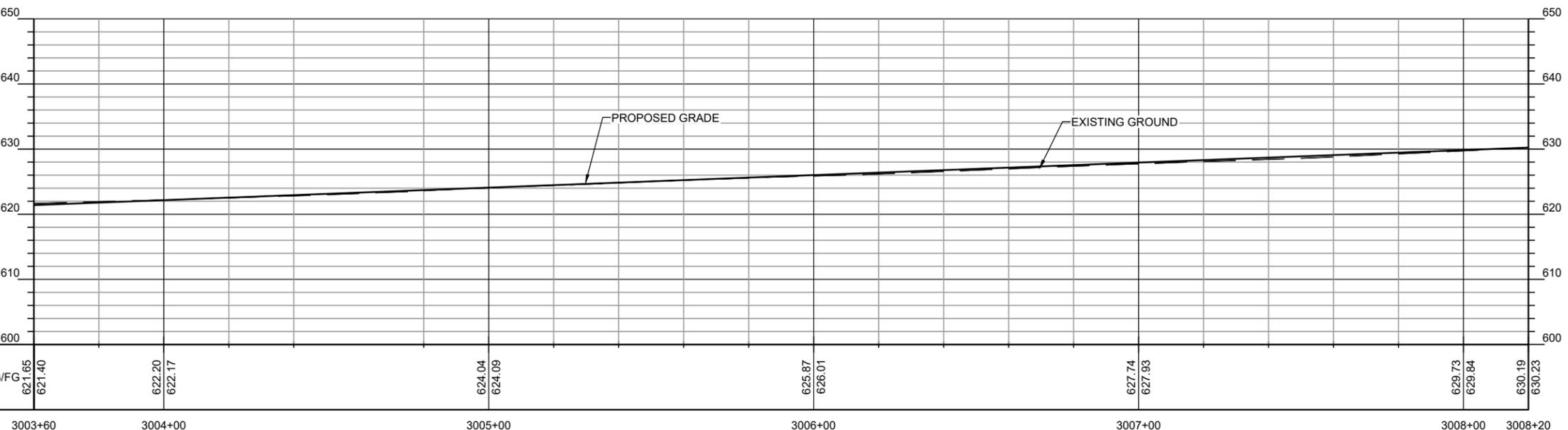
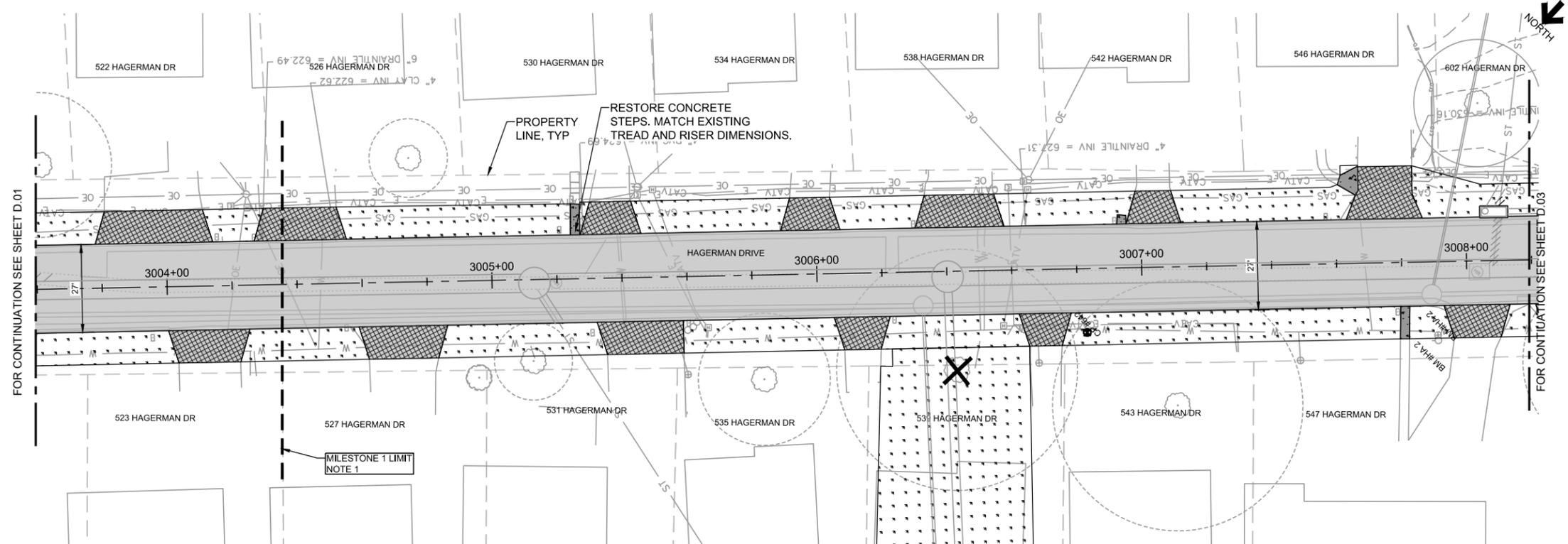
NO.	REVISIONS	DSGN	CHKD	APVD	DATE



CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**PAVEMENT
PAVEMENT RESTORATION PLAN
HAGERMAN DR - SHEET 2**

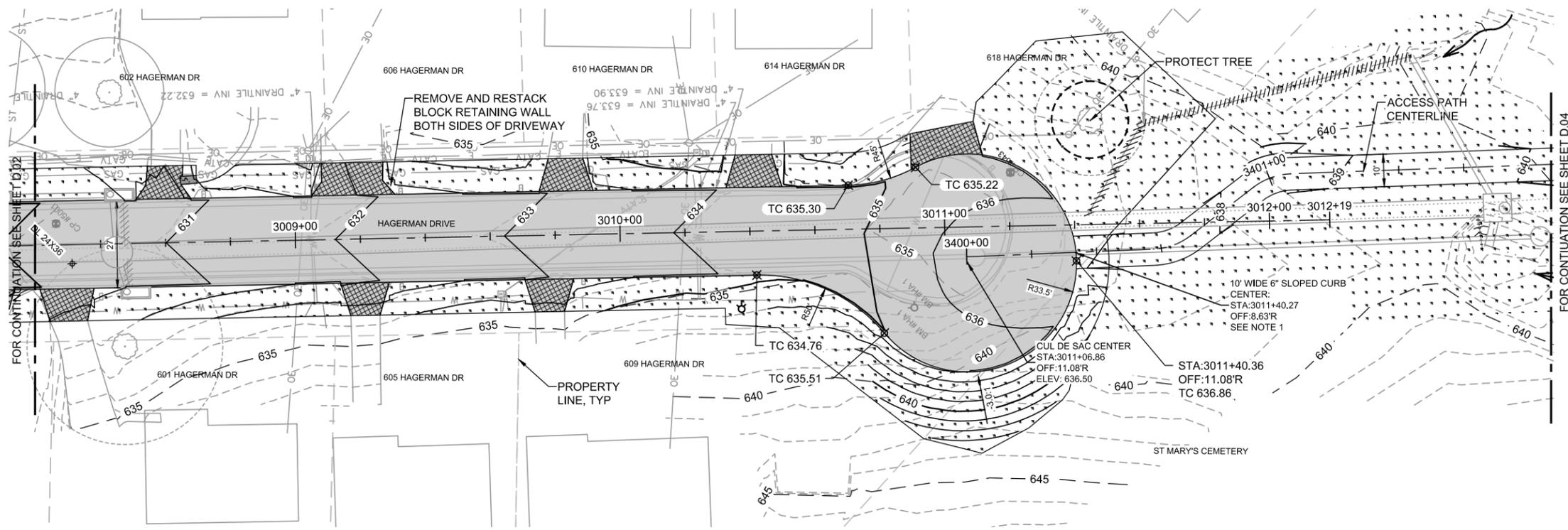
DESIGNED <u>PM JOHNSON</u>	SCALE: 1" = 20'	REV.
DRAWN <u>GM REEVES</u>	NO. 17660.60.30	
CHECKED <u>ER SCHALLERT</u>		
APPROVED <u>KK HEIM</u>		
APPROVED <u>PM JOHNSON</u>		
DATE <u>MARCH 12, 2025</u>	D.02	0



LOAD D3-RS

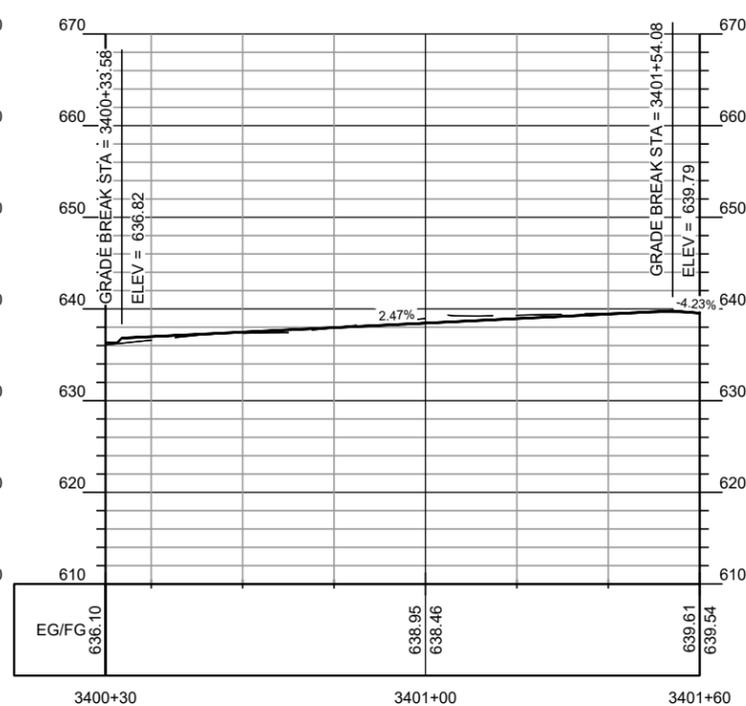
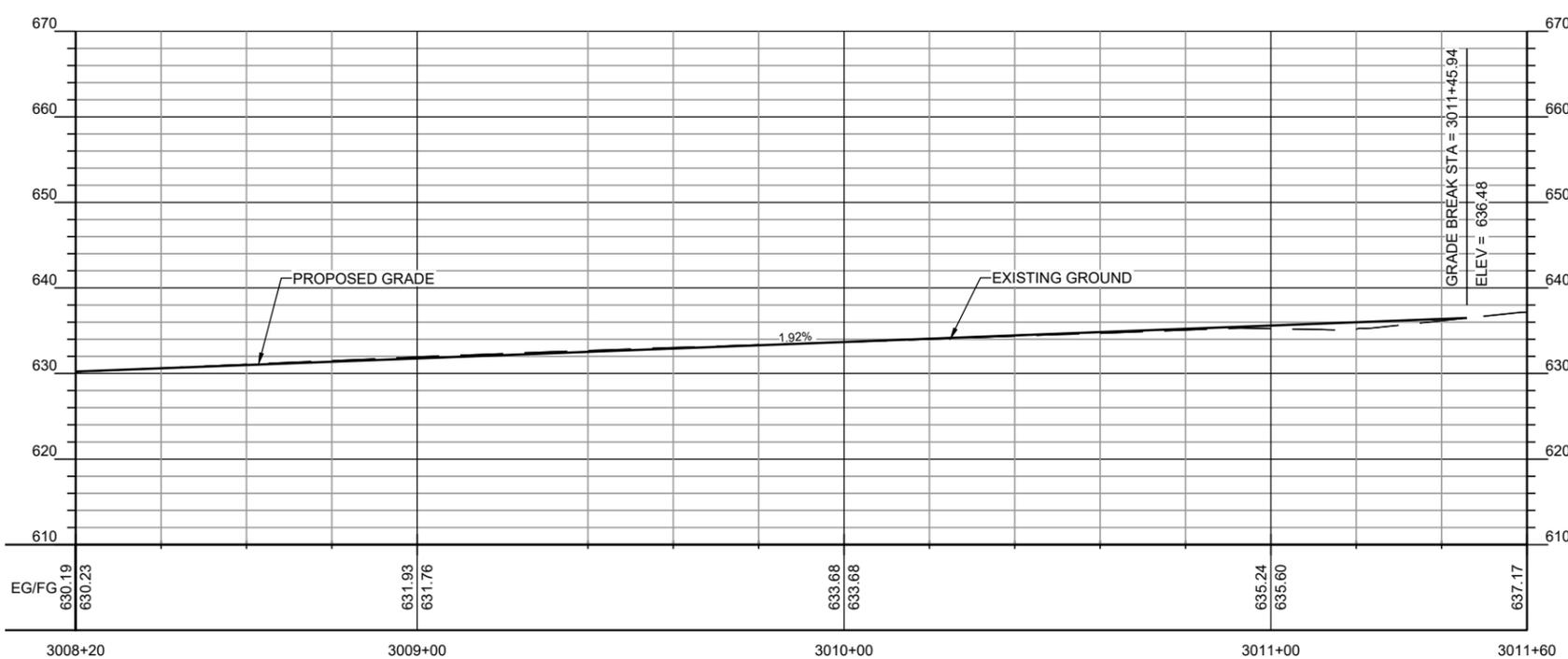
NOTES

1. TRANSITION FROM 6" STANDARD CURB TO 6" SLOPED CURB OVER 5 FEET. REFER TO SUDAS DETAIL 7010.102.



LEGEND

- 7" PCC PAVEMENT REPLACEMENT
- SIDEWALK REPLACEMENT
- DRIVEWAY AND ALLEY REPLACEMENT
- SEEDING
- DETECTABLE WARNING SURFACE



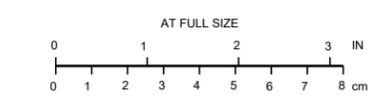
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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 www.stanleyconsultants.com

CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

PAVEMENT PAVEMENT RESTORATION PLAN HAGERMAN DR - SHEET 3

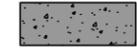
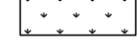
DESIGNED <u>PM JOHNSON</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>KK HEIM</u>	D.03
APPROVED <u>PM JOHNSON</u>	0
DATE <u>MARCH 12, 2025</u>	



LADD D3-RS

NOTES

LEGEND

-  7" PCC PAVEMENT REPLACEMENT
-  SIDEWALK REPLACEMENT
-  DRIVEWAY AND ALLEY REPLACEMENT
-  SEEDING
-  DETECTABLE WARNING SURFACE

NO.	REVISIONS	DSGN	CHKD	APVD	DATE



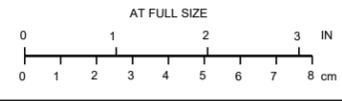
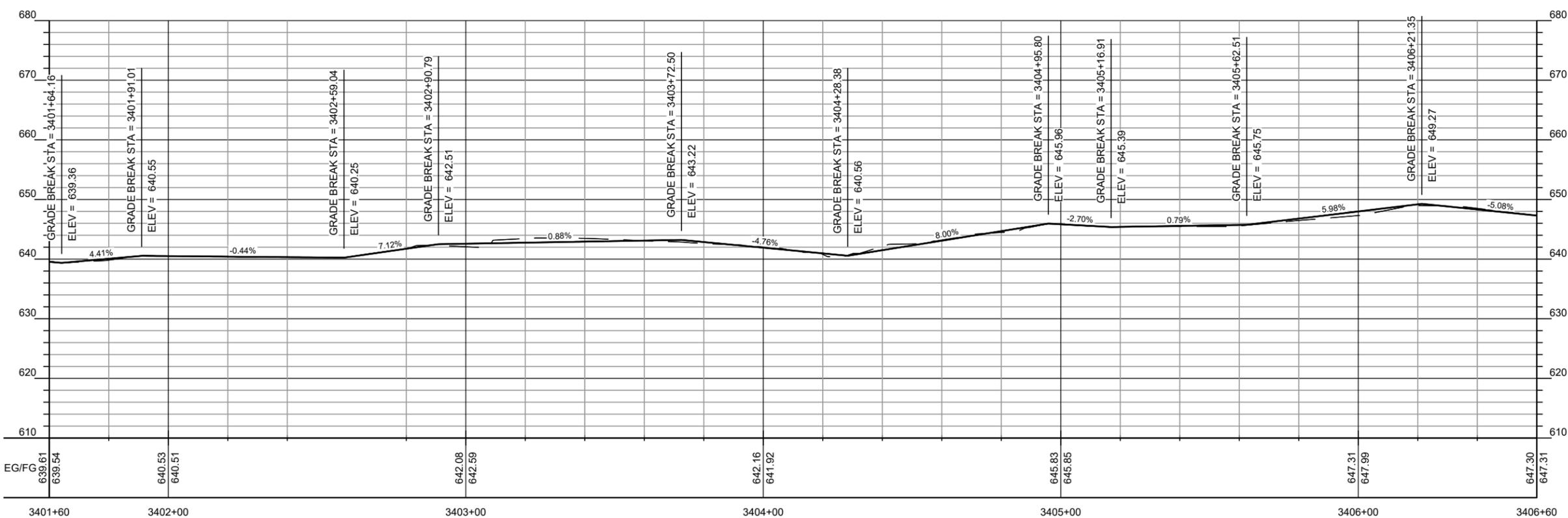
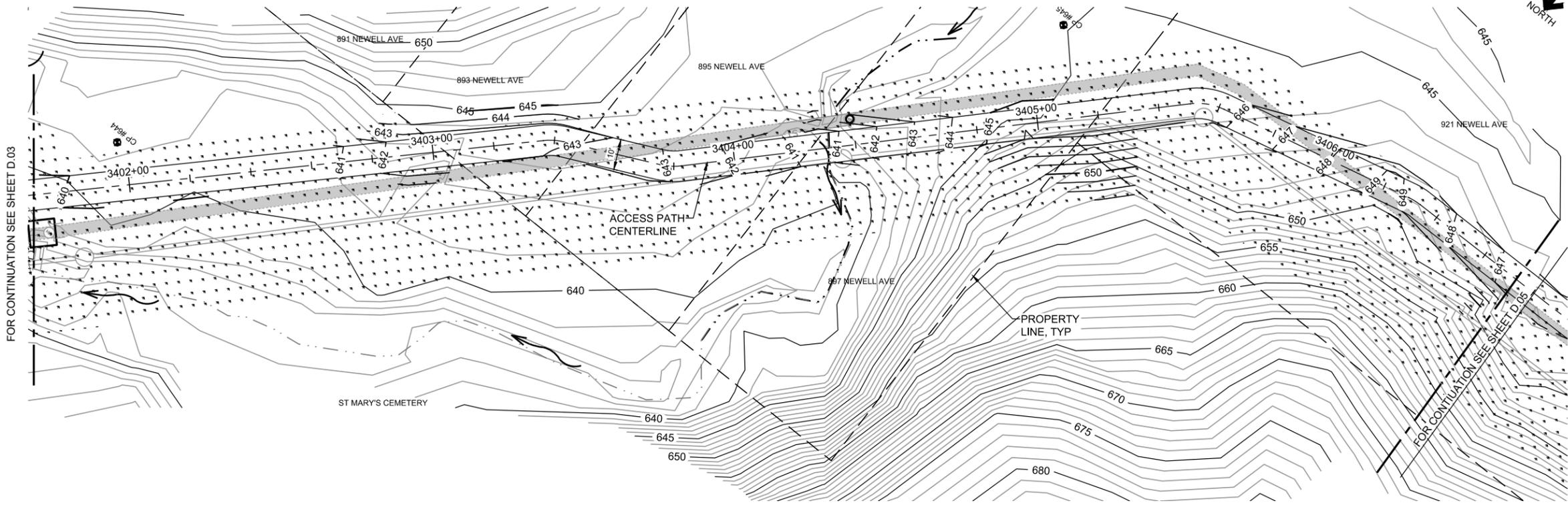
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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**PAVEMENT
PAVEMENT RESTORATION PLAN
BETWEEN HAGERMAN DR & LOGAN ST**

DESIGNED <u>PM JOHNSON</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>KK HEIM</u>	D.04
APPROVED <u>PM JOHNSON</u>	0
DATE <u>MARCH 12, 2025</u>	

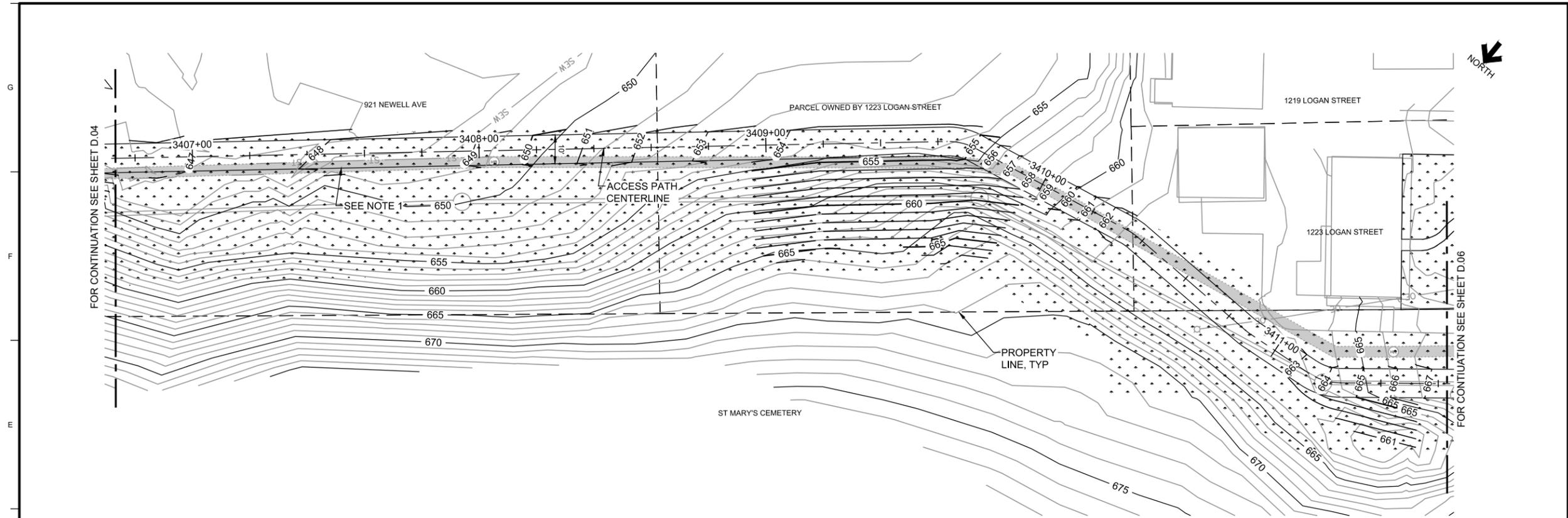


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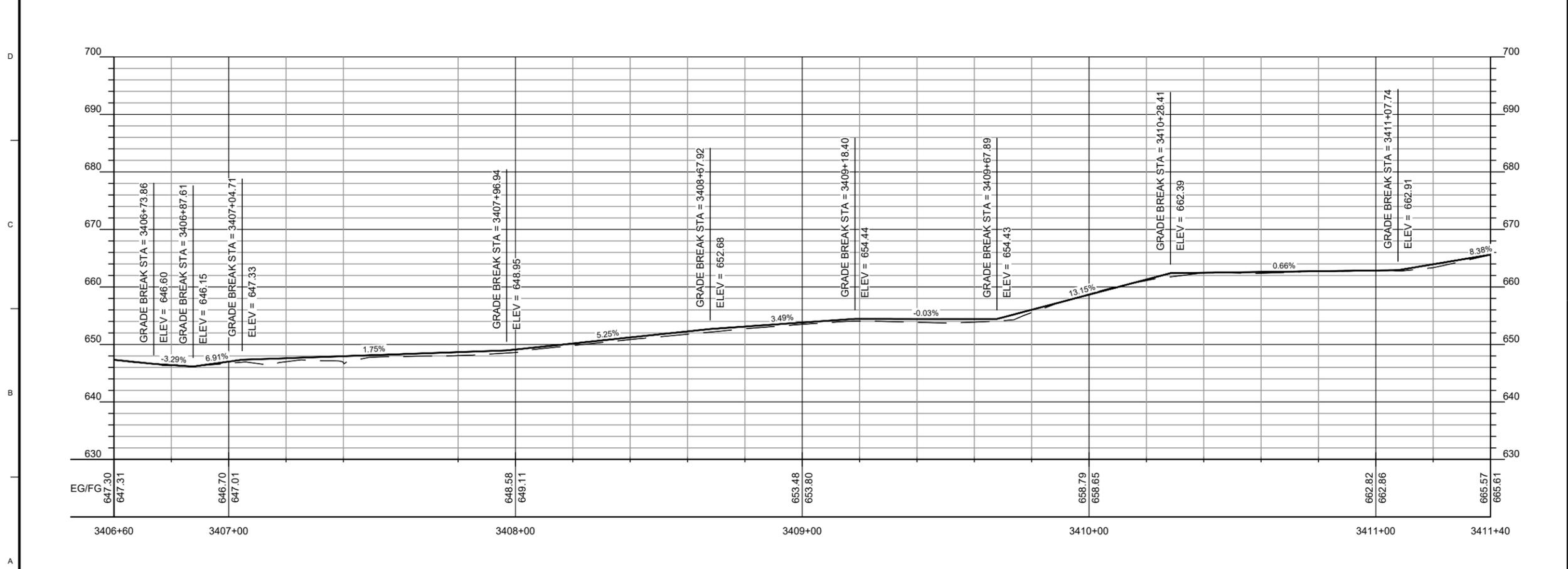
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NOTES

1. SURVEY SHOWS THAT THE EXISTING TUNNEL IS EXPOSED IN THIS AREA. WHERE THE TUNNEL IS EXPOSED, REDUCE THE RIGHT SIDE WIDTH OF THE PATH TO MATCH THE EDGE OF THE TUNNEL AND ADJUST GRADING TO TIE TO THE TOP EXPOSED EDGE OF THE TUNNEL.



LEGEND

- 7" PCC PAVEMENT REPLACEMENT
- SIDEWALK REPLACEMENT
- DRIVEWAY AND ALLEY REPLACEMENT
- SEEDING
- DETECTABLE WARNING SURFACE

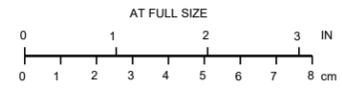
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

225 Iowa Avenue, Muscatine, Iowa 52761-3764
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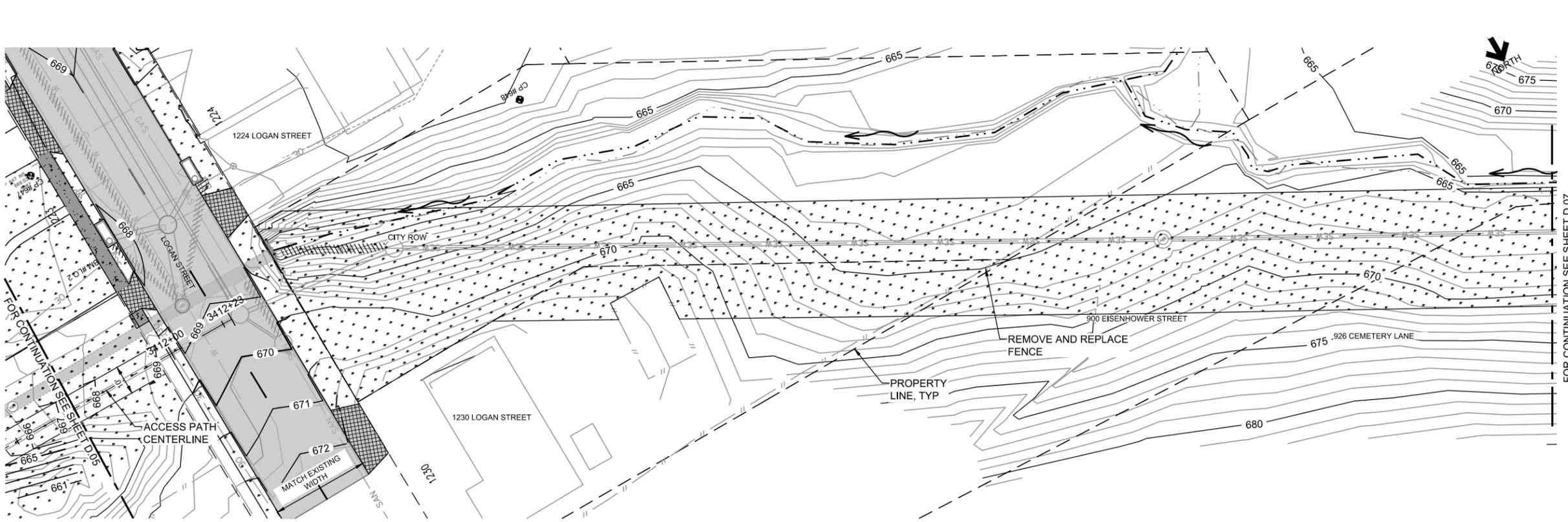
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**PAVEMENT
PAVEMENT RESTORATION PLAN
BETWEEN HAGEMAN DR & LOGAN ST**

DESIGNED PM JOHNSON	SCALE: 1" = 20'
DRAWN GM REEVES	NO. 17660.60.30
CHECKED ER SCHALLERT	REV.
APPROVED KK HEIM	D.05
APPROVED PM JOHNSON	0
DATE MARCH 12, 2025	



LADD D3-RS



NOTES

FOR CONTINUATION SEE SHEET D.07

LEGEND

- 7" PCC PAVEMENT REPLACEMENT
- SIDEWALK REPLACEMENT
- DRIVEWAY AND ALLEY REPLACEMENT
- SEEDING
- DETECTABLE WARNING SURFACE

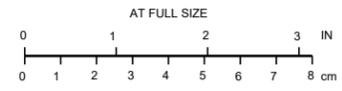
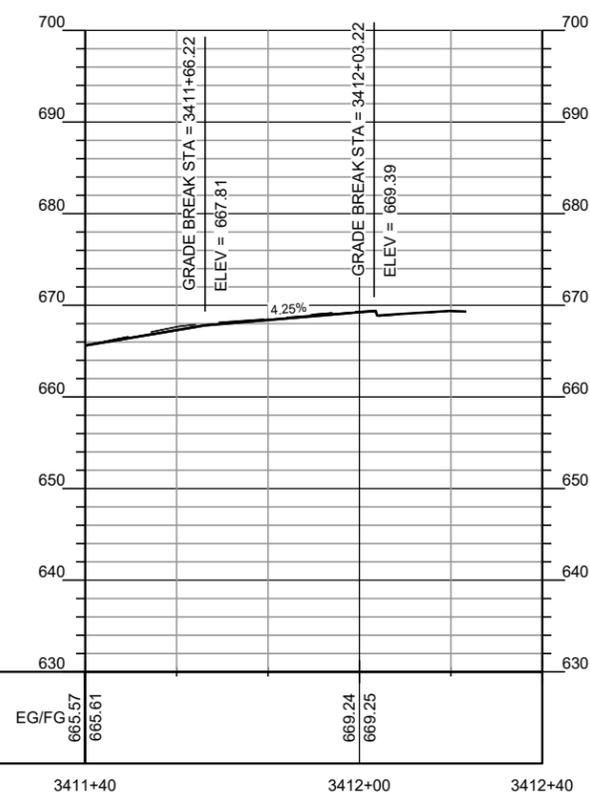
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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 www.stanleyconsultants.com

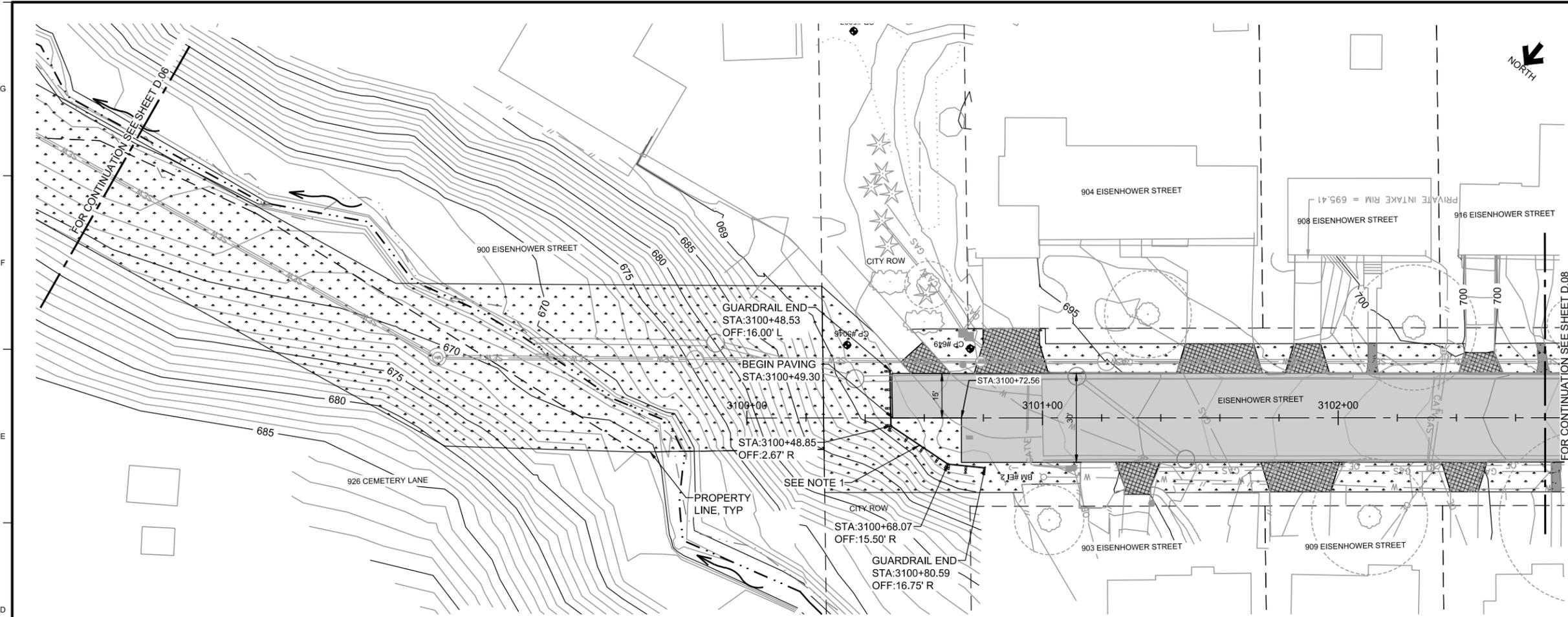
CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

**PAVEMENT
 PAVEMENT RESTORATION PLAN
 BETWEEN LOGAN ST & EISENHOWER**

DESIGNED <u>PM JOHNSON</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV. <u>0</u>
APPROVED <u>KK HEIM</u>	
APPROVED <u>PM JOHNSON</u>	
DATE <u>MARCH 12, 2025</u>	



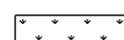
LADD D3-RS

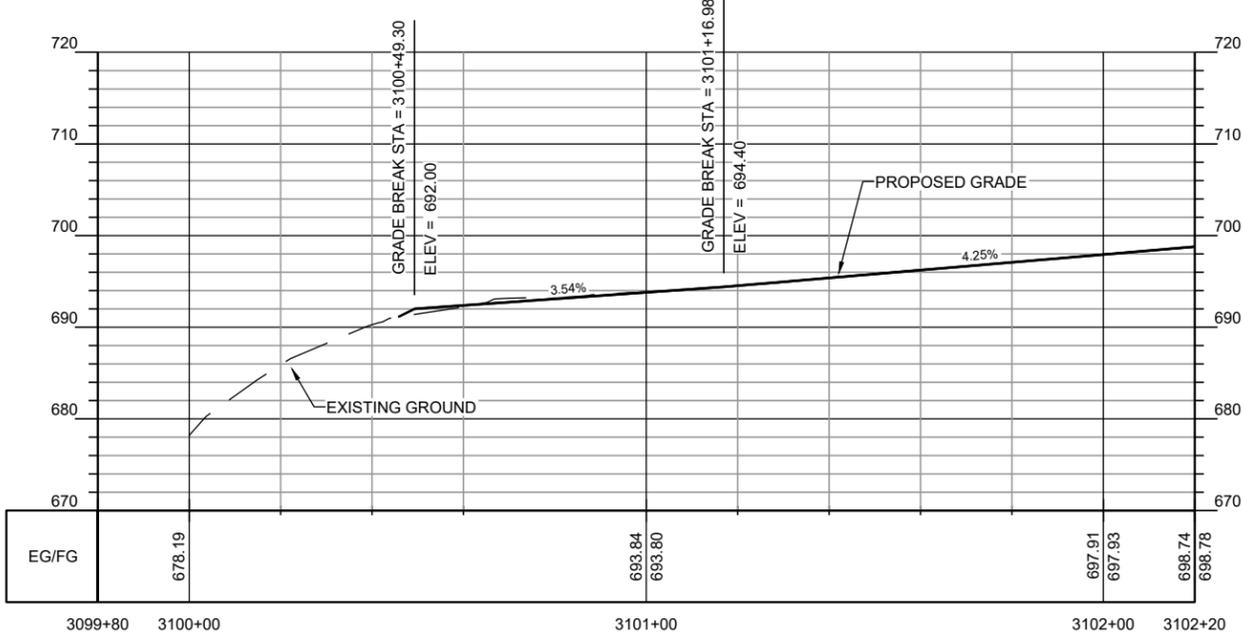


NOTES

1. INSTALL STANDARD W-BEAM GUARDRAIL WITH WOOD POSTS. REFER TO IOWA DOT STANDARD ROAD PLAN BA-200 FOR DIMENSIONS AND POST SPACING. INSTALL W-BEAM END ANCHORS AT ENDS. REFER TO IOWA DOT STANDARD ROAD PLAN BA-203.

LEGEND

-  7" PCC PAVEMENT REPLACEMENT
-  SIDEWALK REPLACEMENT
-  DRIVEWAY AND ALLEY REPLACEMENT
-  SEEDING
-  DETECTABLE WARNING SURFACE



NO.	REVISIONS	DSGN	CHKD	APVD	DATE

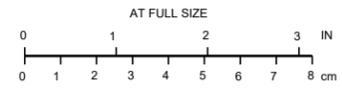


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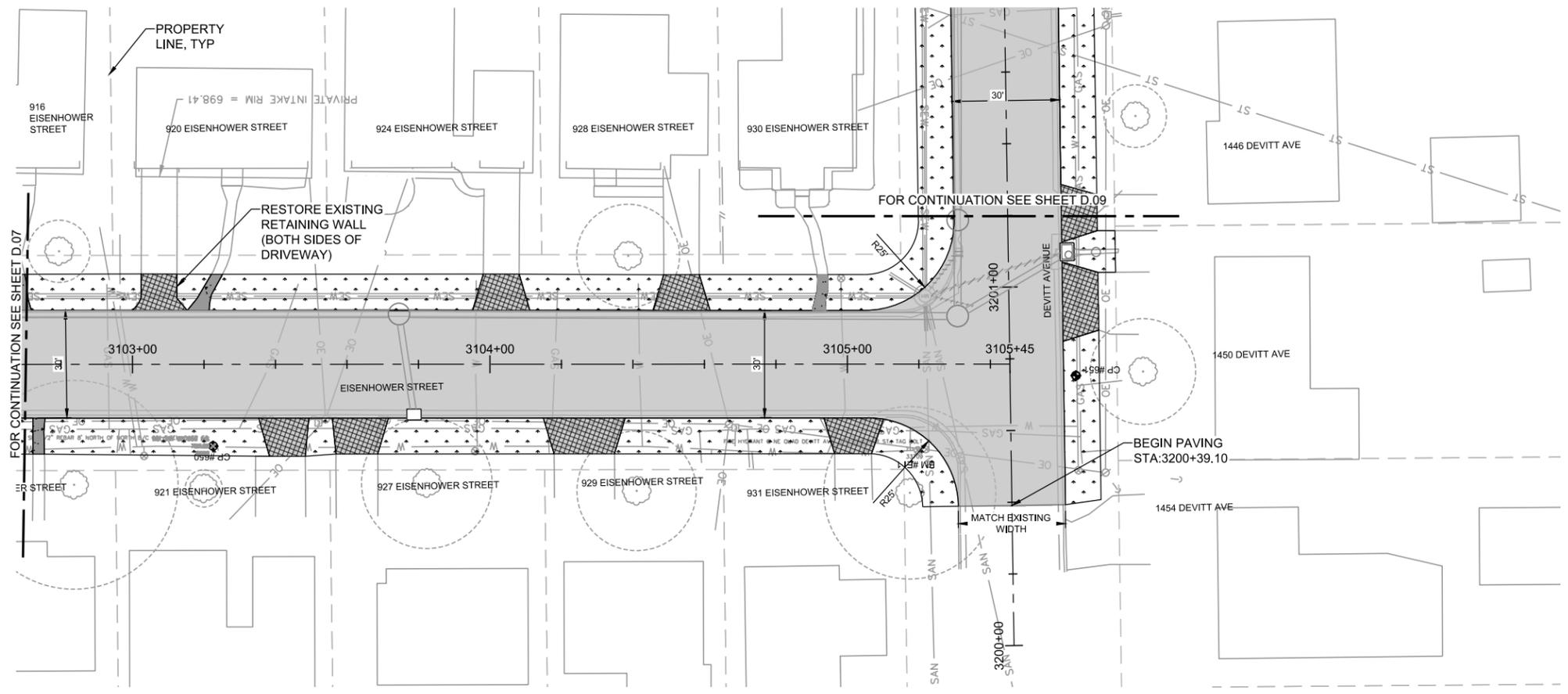
CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

**PAVEMENT
 PAVEMENT RESTORATION PLAN
 EISENHOWER ST**

DESIGNED <u>PM JOHNSON</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>KK HEIM</u>	D.07
APPROVED <u>PM JOHNSON</u>	0
DATE <u>MARCH 12, 2025</u>	



LADD D3-RS

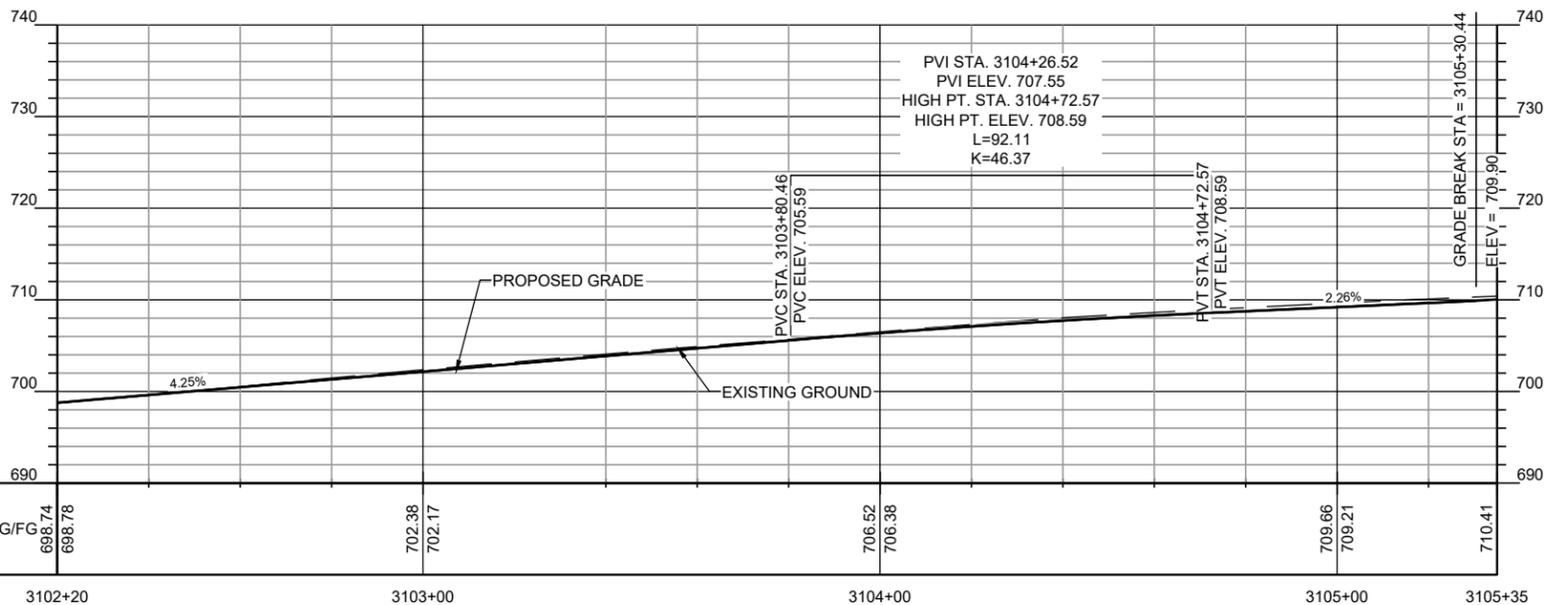


NOTES

- DEVITT AVE PAVEMENT CROSS SLOPE:
3.5% LEFT, 2% RIGHT

LEGEND

- 7" PCC PAVEMENT REPLACEMENT
- SIDEWALK REPLACEMENT
- DRIVEWAY AND ALLEY REPLACEMENT
- SEEDING
- DETECTABLE WARNING SURFACE



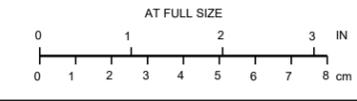
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**PAVEMENT
PAVEMENT RESTORATION PLAN
EISENHOWER ST & DEVITT AVE**

DESIGNED	PM JOHNSON	SCALE:	1" = 20'
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	KK HEIM	D.08	0
APPROVED	PM JOHNSON		
DATE	MARCH 12, 2025		

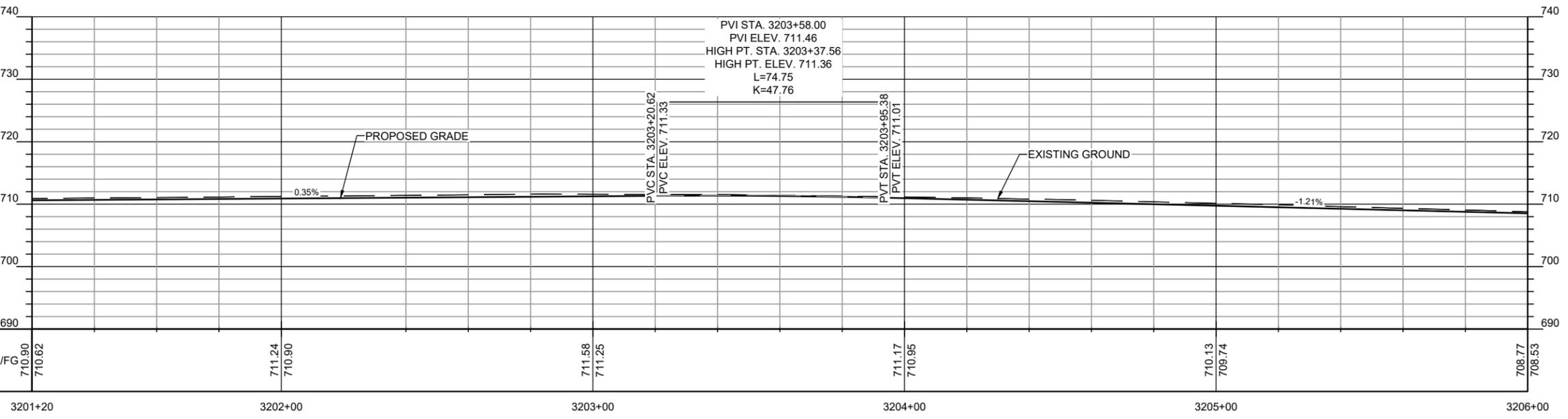
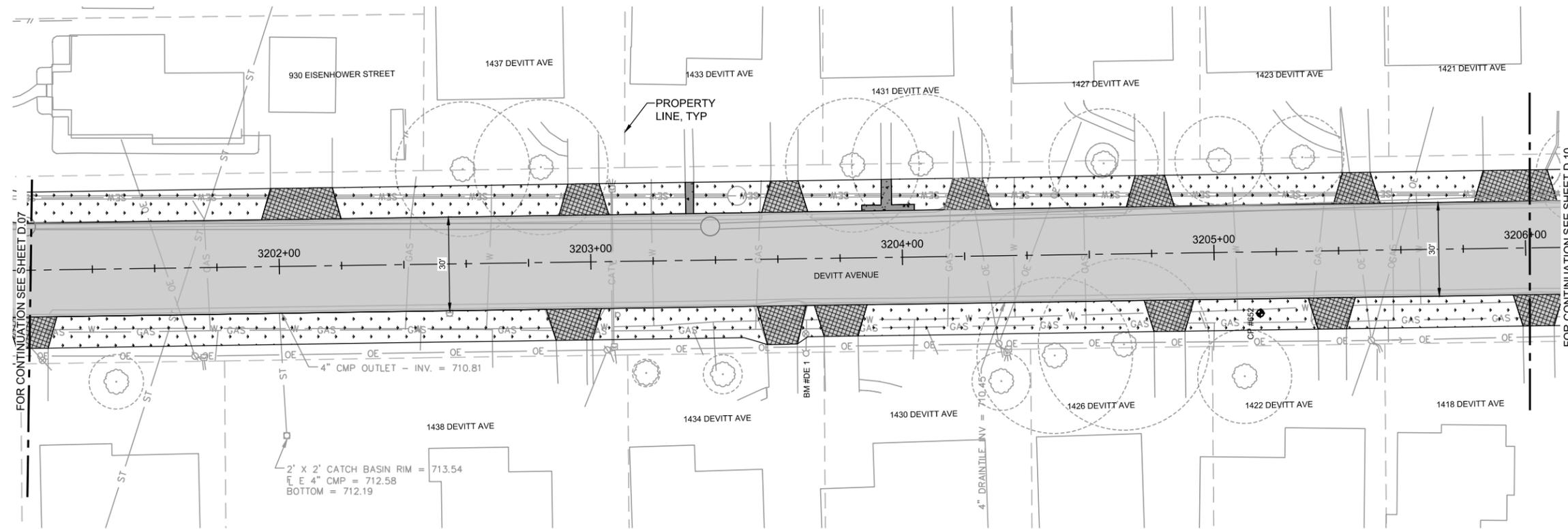


L:ADD D3-RS



NOTES

- DEVITT AVE PAVEMENT CROSS SLOPE:
3.5% LEFT, 2% RIGHT



LEGEND

- 7" PCC PAVEMENT REPLACEMENT
- SIDEWALK REPLACEMENT
- DRIVEWAY AND ALLEY REPLACEMENT
- SEEDING
- DETECTABLE WARNING SURFACE

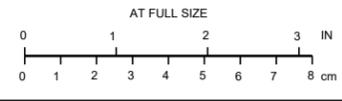
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

PAVEMENT PAVEMENT RESTORATION PLAN DEVITT AVE - SHEET 1

DESIGNED	PM JOHNSON	SCALE:	1" = 20'
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	KK HEIM	D.09	0
DATE	MARCH 12, 2025		

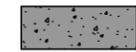
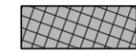
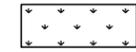
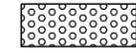


CADD D3-RS

NOTES

- DEVITT AVE PAVEMENT CROSS SLOPE:
3.5% LEFT, 2% RIGHT

LEGEND

-  7" PCC PAVEMENT REPLACEMENT
-  SIDEWALK REPLACEMENT
-  DRIVEWAY AND ALLEY REPLACEMENT
-  SEEDING
-  DETECTABLE WARNING SURFACE

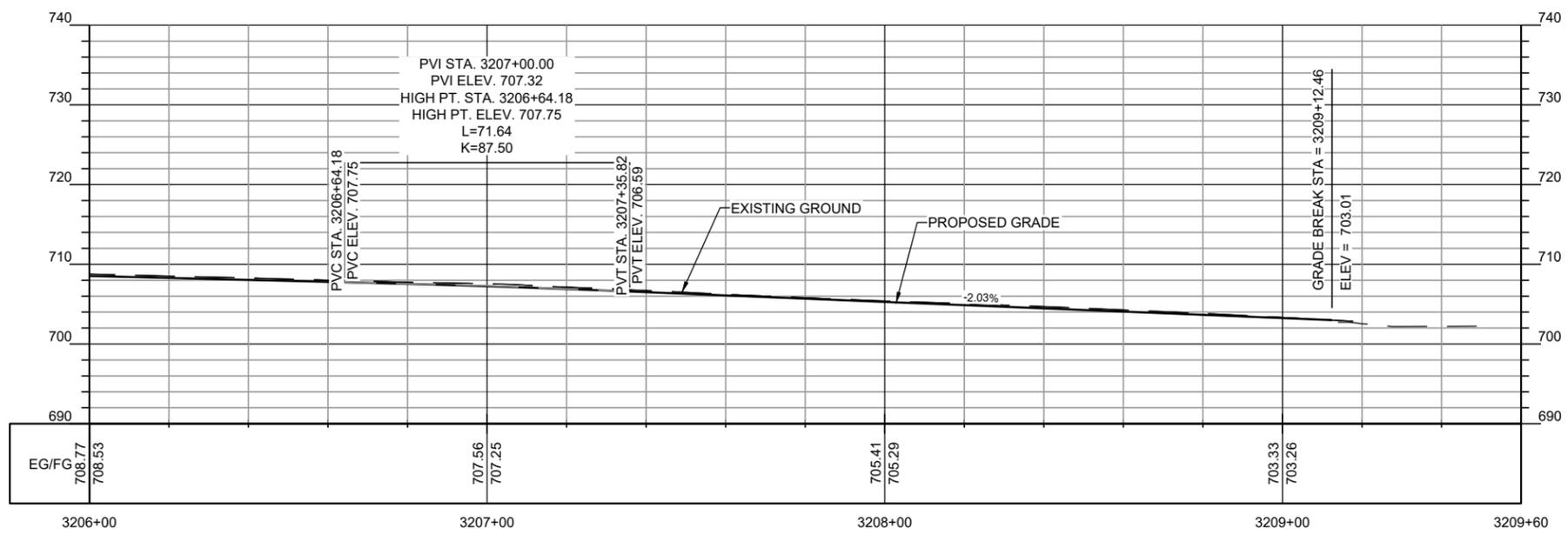
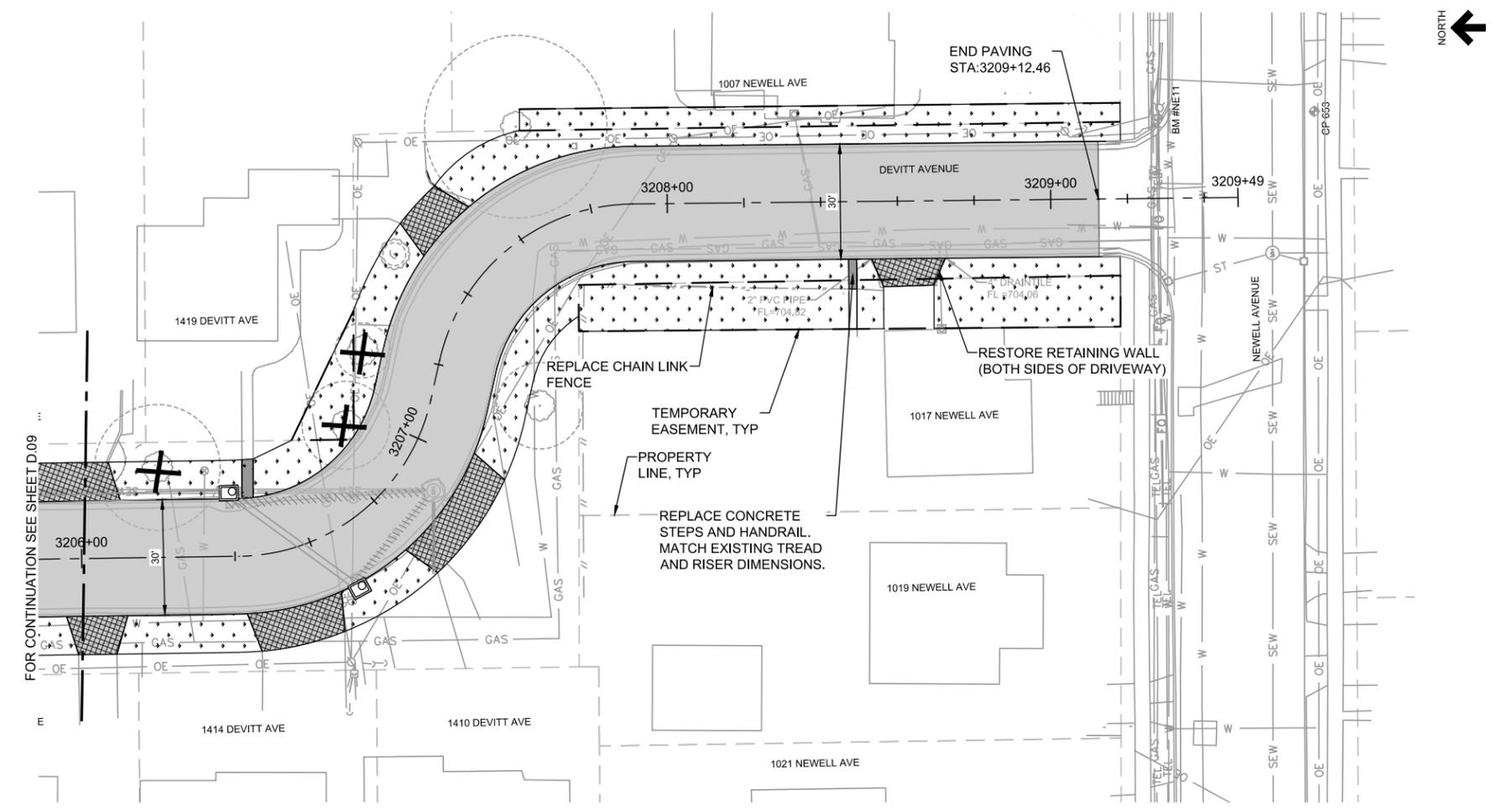
NO.	REVISIONS	DSGN	CHKD	APVD	DATE



CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

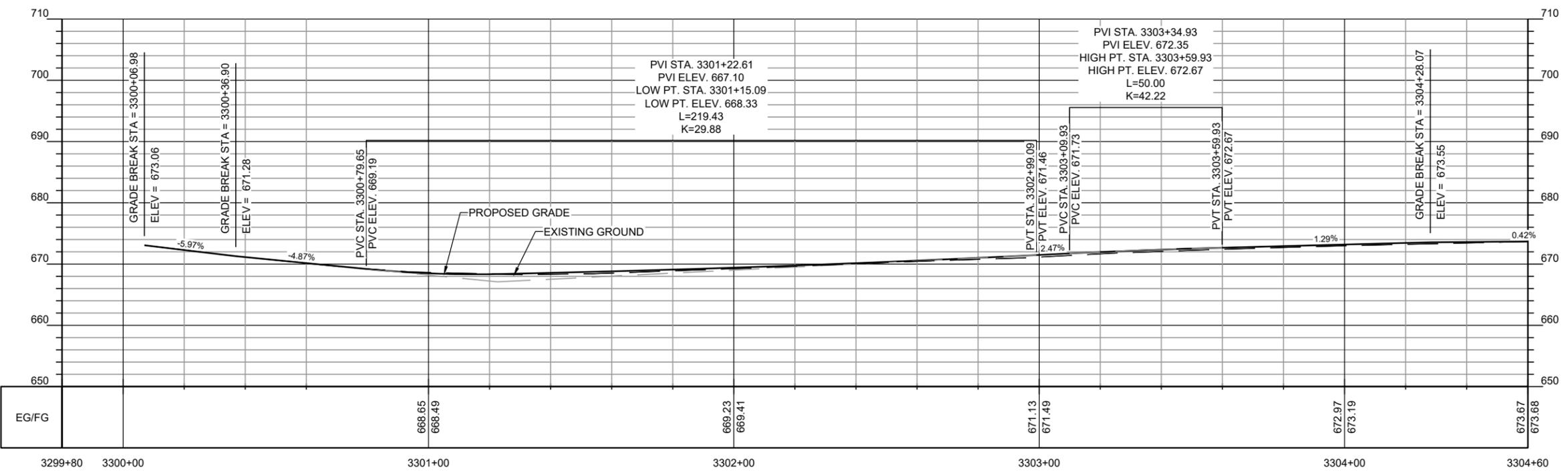
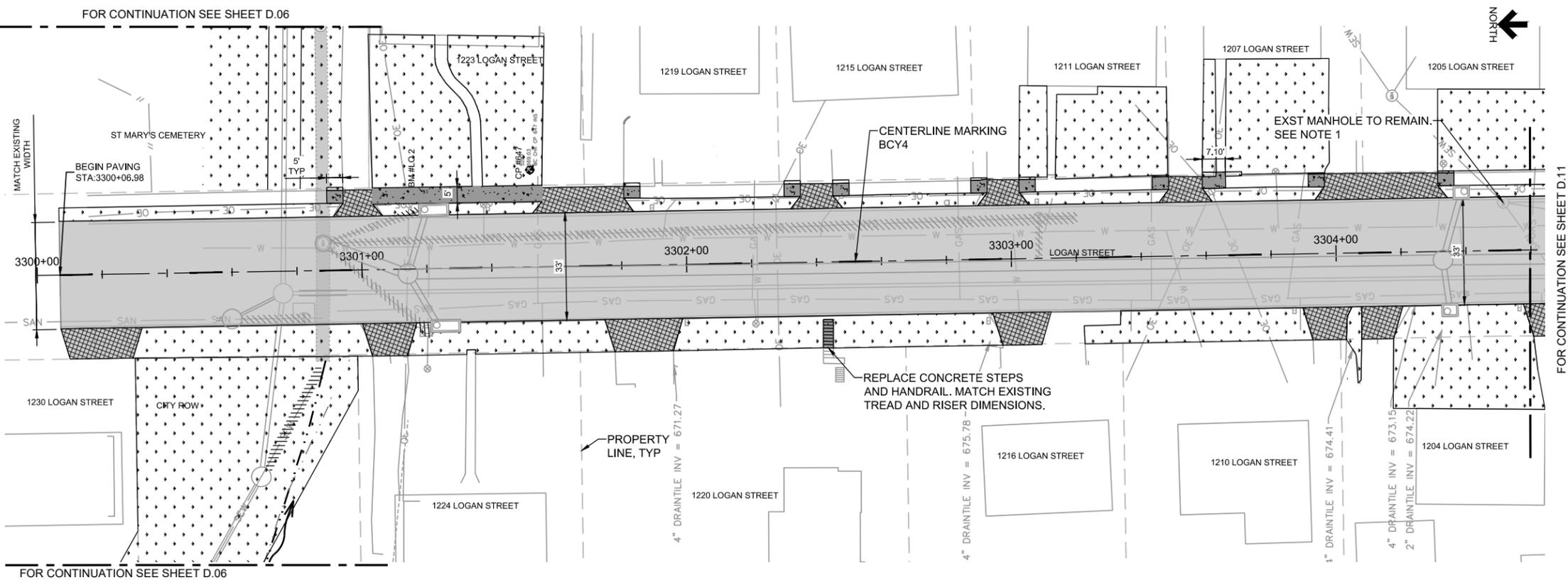
**PAVEMENT
PAVEMENT RESTORATION PLAN
DEVITT AVE - SHEET 2**

DESIGNED <u>PM JOHNSON</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV. <u>0</u>
APPROVED <u>KK HEIM</u>	
APPROVED <u>PM JOHNSON</u>	
DATE <u>MARCH 12, 2025</u>	



NOTES

1. LOCATE TRANSVERSE PAVING JOINTS TO PLACE MANHOLE WITHIN ONE PAVEMENT PANEL.
2. PRIVATE PROPERTY MAY BE DISTURBED FOR SANITARY SERVICE LINE WORK ON PROPERTIES OF 1223 LOGAN, 1211 LOGAN, 1207 LOGAN, 1205 LOGAN, 1204 LOGAN, AND 941 NEWELL. RESTORE AREA DISTURBED ON PRIVATE PROPERTY OUTSIDE OF ROW TO MATCH EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO SEEDING, LANDSCAPING, RETAINING WALLS, DRIVEWAYS, AND SIDEWALK REPLACEMENT.
3. LOGAN ST PAVEMENT CROSS SLOPE: 3% LEFT, 2% RIGHT



LEGEND

- 7" PCC PAVEMENT REPLACEMENT
- SIDEWALK REPLACEMENT
- DRIVEWAY AND ALLEY REPLACEMENT
- SEEDING
- DETECTABLE WARNING SURFACE

NO.	REVISIONS	DSGN	CHKD	APVD	DATE

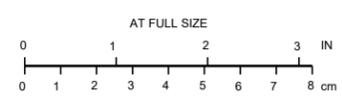


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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

PAVEMENT PAVEMENT RESTORATION PLAN LOGAN ST - SHEET 1

DESIGNED <u>PM JOHNSON</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>KK HEIM</u>	D.11
APPROVED <u>PM JOHNSON</u>	0
DATE <u>MARCH 12, 2025</u>	

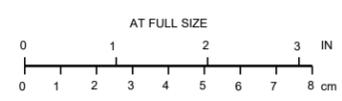
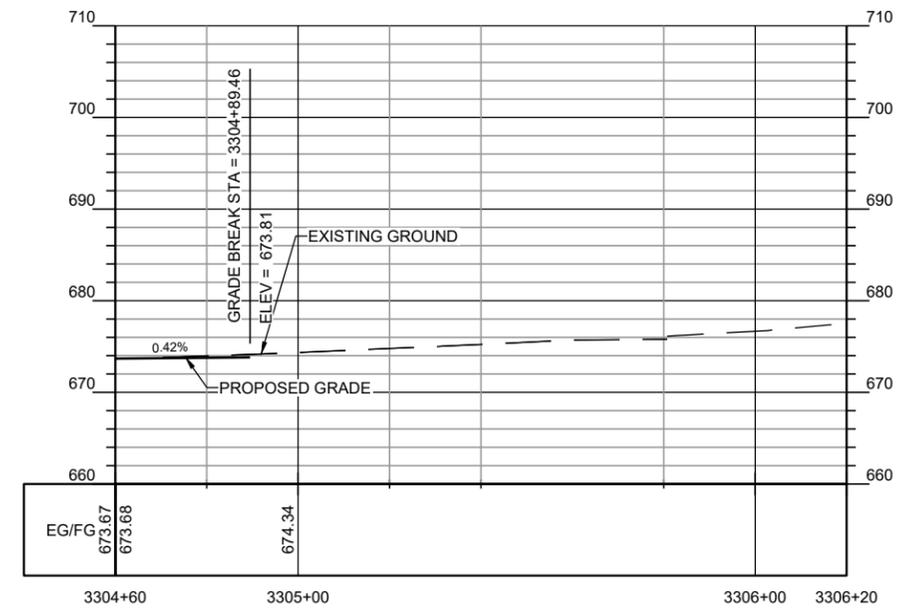
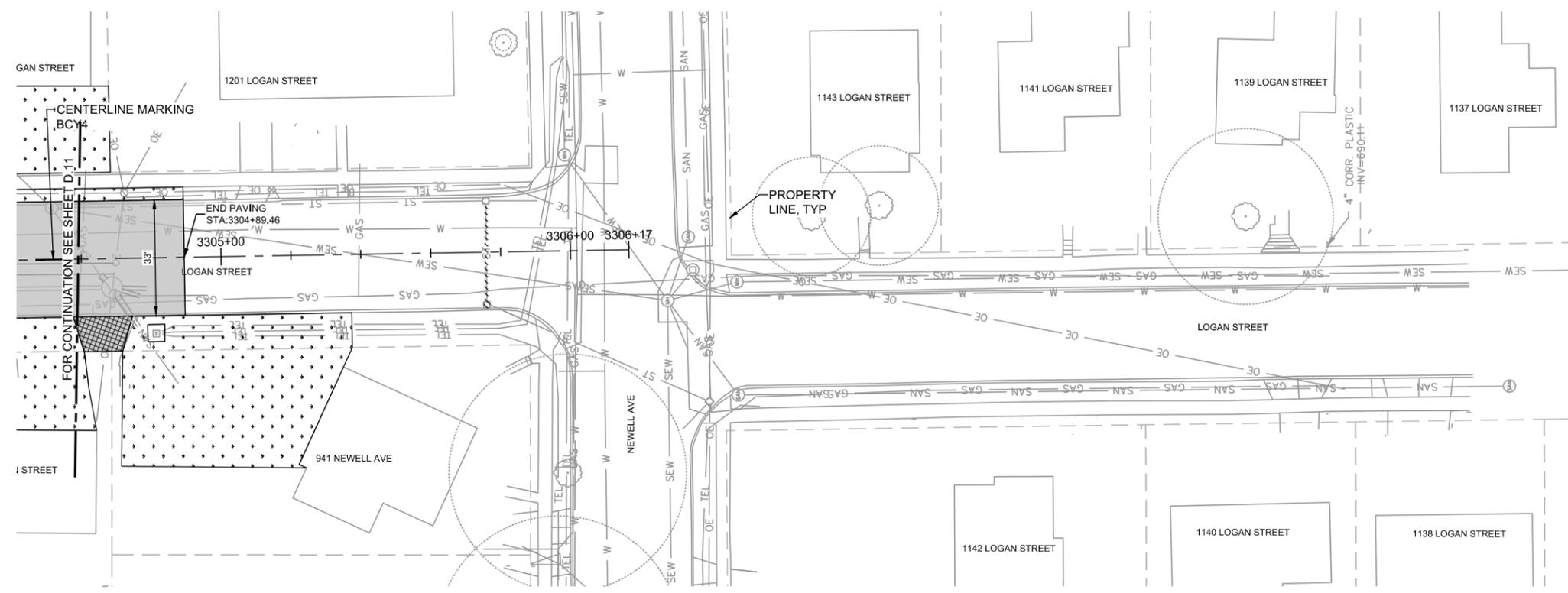


LADD D3-RS



NOTES

1. PRIVATE PROPERTY MAY BE DISTURBED FOR SANITARY SERVICE LINE WORK ON PROPERTIES OF 1223 LOGAN, 1211 LOGAN, 1207 LOGAN, 1205 LOGAN, 1204 LOGAN, AND 941 NEWELL. RESTORE AREA DISTURBED ON PRIVATE PROPERTY OUTSIDE OF ROW TO MATCH EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO SEEDING, LANDSCAPING, RETAINING WALLS, DRIVEWAYS, AND SIDEWALK REPLACEMENT.
2. LOGAN ST PAVEMENT CROSS SLOPE: 3% LEFT, 2% RIGHT



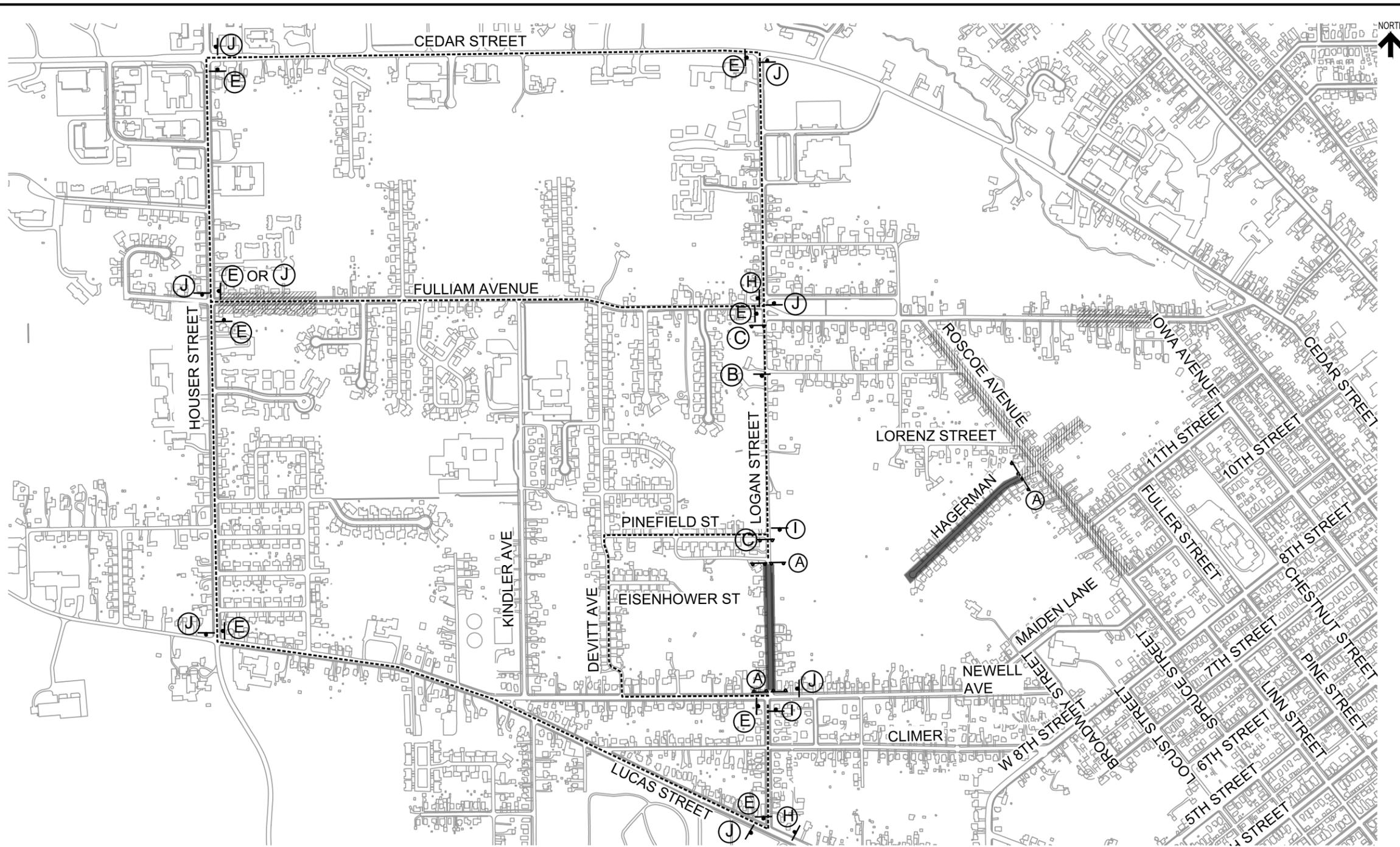
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

PAVEMENT PAVEMENT RESTORATION PLAN LOGAN ST - SHEET 2

DESIGNED <u>PM JOHNSON</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>KK HEIM</u>	D.12
APPROVED <u>PM JOHNSON</u>	0
DATE <u>MARCH 12, 2025</u>	



NOTES

TRAFFIC CONTROL LEGEND:

- AREA OF STREET CLOSURES OR CONCURRENT CONSTRUCTION
- R11-2 48"x30" **STREET CLOSED**
MOUNTED ABOVE ONE OF THE TYPE III BARRICADE (5'X10') (2 EACH)
- M4-9R 30"x24" **DETOUR** (Right arrow)
- M4-8 24"x12" M5-1L 21"x15" **DETOUR** (Left arrow)
- M4-8 24"x12" M5-1R 21"x15" **DETOUR** (Right arrow)
- M4-8 24"x12" M6-3 21"x15" **DETOUR** (Up arrow)
- M4-8a 24"x18" **END DETOUR**
- M4-9L 30"x24" **DETOUR** (Left arrow)
- W20-3 36"x36" **STREET CLOSED TO THRU TRAFFIC**
MOUNTED ABOVE TYPE III BARRICADE (5'X10') (1 REQUIRED)
CLOSED AT XXXX STREET
- W20-2 36"x36" **DETOUR AHEAD**
- SIGN POST TYPE III BARRICADE
- DETOUR ROUTE
- AREA OF CONCURRENT CONSTRUCTION BY OTHERS

1. MOUNT BELOW "STREET CLOSED TO THRU TRAFFIC" SIGN.
2. INSERT FOR "XXXX" THE APPROPRIATE CLOSURE LOCATION.

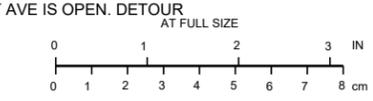
TRAFFIC CONTROL NOTES:

1. STREET CLOSURES THIS SHEET ARE LIMITED TO AREAS: HAGERMAN DR AND LOGAN ST.
2. MISSISSIPPI DRIVE CLOSURE - FLOOD DETOUR ROUTE "AND" DETOUR ROUTE FOR FLOOD - MISSISSIPPI DRIVE/EAST 2ND STREET CLOSURE MAY OCCUR WITHIN THE DOWNTOWN AREA.
3. ALL TRAFFIC ROUTING FOR THE WEST HILL CONSTRUCTION DETOURS SHALL BE COORDINATED WITH ANY OTHER DETOURS THAT MAY BE IN PLACE. THE FLOOD DETOUR PLANS MAY BE OBTAINED FROM THE CITY OF MUSCATINE PUBLIC WORKS.
4. "STREET CLOSED TO THRU TRAFFIC" SIGNS MOUNTED ON TYPE III BARRICADES (5'X10') SHALL BE ERECTED AT ALL STREETS/ALLEYS THAT ARE TO BE CLOSED DUE TO CONSTRUCTION. THESE SIGNS SHALL BE ERECTED AT THE NEAREST CROSS STREET/ALLEY FROM CONSTRUCTION ZONE.
5. SIDEWALKS THAT ARE TO BE CLOSED SHALL BE SIGNED APPROPRIATELY TO WARN PEDESTRIANS OF CLOSED SIDEWALK. SIGN INSTALLATIONS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 11TH EDITION AND SUDAS. ALTERNATE ROUTES SHALL BE PROVIDED WHERE SIDEWALKS ARE CLOSED. ALTERNATE

6. ROUTES SHALL COMPLY WITH PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
7. CONSTRUCTION SCHEDULE SHALL BE APPROVED BY THE CITY OF MUSCATINE. THE CONTRACTOR SHALL MODIFY THE CONSTRUCTION SCHEDULE AS REQUIRED BY THE CITY OF MUSCATINE.
8. NO PAVEMENT CONSTRUCTION SHALL BE INITIATED DURING THE LATE FALL AND WINTER MONTHS. CONSTRUCTION SHALL BE CONCLUDED BEFORE WINTER SHUT DOWN SO THAT ALL STREETS ARE OPEN TO TRAFFIC DURING THE WINTER MONTHS. CONTRACTOR SHALL NOT BE PAID FOR "WINTER PROTECTION" ACTIVITIES.
9. PARKING SPACES MAY BE REMOVED ALONG DETOUR ROUTES WHERE ADDITIONAL WIDTH OF TRAVEL WAY IS NEEDED FOR TURNING AND ROUTING OF VEHICLES. ALL CHANGES TO PARKING MUST BE COORDINATED WITH AND APPROVED BY THE CITY OF MUSCATINE. CONTRACTOR SHALL CONTACT CITY'S FIELD ENGINEERING REPRESENTATIVE, CITY OF MUSCATINE PUBLIC WORKS DEPT (563-263-8933), PRIOR TO IMPLEMENTING THE TRAFFIC CONTROL PLAN. CONTRACTOR TO PROVIDE TRAFFIC CONES WITH NO PARKING SIGNS.
10. LOCAL STREETS CLOSED DUE TO CONSTRUCTION SHALL BE

11. SIGNED FOR CLOSURES AS INDICATED ON PLANS. DETOURS FOR TRAFFIC SHALL BE SIGNED AS REQUIRED BY THE CITY OF MUSCATINE. CLOSURES AND DETOURS SIGN INSTALLATIONS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 11TH EDITION AND SUDAS.
12. TEMPORARY DRIVING SURFACE SHALL BE PROVIDED IMMEDIATELY AFTER THE TRENCH HAS BEEN FILLED WITH SUITABLE FILL MATERIAL TO OPEN INTERSECTIONS TO A MINIMUM OF ONE LANE TRAFFIC AS SOON AS POSSIBLE AFTER SEWER CONSTRUCTION.
13. ORANGE SAFETY FENCE SHALL BE ERECTED CURB TO CURB BEHIND THE "STREET CLOSED" SIGNS MOUNTED ON TYPE III BARRICADES WHICH ARE INSTALLED IMMEDIATELY ADJACENT TO THE CURRENT CONSTRUCTION ACTIVITIES.
14. ACCESS SHALL BE PROVIDED TO LOCAL RESIDENTS' HOMES, AS MUCH AS FEASIBLE, EITHER FROM ALLEY OR PARTIAL STREET CLOSURE.
15. ALL CHANGES TO THE TRAFFIC CONTROL PLAN SHALL BE COORDINATED WITH AND APPROVED BY THE CITY OF MUSCATINE. CONTRACTOR SHALL CONTACT CITY'S FIELD

16. ENGINEERING REPRESENTATIVE, CITY OF MUSCATINE PUBLIC WORKS (563-263-8933) PRIOR TO IMPLEMENTING CHANGES.
17. ADDITIONAL STANDARD MUTCD SIGNING WILL BE REQUIRED WHEN MORE THAN ONE AREA IS UNDER CONSTRUCTION AT ONE TIME.
18. CONTRACTOR SHALL RESTRICT PLACEMENT OF EQUIPMENT TO AREAS APPROVED BY THE CITY OF MUSCATINE. PAVEMENT OUTSIDE OF PROJECT SHALL BE PRESERVED. CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF PAVEMENT TO PRE-CONSTRUCTION CONDITION OR BETTER IF DAMAGE OCCURS DUE TO CONSTRUCTION ACTIVITIES. NO ADDITIONAL PAYMENT WILL BE MADE FOR RESTORATION OF PAVEMENT OUTSIDE OF WHAT IS SHOWN ON DRAWINGS.
19. LOGAN ST DETOUR UTILIZES CEDAR ST WHEN FULLIAM AVE IS CLOSED. DETOUR SIGNAGE SHOWN FOR BOTH SITUATIONS.
20. LOGAN ST LOCAL DETOUR UTILIZES PINEFIELD ST, DEVITT AVE, AND NEWELL AVE WHEN DEVITT AVE IS OPEN. DETOUR SIGNAGE NOT SHOWN FOR CLARITY.



NO.	REVISIONS	DSGN	CHKD	APVD	DATE

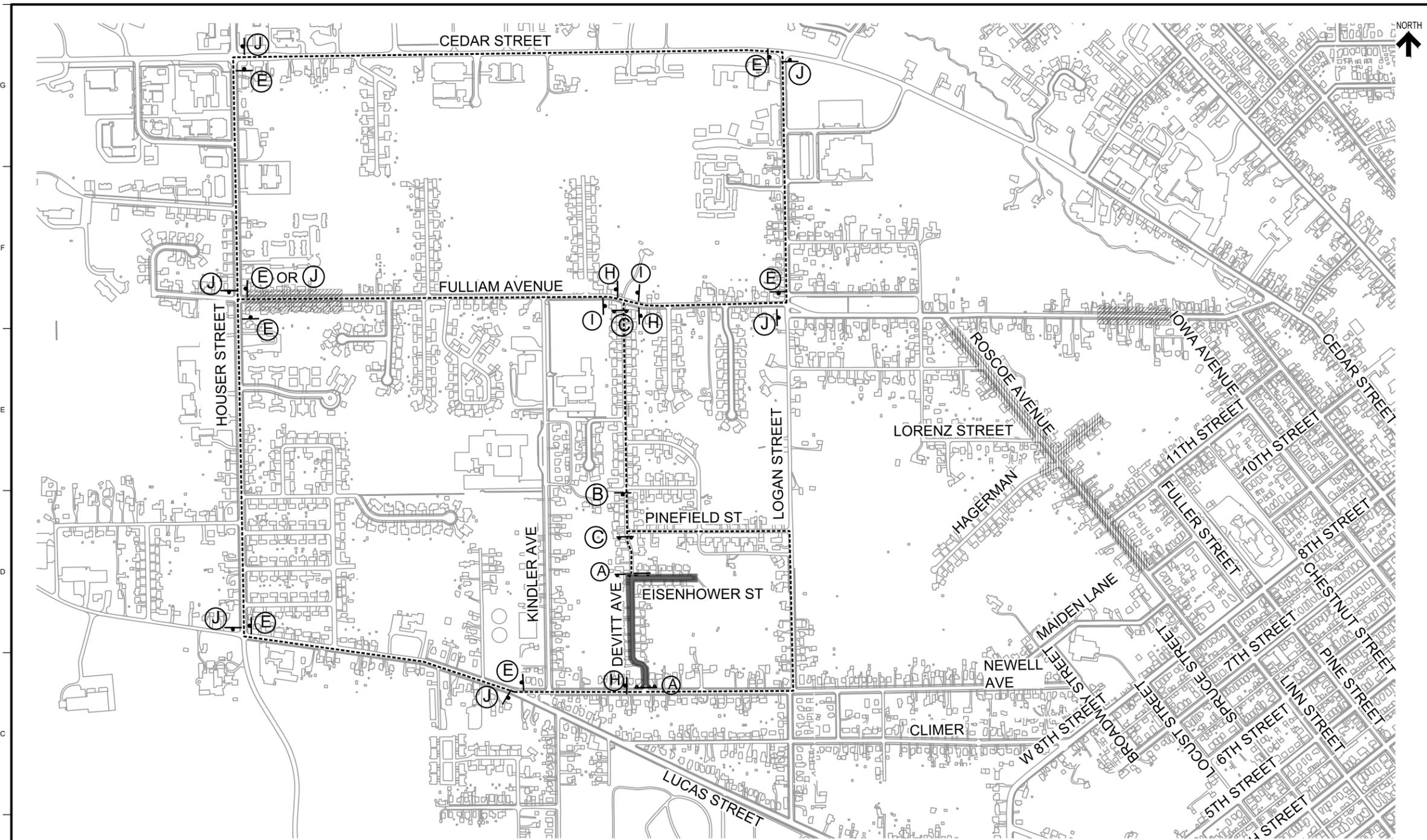
225 Iowa Avenue, Muscatine, Iowa 52761-3764
www.stanleyconsultants.com

CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**TRAFFIC CONTROL
HAGERMAN DR AND LOGAN ST**

DESIGNED: PM JOHNSON	SCALE: 1" = 400'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: KK HEIM	J.01
APPROVED: PM JOHNSON	0
DATE: MARCH 12, 2025	

LADD D3-RS



NOTES

TRAFFIC CONTROL LEGEND:

- AREA OF STREET CLOSURES OR CONCURRENT CONSTRUCTION
- R11-2 48"x30" **STREET CLOSED**
MOUNTED ABOVE ONE OF THE TYPE III BARRICADE (5'X10') (2 EACH)
- STREET CLOSED AHEAD**
W20-3 36"x36"
- R11-4 60"x30" **STREET CLOSED TO THRU TRAFFIC**
MOUNTED ABOVE TYPE III BARRICADE (5'X10') (1 REQUIRED)
CLOSED AT XXXX STREET
- DETOUR AHEAD**
W20-2 36"x36"
- M4-9R 30"x24" **DETOUR** (Right arrow)
- M4-8 24"x12" M5-1L 21"x15" **DETOUR** (Left arrow)
- M4-8 24"x12" M5-1R 21"x15" **DETOUR** (Right arrow)
- M4-8 24"x12" M6-3 21"x15" **DETOUR** (Up arrow)
- M4-8a 24"x18" **END DETOUR**
- M4-9L 30"x24" **DETOUR** (Left arrow)
- SIGN POST TYPE III BARRICADE
- DETOUR ROUTE
- AREA OF CONCURRENT CONSTRUCTION BY OTHERS

1. MOUNT BELOW "STREET CLOSED TO THRU TRAFFIC" SIGN.
2. INSERT FOR "XXXX" THE APPROPRIATE CLOSURE LOCATION.

TRAFFIC CONTROL NOTES:

1. STREET CLOSURES THIS SHEET ARE LIMITED TO AREAS: EISENHOWER ST AND DEVITT AVE.
2. REFER TO SHEET J.01 FOR ADDITIONAL TRAFFIC CONTROL NOTES.
3. DEVITT AVE DETOUR UTILIZES CEDAR ST WHEN FULLIAM AVE IS CLOSED. DETOUR SIGNAGE SHOWN FOR BOTH SITUATIONS.
4. DEVITT AVE LOCAL DETOUR UTILIZES PINEFIELD ST, LOGAN ST, AND NEWELL AVE WHEN LOGAN ST IS OPEN. DETOUR SIGNAGE NOT SHOWN FOR CLARITY.

NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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225 Iowa Avenue, Muscatine, Iowa 52761-3764
www.stanleyconsultants.com

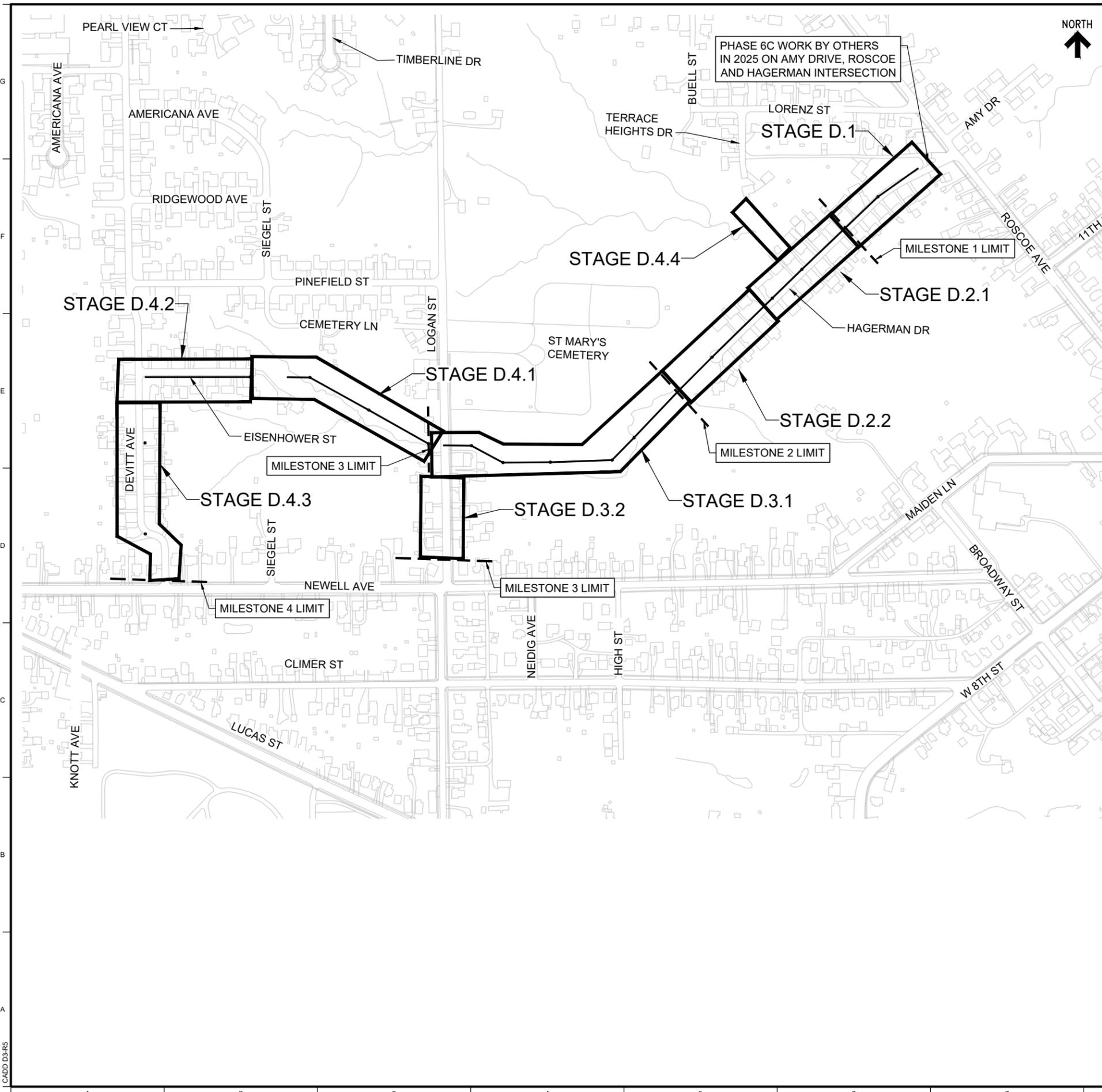
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**TRAFFIC CONTROL
EISENHOWER ST AND DEVITT AVE**

DESIGNED <u>PM JOHNSON</u>	SCALE: 1" = 400'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV. _____
APPROVED <u>KK HEIM</u>	J.02
APPROVED <u>PM JOHNSON</u>	DATE <u>MARCH 12, 2025</u>



LOAD D3-RS



GENERAL NOTES

1. PHASING AND STAGES SHOWN REPRESENT ONE WAY TO STAGE THE WORK. REFER TO CONTRACT MILESTONES AND PHASING CONSTRAINTS IN THE CONTRACT DOCUMENTS FOR REQUIREMENTS.

STAGING CONSTRAINTS

1. AT NO TIME DURING CONSTRUCTION SHALL MORE THAN 2 BLOCKS (800') BE CLOSED TO TRAFFIC UNLESS AUTHORIZED BY THE CITY.
2. INSTALLATION OF TEMPORARY DRIVING SERVICES BEHIND THE TRENCH AND AT DRIVEWAYS IS ACCEPTABLE PENDING AUTHORIZATION FROM THE CITY. TEMPORARY DRIVING SURFACES INSTALL BEFORE PAVING ARE CONSIDERED INCIDENTAL TO CONTRACT COSTS. COORDINATE WITH CITY FOR AVAILABILITY OF CITY'S MILLINGS FOR TEMPORARY SURFACING OR TRANSITIONS TO UNEVEN DRIVING SURFACES.
3. COORDINATE CONSTRUCTION PHASING WITH PHASE 6C CONTRACTOR INSTALLING WORK ON ROSCOE AVE, AMY DRIVE, HAGERMAN DR IN 2025. COORDINATE WITH PHASE 6AB CONTRACTOR WORKING ON FULLIAM EAST OF ROSCOE IN 2025. COORDINATE WITH FUTURE FULLIAM AVE RECONSTRUCTION CONTRACTOR WORKING IN SUMMER 2025 BETWEEN 2716 WEST FULLIAM AVENUE AND HOUSER.
4. COORDINATE CONSTRUCTION PHASING WITH MPW CONSTRUCTION CREW AND UTILITY COMPANY CREWS PERFORMING RELOCATIONS OR WORK IN THE PROJECT AREA.
5. CONTRACTOR TO SUBMIT REQUESTS FOR CHANGES TO STAGING PLAN WHICH MUST BE APPROVED PRIOR TO PROCEEDING. ADDITIONAL COSTS INCURRED TO SEQUENCE WORK DIFFERENTLY SHALL NOT BE CHARGED TO THE CITY.
6. CUTTING OF TREES 3-INCH AND LARGER MUST OCCUR BETWEEN OCTOBER 1 AND MARCH 31 ST IN WOODED AREA BETWEEN HAGERMAN DRIVE AND EISENHOWER STREET. TREE CUTTING IN THIS AREA WILL BE PERFORMED BY OTHERS BY MARCH 31, 2025. STREET TREES IN URBAN AREAS ARE CONSIDERED UNSUITABLE BAT HABITAT AND CAN BE CUT YEAR ROUND.
7. MAINTAIN LOCAL ACCESS TO DEAD ENDS, HAGERMAN DRIVE AND EISENHOWER ST. IF THE INTERSECTION OF HAGERMAN AND ROSCOE IS BLOCKED, ALLEY ACCESS FROM HAGERMAN DRIVE TO ALLEY TO TERRACE HEIGHTS DR TO THE NORTH MAY BE UTILIZED.

STAGING REQUIREMENTS

1. COMPLETE STAGE D.1 PIPING AND PAVING BY MILESTONE 1 (AUGUST 1, 2025). LIMITED TO NO WORK IS ALLOWED IN OTHER STAGES UNTIL COMPLETION OF THIS STAGE.
2. COMPLETE STAGE D.2.1 AND D.2.2 PIPING AND PAVING ON HAGERMAN, BY MILESTONE 2 (NOVEMBER 28, 2025).
3. COMPLETE STAGE D.3.1 AND D.3.2 PIPING THROUGH PRIVATE PROPERTY AND TO LOGAN ST MANHOLE SS D20 BY MILESTONE 3 (APRIL 17, 2026).
 - A. STAGE D.3.1 AND D.3.2 PIPE WORK CAN BEGIN BEFORE COMPLETION OF HAGERMAN PAVING.
 - B. CONTRACTOR IS ENCOURAGED TO COMPLETE STAGE D.3.1 AND D.3.2 PIPE WORK BEFORE WINTER WEATHER SHUTDOWNS FOR 2025.
4. COMPLETE ALL REMAINING WORK INCLUDING STAGES D.4.1 THROUGH PRIVATE PROPERTY, AND STAGES D.4.2 AND D.4.3 ON EISENHOWER AND DEVITT BY MILESTONE 4 (NOVEMBER 29, 2026 SUBSTANTIAL COMPLETION AND DECEMBER 31, 2026 FINAL COMPLETION).
 - A. SEWER LINING WORK ON EISENHOWER AND DEVITT CAN OCCUR WHILE OTHER STAGES ARE BEING COMPLETED IF WORK CAN BE COMPLETED WITH NO STREET CLOSURES. CITY MUST AUTHORIZE START OF LINING AND PUBLIC MUST BE NOTIFIED.
 - B. STAGE D.4.4 WORK START DATE MUST BE AUTHORIZED BY THE CITY. WORK MAY OCCUR DURING THE 2026 CONSTRUCTION SEASON.

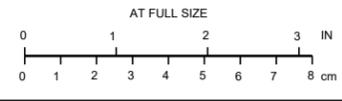
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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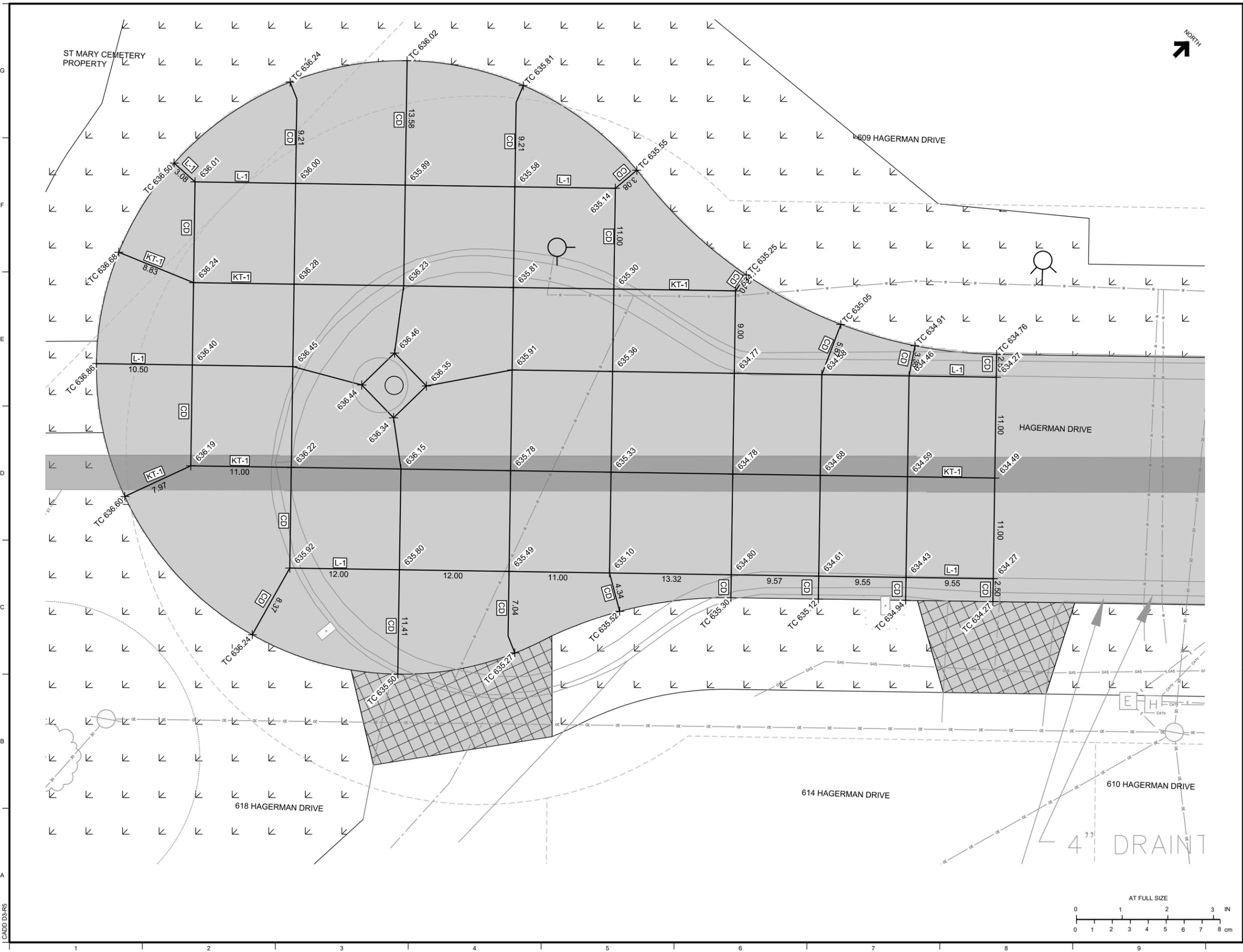
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

STAGING PLAN

DESIGNED <u>KK HEIM</u>	SCALE: AS NOTED
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV. <u>0</u>
APPROVED <u>JM BRADY</u>	
APPROVED <u>KK HEIM</u>	
DATE <u>MARCH 12, 2025</u>	



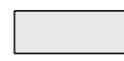
LOAD D3-RS



NOTES

1.

LEGEND

-  7" PCC PAVEMENT REPLACEMENT
-  SIDEWALK REPLACEMENT
-  DRIVEWAY AND ALLEY REPLACEMENT
-  SEEDING
-  DETECTABLE WARNING SURFACE

NO.	REVISIONS	DSGN	CHKD	APVD	DATE

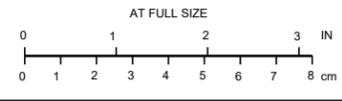


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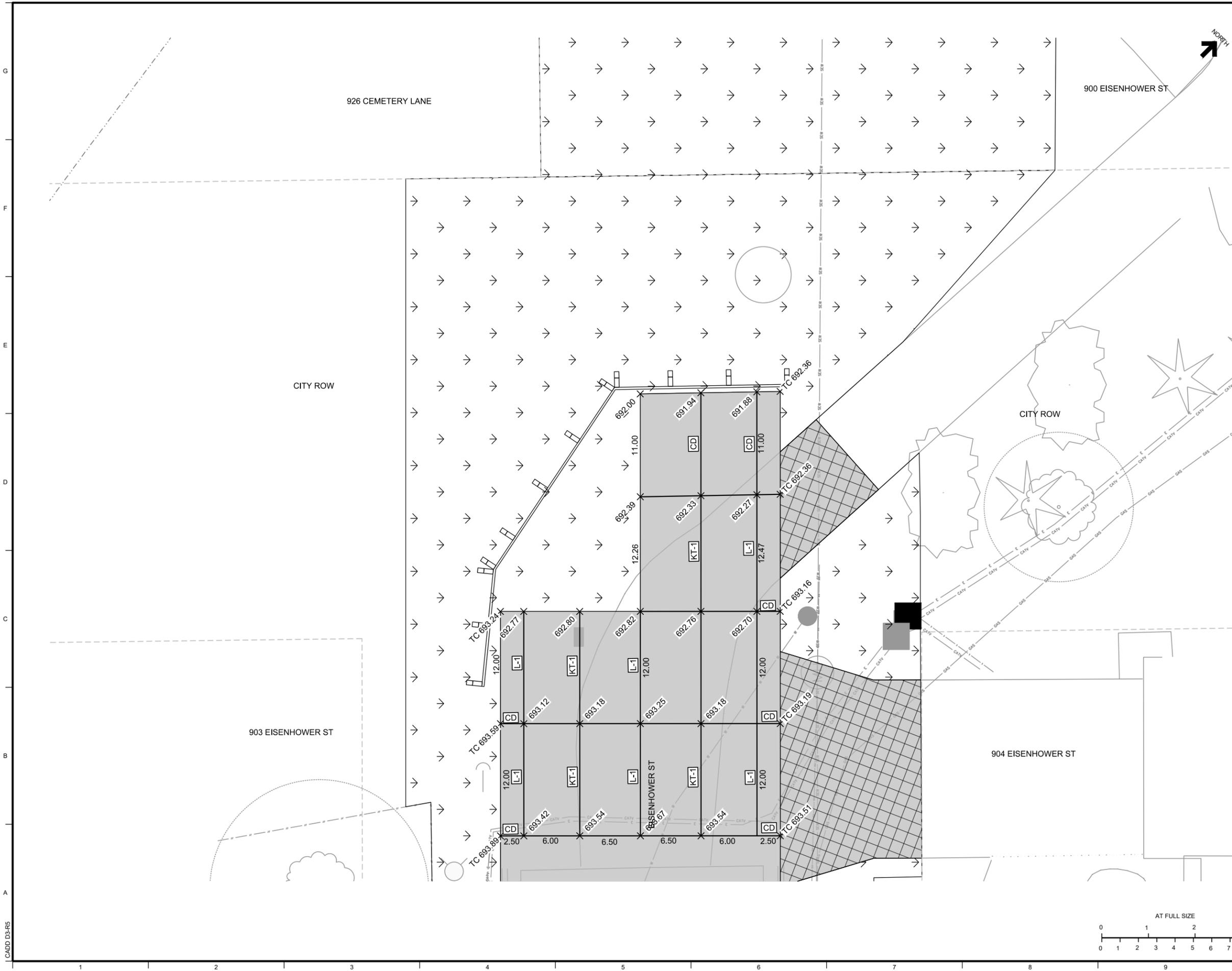
CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

**JOINTING PLANS
 HAGERMAN DRIVE CULDESAC**

DESIGNED <u>PM JOHNSON</u>	SCALE: 1" = 5'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>KK HEIM</u>	L.01
APPROVED <u>PM JOHNSON</u>	0
DATE <u>MARCH 12, 2025</u>	



LADD D3-RS



NOTES

1.

LEGEND

-  7" PCC PAVEMENT REPLACEMENT
-  SIDEWALK REPLACEMENT
-  DRIVEWAY AND ALLEY REPLACEMENT
-  SEEDING
-  DETECTABLE WARNING SURFACE

NO.	REVISIONS	DSGN	CHKD	APVD	DATE

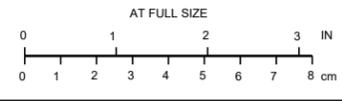


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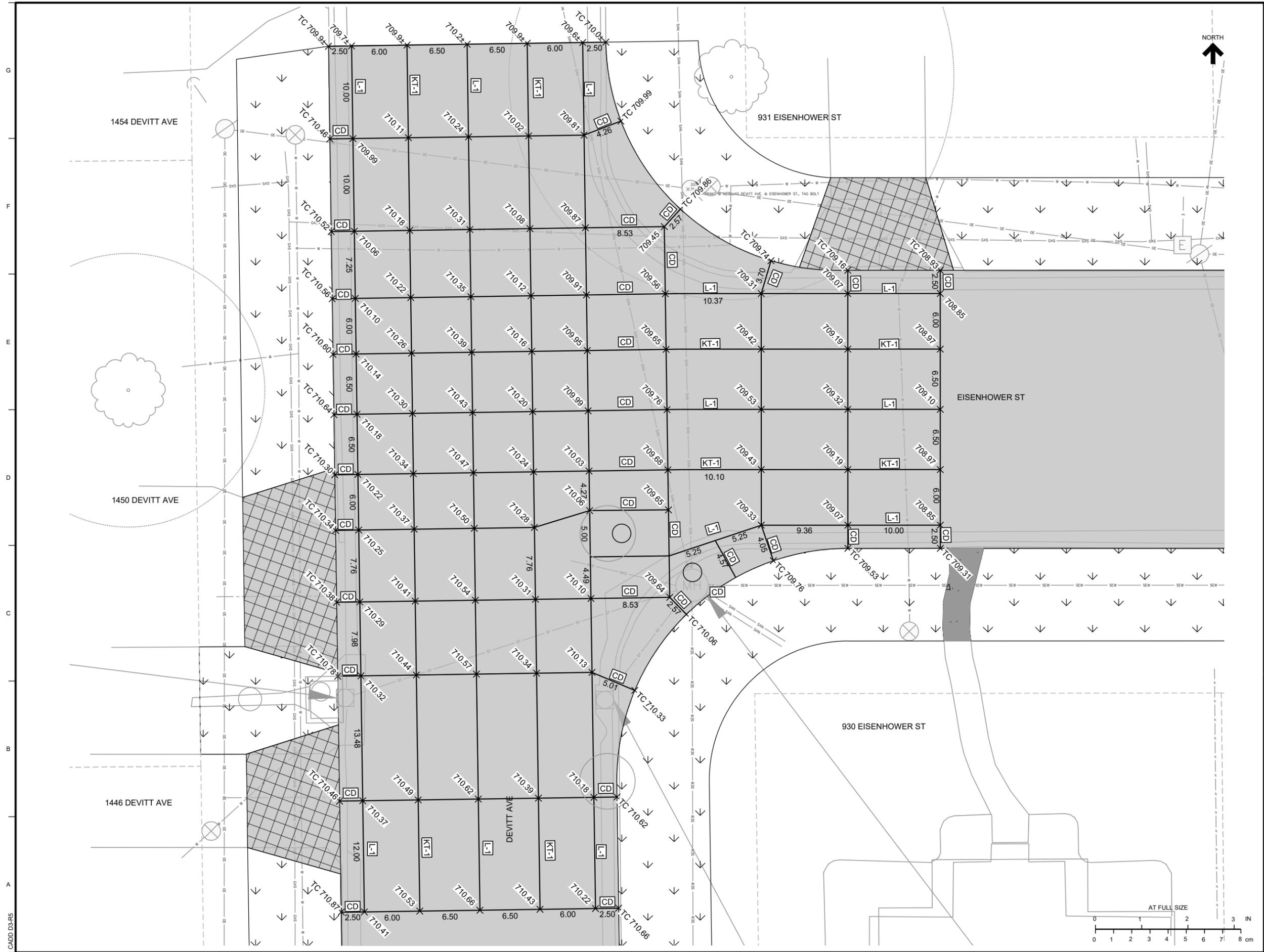
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**JOINTING PLANS
EAST END OF EISENHOWER ST**

DESIGNED <u>PM JOHNSON</u>	SCALE: 1" = 5'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>KK HEIM</u>	L.02
APPROVED <u>PM JOHNSON</u>	0
DATE <u>MARCH 12, 2025</u>	



LADD D3-RS



NOTES

- 1.

LEGEND

- 7" PCC PAVEMENT REPLACEMENT
- SIDEWALK REPLACEMENT
- DRIVEWAY AND ALLEY REPLACEMENT
- SEEDING
- DETECTABLE WARNING SURFACE

NO.	REVISIONS	DSGN	CHKD	APVD	DATE

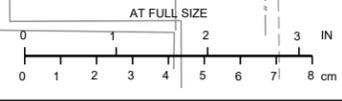


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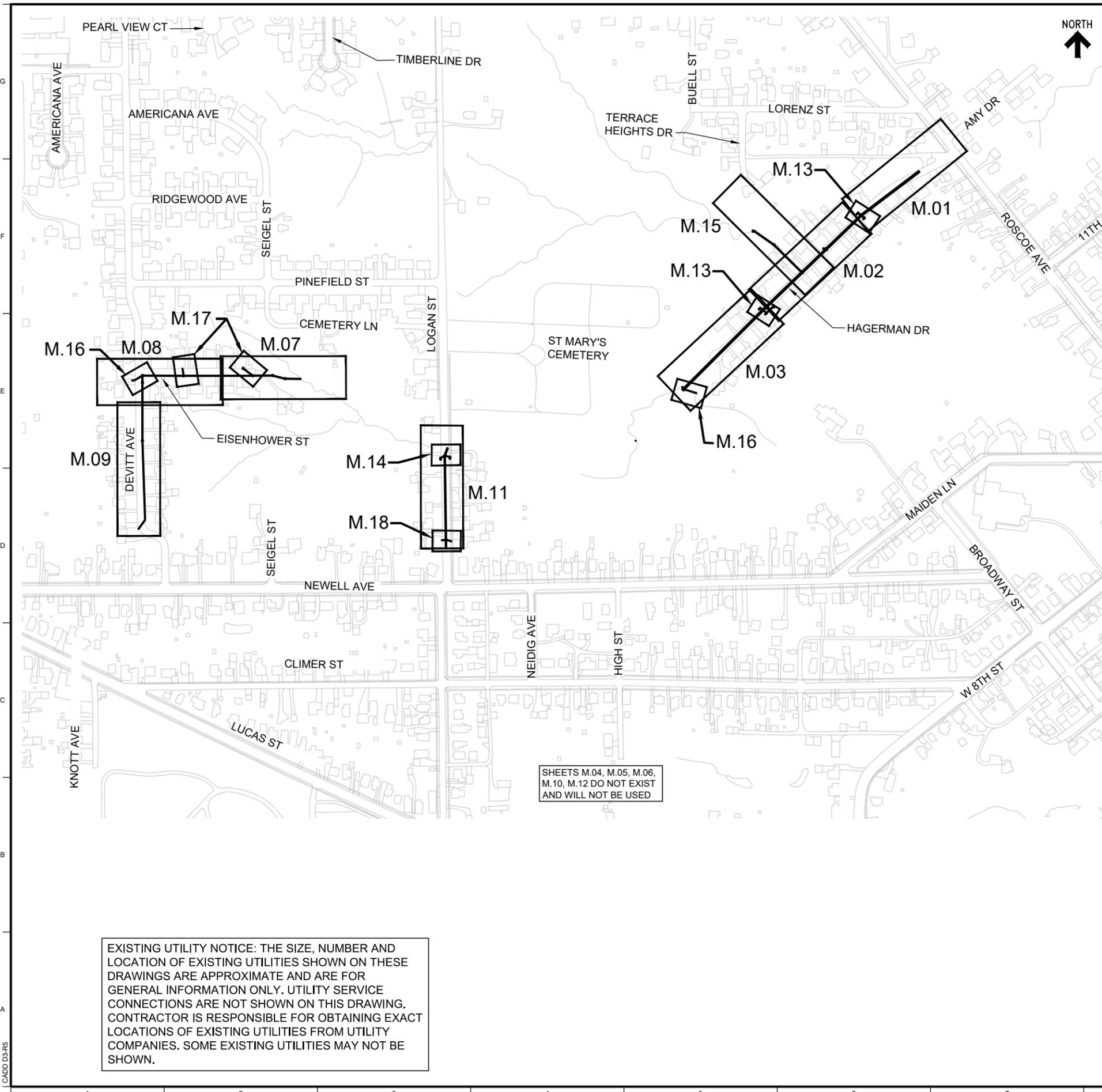
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**JOINTING PLANS
EISENHOWER ST & DEVITT ST
INTERSECTION**

DESIGNED <u>PM JOHNSON</u>	SCALE: 1" = 5'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>KK HEIM</u>	L.03
APPROVED <u>PM JOHNSON</u>	0
DATE <u>MARCH 12, 2025</u>	



LCADD D3-RS

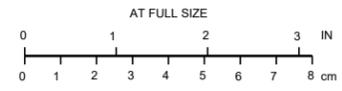


GENERAL NOTES

1. SHEETS M.04, M.05, M.06, M.10, M.12 DO NOT EXIST AND WILL NOT BE USED.
2. KEY PLAN DRAWING SHOWS PROPOSED STORM SEWERS SCHEMATICALLY ONLY. EXISTING UTILITIES ARE NOT SHOWN.
3. PROPOSED SANITARY SEWER IS SHOWN ON MSA SERIES DRAWINGS. REFER TO MSA.00 FOR GENERAL NOTES FOR SANITARY AND STORM SEWER CONSTRUCTION REQUIREMENTS.
4. STORM CONNECTION SHALL NOT BE MADE TO EXISTING OR NEW SANITARY SEWERS.
5. RIM ELEVATIONS OF MANHOLES ARE BASED ON PROPOSED GRADE ELEVATIONS WHERE PROPOSED SURFACE IS AVAILABLE. OTHER LOCATIONS SHALL MATCH EXISTING CONDITIONS. RIM ELEVATIONS SHALL BE ADJUSTED TO MATCH ELEVATIONS OF AS PLACED PAVEMENT.
6. PROPOSED INLET RIM ELEVATIONS ARE TAKEN FROM PROPOSED OR EXISTING SURFACE IN THE MIDDLE OF THE STRUCTURE. CENTER OF STRUCTURE PLACEMENT FOR SW-501 AND SW-502 STYLE INLETS IS 1' IN FRONT OF BACK OF CURB. FOR SW-507 AND SW-509 STYLE INLETS CENTER OF STRUCTURE IS 1.5' BEHIND BACK OF CURB. RIM ELEVATIONS SHALL BE ADJUSTED TO MATCH ELEVATIONS OF AS PLACED PAVEMENT.
7. MAINTAIN REQUIRED CLEARANCE BETWEEN WATER MAIN AND NEW STORM SEWER. SEE WATER MAIN CROSSING CRITERIA SUMMARIZED ON SHEET A.05.
8. REFER TO SUDAS DETAILS APPLICABLE TO PROJECT SUMMARIZED ON DRAWING A.03 TABLE AND ADDITIONAL PIPE DETAILS ON A SERIES SHEETS.
9. REFER TO C SERIES TABLES FOR INLET STRUCTURE TYPE AND CASTING/GRATE TYPE.
10. SHADING ON M SERIES STORM INLET BLOW UPS REPRESENTS PROPOSED PAVEMENT.
11. CONTRACTOR TO SEQUENCE WORK AND SUBMIT PLAN FOR REVIEW ON MAINTAINING COMBINED AND SANITARY SEWAGE, AND STORM WATER FLOW DURING CONSTRUCTION. TEMPORARY PIPE CONNECTIONS, SANDBAGGING, OR BYPASS PUMPING MAY BE NEEDED.
12. SEE J SHEETS FOR TRAFFIC CONTROL AND STAGING PLANS.
13. TEMPORARY AND PERMANENT EASEMENT LIMITS ARE SHOWN ON SANITARY SEWER (MSA) SHEETS. CONTRACTOR IS REQUIRED TO STAY WITHIN EASEMENTS AND CONSTRUCTION LIMITS. STAKING OF EASEMENTS AND CONSTRUCTION LIMITS IS THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR TO UTILIZE LICENSED SURVEYOR FOR CONSTRUCTION STAKING. EASEMENT EXHIBITS, PLATS, AND SHAPES CAN BE PROVIDED ELECTRONICALLY TO CONTRACTOR.
14. SUBDRAIN IS NOT SHOWN ON PLAN DRAWINGS. SUBDRAIN IS REQUIRED UNDER PAVEMENT ACCORDING TO DETAIL ON SHEET B.01 AND ESTIMATE REFERENCE NOTES. SUBDRAIN SHALL BE OUTLET TO NEAREST INLET.
15. SEE WATER SHEETS FOR PROPOSED WATER WORK UNDER THIS CONTRACT.

SHEETS M.04, M.05, M.06, M.10, M.12 DO NOT EXIST AND WILL NOT BE USED

EXISTING UTILITY NOTICE: THE SIZE, NUMBER AND LOCATION OF EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND ARE FOR GENERAL INFORMATION ONLY. UTILITY SERVICE CONNECTIONS ARE NOT SHOWN ON THIS DRAWING. CONTRACTOR IS RESPONSIBLE FOR OBTAINING EXACT LOCATIONS OF EXISTING UTILITIES FROM UTILITY COMPANIES. SOME EXISTING UTILITIES MAY NOT BE SHOWN.



NO.	REVISIONS	DSGN	CHKD	APVD	DATE
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CITY OF MUSCATINE - PHASE 6D WEST HILL AREA SANITARY AND STORM SEWER SEPARATION MUSCATINE, IOWA					
OVERALL STORM SEWER KEY PLAN					
DESIGNED <u>KK HEIM</u>		SCALE: AS NOTED			
DRAWN <u>GM REEVES</u>		NO. 17660.60.30		REV.	
CHECKED <u>ER SCHALLERT</u>					
APPROVED <u>JM BRADY</u>					
APPROVED <u>KK HEIM</u>					
DATE <u>MARCH 12, 2025</u>				M.00	
				0	

LADD D3-RS

NOTES

- LOCATE END OF NEW CONSTRUCTION FROM PREVIOUS PHASE 6C AND CONTINUE REPLACEMENT OF EXISTING UWBS WITH NEW STORM PIPE. ELLIPTICAL PIPE MAY BE COLLARED TO EXISTING UWBS. REMOVE COLLAR AND CONTINUE INSTALLATION OF ELLIPTICAL PIPE.

INSTALL NEW 48-INCH HORIZONTAL ELLIPTICAL RCP PIPE TO REPLACE EXISTING UWBS. INSTALL ELLIPTICAL PIPE WITH 60-INCH DIMENSION HORIZONTALLY AND 38-INCH DIMENSION VERTICALLY. PROTECT EXISTING UTILITY SERVICES CROSSING ABOVE AND BELOW THE EXISTING UWBS.

INSTALL NEW STORM ON ALIGNMENT SHOWN. REMOVE EXISTING UWBS IN ITS ENTIRETY AS WORK PROGRESSES. MAINTAIN FLOW OF EXISTING COMBINED SEWAGE AT ALL TIMES. PROVIDE BYPASS PUMPING OR TEMPORARY PIPING CONNECTION AS NEEDED. PROTECT EXISTING AND PROPOSED SANITARY CONNECTIONS TO UWBS AND PREVENT SURCHARGING AND BACKUPS INTO SANITARY SERVICE LATERALS OR HOMES.
- PROTECT EXISTING GAS LINE. COORDINATE PROTECTION AND ANY RELOCATION WITH GAS COMPANY.
- TYPICAL ON ALL STORM SEWER PROFILES, AN APPROXIMATION OF SANITARY SERVICES LOCATION AND ELEVATION IS SHOWN. ACTIVE SANITARY SERVICES CONNECTED TO UWBS SHALL BE DISCONNECTED AND CONNECTED TO NEW SANITARY. SERVICES MAY REQUIRE TRENCHLESS CONSTRUCTION UNDER EXISTING UWBS OR NEW STORM.
- PROTECT EXISTING WATER AND GAS SERVICES. RELOCATE WATER SERVICES IF NEEDED ACCORDING TO DETAIL ON SHEET A.05.
- COMBINED SEWAGE FLOWS DURING DRY WEATHER IN THE UWBS ARE TYPICALLY A FEW INCHES DEEP. DURING AN EXTREME WET WEATHER EVENT, FLOWS COULD BE NEAR SEWER CAPACITY.
- TYPICAL ALL PRIVATE DRAIN CONNECTIONS TO STREET GENERALLY SHOULD NOT BE CONNECTED TO STREET UNLESS AUTHORIZED BY THE CITY. CURB OPENING CASTINGS CAN BE USED ONLY IF CITY AUTHORIZES.

NO.	REVISIONS	DSGN	CHKD	APVD	DATE

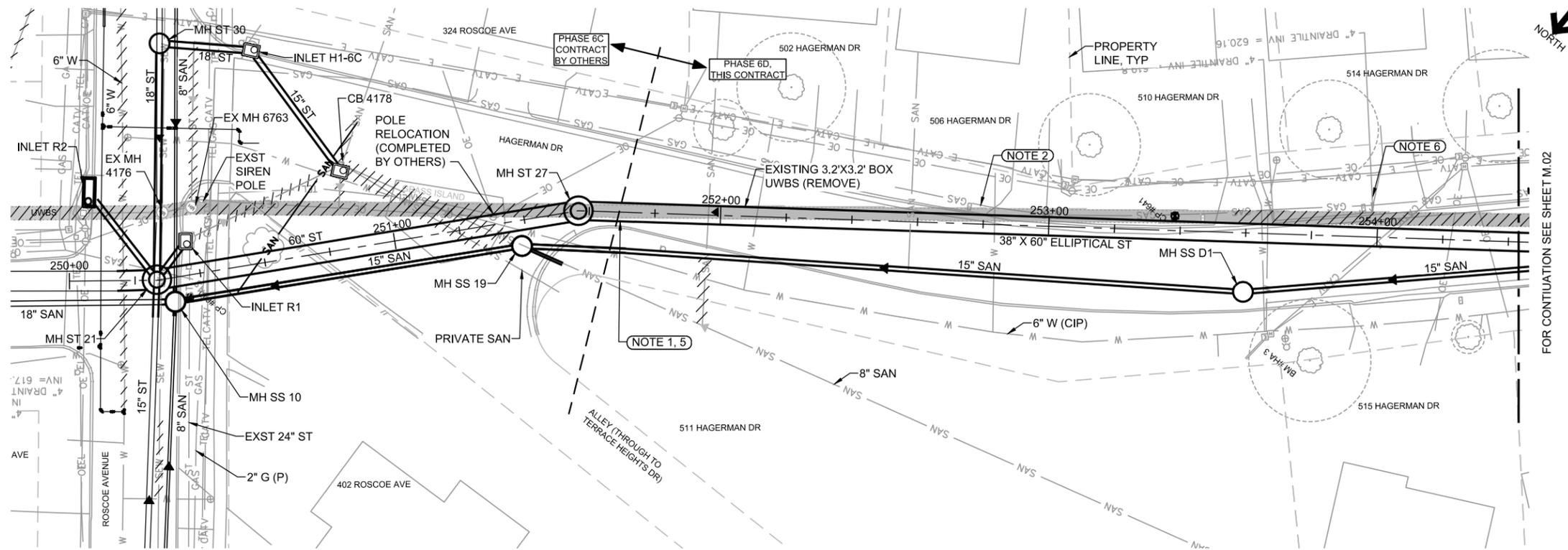


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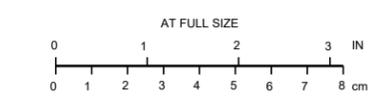
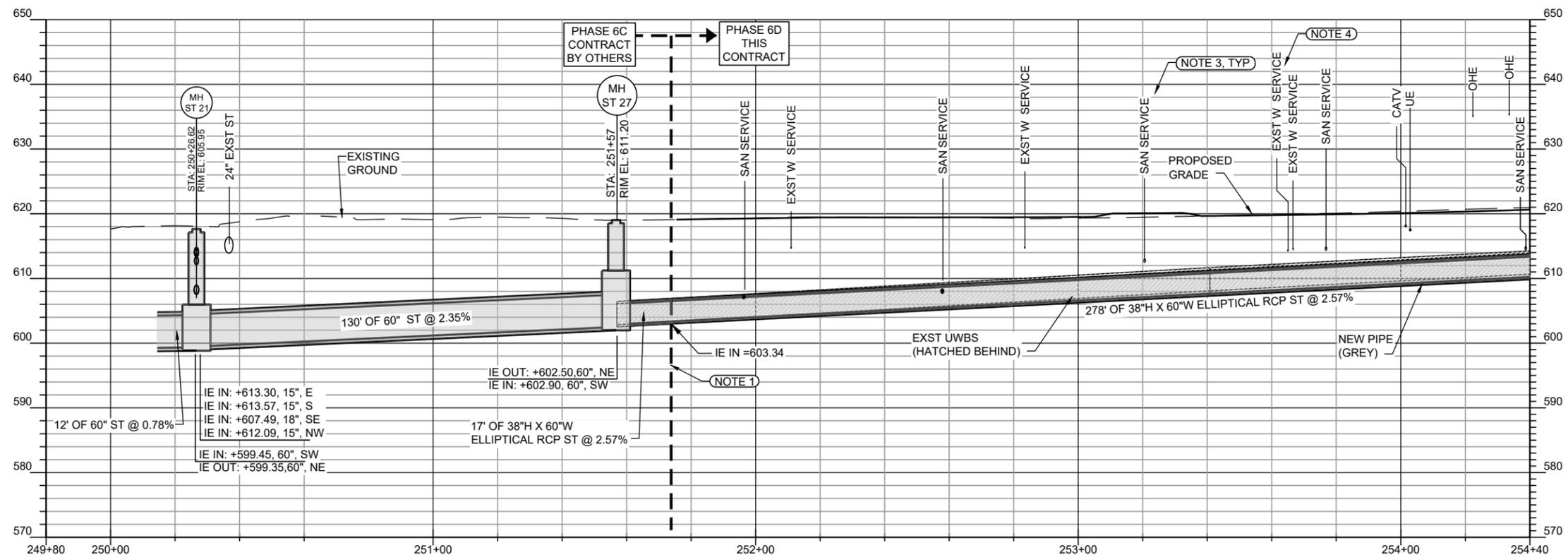
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**STORM SEWER
HAGERMAN DRIVE
SHEET 1**

DESIGNED <u>KK HEIM</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	M.01
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	

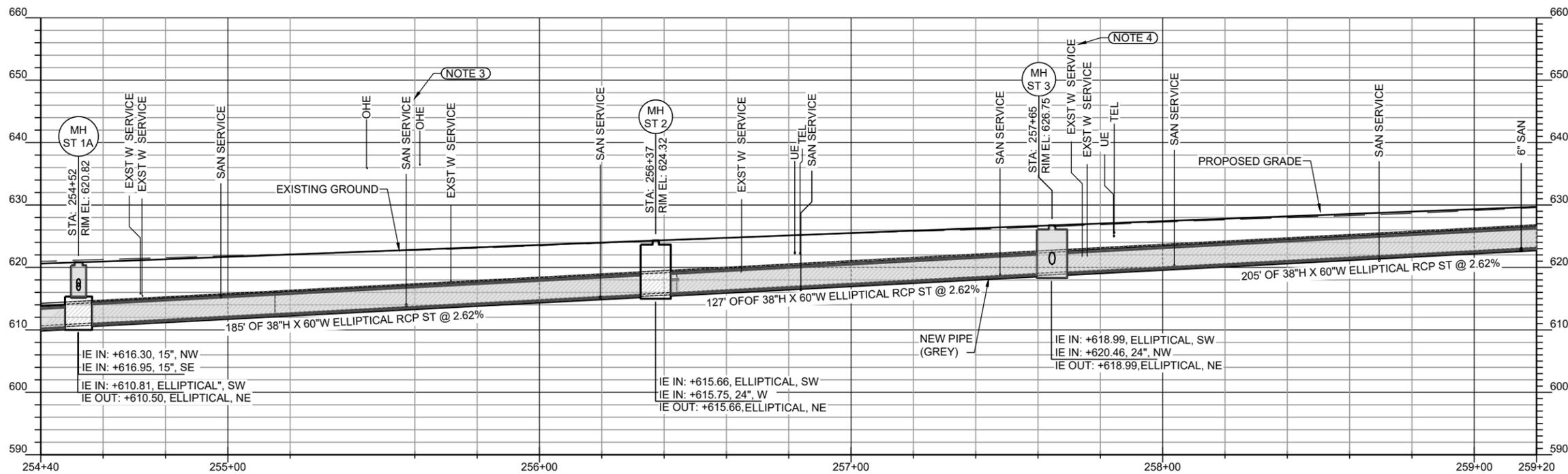
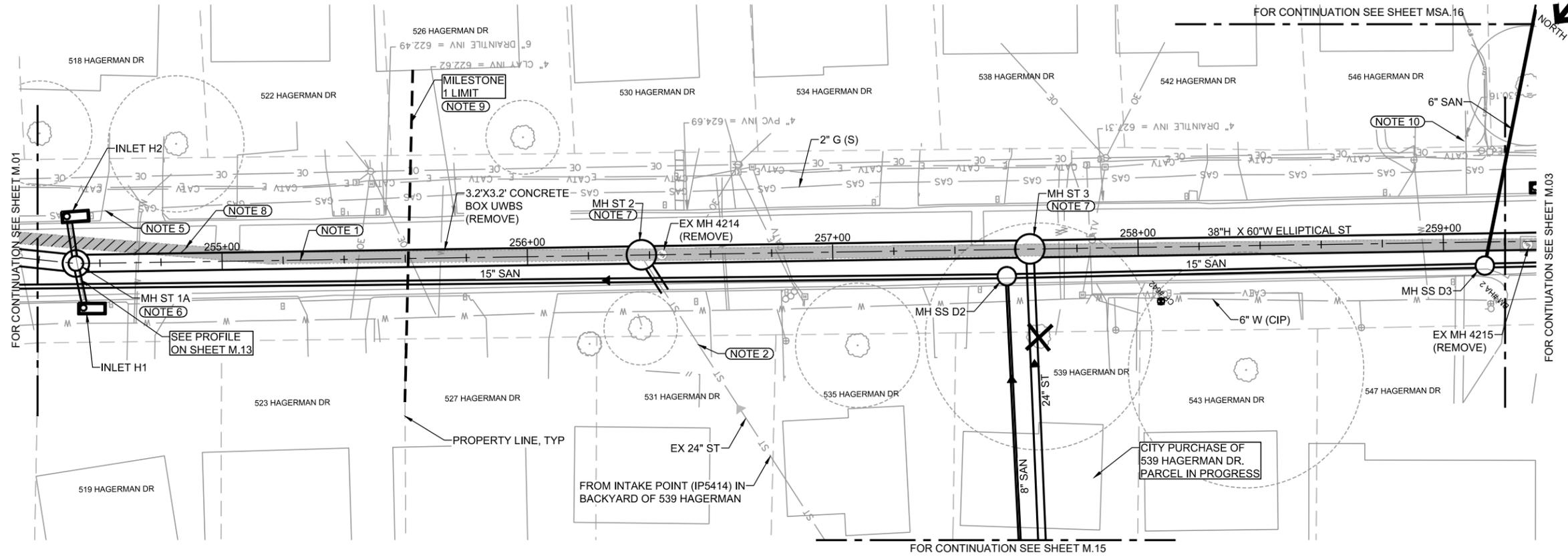


FOR CONTINUATION SEE SHEET M.02



NOTES

- INSTALL NEW STORM SEWER ON ALIGNMENT OF EXISTING COMBINED UWBS. REMOVE EXISTING UWBS AND MANHOLES. PROTECT EXISTING UTILITY SERVICES AND ANY UTILITIES CROSSING EXISTING UWBS. MAINTAIN FLOW IN EXISTING SEWERS. PROVIDE FLOW CONTROL, BYPASS PUMPING OR TEMPORARY CONNECTIONS AS NEEDED TO CONSTRUCT SEWERS.
- CONNECT EXISTING 24-INCH STORM FROM NORTHWEST INTO NEW STORM SEWER. AFTER NEW 24-INCH STORM IS INSTALLED ON 539 HAGERMAN DR PARCEL, PLUG PIPE END WITH 2' LENGTH OF CONCRETE AND ABANDON CONNECTION TO EXISTING 24-INCH STORM AT MH.
- LOCATE EXISTING SANITARY SERVICE LATERALS CONNECTED TO EXISTING UWBS (COMBINED SEWER) AND CONNECT TO NEW SANITARY. TRENCHLESS CONSTRUCTION OF NEW SANITARY LATERALS MAY BE NEEDED UNDER EXISTING UWBS.
- PROTECT EXISTING WATER AND GAS SERVICES. RELOCATE WATER SERVICES IF NEEDED ACCORDING TO DETAIL ON SHEET A.05.
- PROTECT EXISTING GAS MAIN. IF NECESSARY COORDINATE RELOCATION WITH GAS COMPANY.
- MANHOLE ST 1 IS COMBINATION MANHOLE WITH 8-FOOT DIAMETER BASE SECTION WITH 4-FOOT DIAMETER RISER SECTION. RISER SECTION IS REPRESENTED WITH "A" IN THE NAME. CONNECT RISER SECTION TO BASE SECTION ACCORDING TO DETAIL ON SHEET A.04.
- MANHOLES ST 2 AND ST 3 SHALL BE SW-401 8-FOOT DIAMETER MANHOLES.
- REMOVE EXISTING UWBS IN ITS ENTIRETY WHEN NEW STORM PIPE IS NOT ON ALIGNMENT OF EXISTING UWBS.
- INSTALL PIPE AND MAINLINE PAVING TO MILESTONE 1 LIMIT, BEYOND THE DRIVEWAYS FOR 522 AND 523 HAGERMAN DRIVE BEFORE THE MILESTONE 1 CONTRACT DATE.
- NO PIPE WORK CAN OCCUR BEYOND ROW ON 602 HAGERMAN DRIVE PROPERTY IN THIS PHASE 6D.



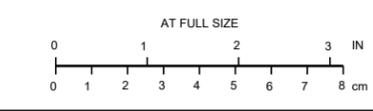
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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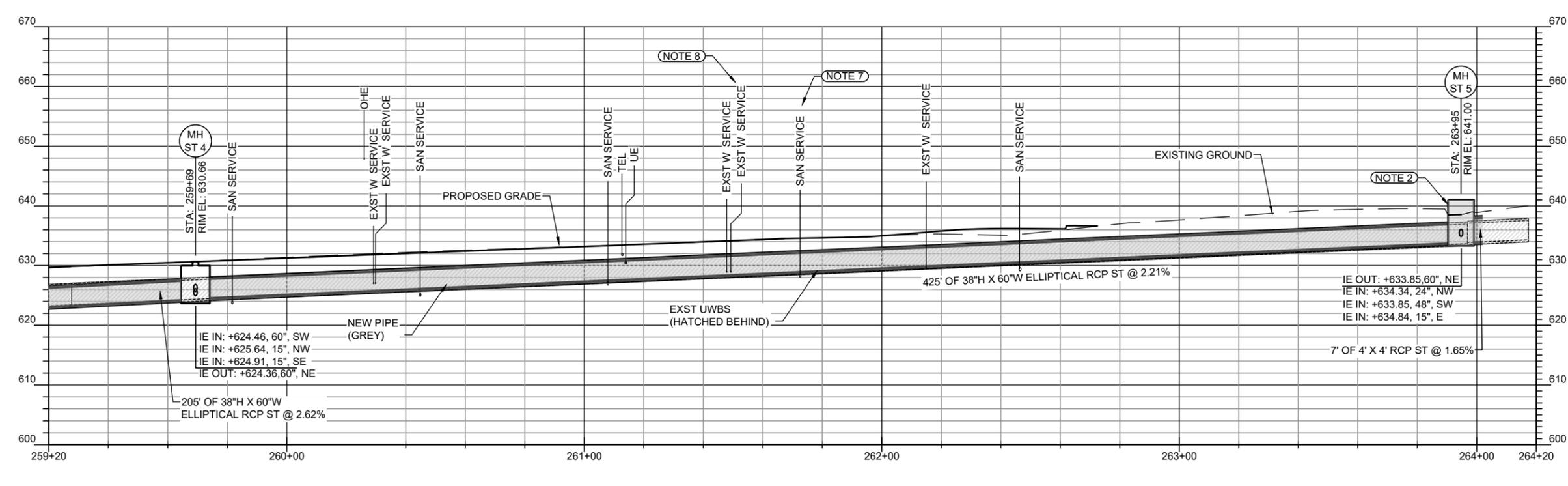
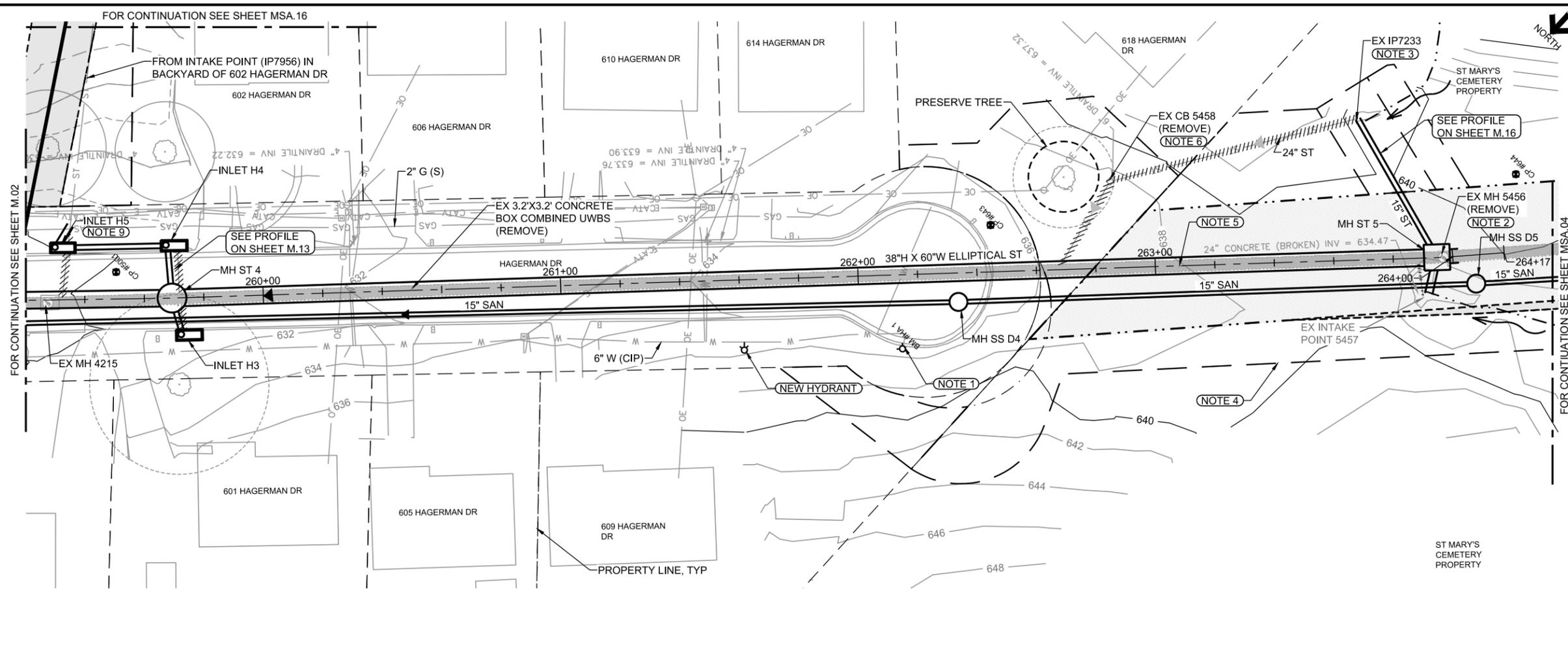
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

STORM SEWER HAGERMAN DRIVE SHEET 2

DESIGNED: KK HEIM	SCALE: 1" = 20'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: JM BRADY	M.02
APPROVED: KK HEIM	0
DATE: MARCH 12, 2025	



CADD D3-RS



NOTES

1. MPW CREW TO REMOVE AND REPLACE EXISTING HYDRANT AT A LOCATION THAT DOES NOT CONFLICT WITH NEW CUL-DE-SAC. COORDINATE WITH CITY AND MPW TO DETERMINE WHO WILL BE INSTALLING HYDRANT. WORK TO STAY IN ROW.
2. REMOVE EXISTING MH 5456 AND INSTALL RECTANGULAR MH OVER EXISTING 3.2' X 3.2' INTERIOR CONCRETE BOX COMBINED SEWER. NEW STRUCTURE SHALL BE SUDAS SW-406. SHAPE INVERT. INSTALL STRUCTURE TO EXTEND HIGHER THAN GROUND AT ELEVATION LISTED. INSTALL NEW 24-INCH PIPE TO NORTHWEST, REPLACE THE BROKEN PIPE WHICH DRAINS EXISTING DRAINAGE AREA FROM INTAKE POINT 5457 FROM NORTH.
3. PLACE PIPE TO LOCATION OF EXISTING SURFACE FLOW INTAKE POINT (IP7233).
4. SEE MSA SHEETS FOR EASEMENTS AND CONSTRUCTION LIMITS.
5. INSTALL NEW STORM SEWER ON ALIGNMENT OF EXISTING COMBINED UWBS. REMOVE EXISTING UWBS AND MANHOLES. PROTECT EXISTING UTILITY SERVICES AND ANY UTILITIES CROSSING EXISTING UWBS. MAINTAIN FLOW IN EXISTING SEWERS. PROVIDE FLOW CONTROL SUCH AS BYPASS PUMPING AND TEMPORARY CONNECTIONS AS NEEDED TO CONSTRUCT SEWERS.
6. REMOVE EXISTING 2'X3' STEEL GRATE INLET AND EXISTING INLET PIPE. GRADE AREA WITH POSITIVE SLOPE TO PREVENT PONDING. PROTECT EXISTING DRAIN TILE AND DAYLIGHT TO YARD.
7. LOCATE EXISTING SANITARY SERVICE LATERALS CONNECTED TO EXISTING UWBS (COMBINED SEWER) AND CONNECT TO NEW SANITARY. TRENCHLESS CONSTRUCTION OF NEW SANITARY LATERALS MAY BE NEEDED UNDER EXISTING UWBS.
8. PROTECT EXISTING WATER AND GAS SERVICES. RELOCATE WATER SERVICES IF NEEDED ACCORDING TO DETAIL ON SHEET A.
9. DISCONNECT EXISTING STORM PIPE FROM 602 HAGERMAN DR PROPERTY AT UWBS AND CONNECT TO NEW INLET IN ROW. NO PIPE WORK CAN OCCUR BEYOND ROW ON 602 HAGERMAN DRIVE PROPERTY IN PHASE 6D.

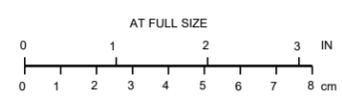
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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www.stanleyconsultants.com

CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**STORM SEWER
HAGERMAN DRIVE
SHEET 3**

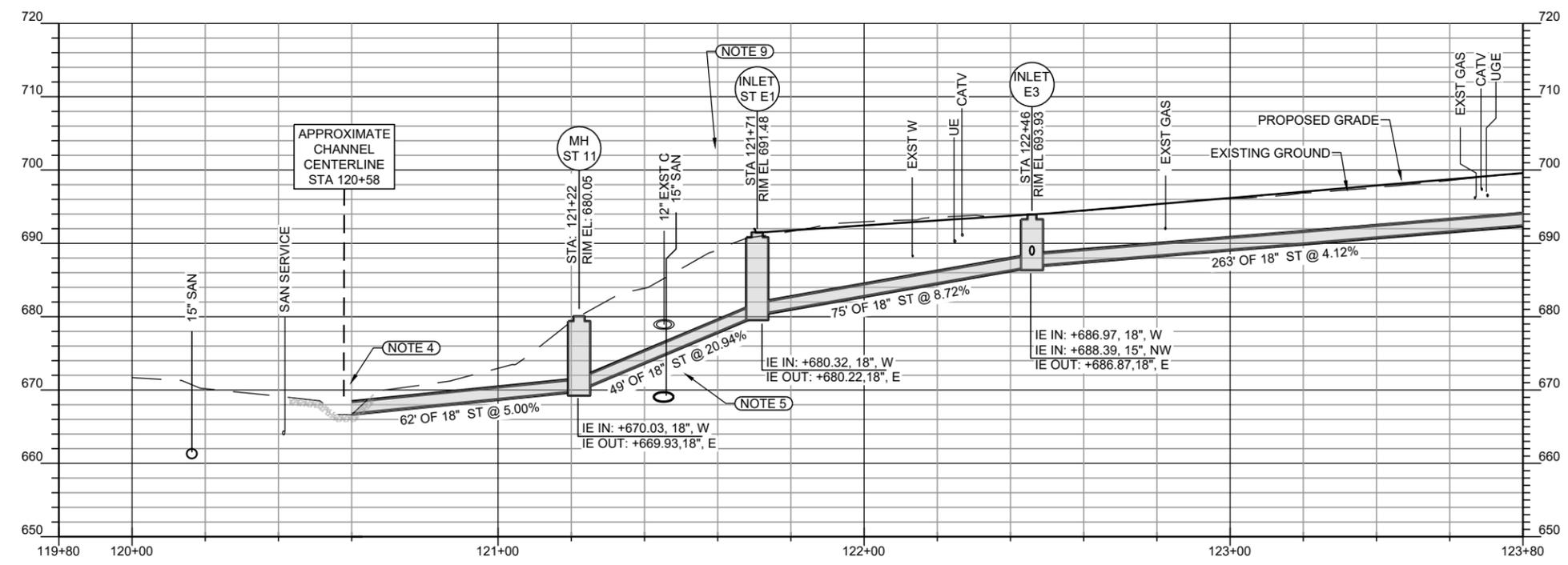
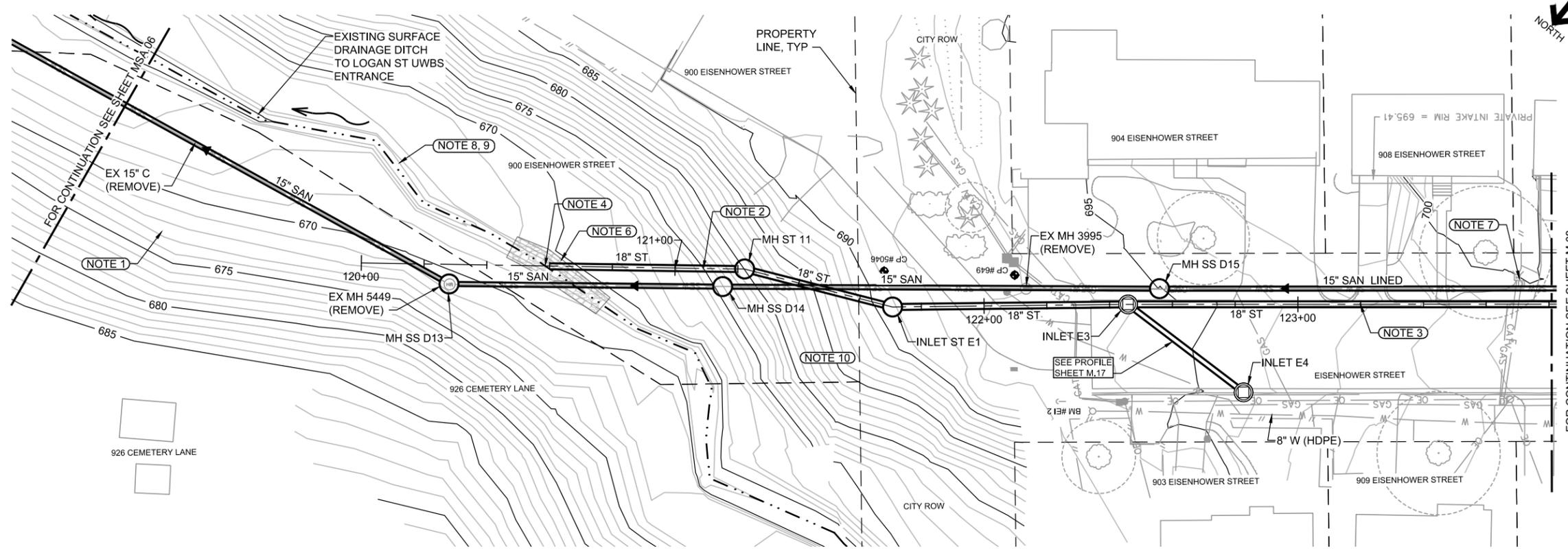
DESIGNED <u>KK HEIM</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	M.03
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	



LOAD D3-RS

NOTES

- SEE MSA SHEETS FOR EASEMENT LINEWORK THIS AREA.
- INSTALL STORM SEWER ON ALIGNMENT SHOWN.
- MAINTAIN STORM WATER FLOW UPSTREAM ON DEVITT AVENUE AND EISENHOWER STREET DURING CONSTRUCTION. PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN POSITIVE DRAINAGE. PROTECT CONSTRUCTION AREA FROM EROSION AT ALL TIMES.
- DAYLIGHT NEW STORM SEWER TO EXISTING DRAINAGE WAY. INSTALL CONCRETE PIPE APRON AND FOOTING ACCORDING TO SUDAS FIGURE 4030.221 AND 4030.222. INSTALL EROSION STONE APRON FOR PIPE OUTLET INTO CHANNEL ACCORDING TO SUDAS FIGURE 9040.111. INSTALL EROSION STONE WIDTH OF CHANNEL. ANCHOR THE LAST THREE CONCRETE PIPE SECTIONS AND APRON TOGETHER WITH TWO PIPE CONNECTIONS PER JOINT. SEE IDOT STANDARD ROAD PLANS DR-121 FOR CONCRETE PIPE TO CONCRETE PIPE FOR SEALED JOINTS.
- PIPE JOINTS SHALL BE TIED TOGETHER ON THIS SLOPE. TYING METHOD MUST BE SUITABLE FOR PIPE MATERIAL. TIE TOGETHER WITH TWO PIPE CONNECTIONS PER JOINT. SEE IDOT STANDARD ROAD PLANS DR-121 FOR CONCRETE PIPE TO CONCRETE PIPE FOR SEALED JOINTS.
- LINE DISTURBED DRAINAGE WAY WITH EROSION STONE. RESTORE CONTOURS TO MATCH EXISTING GROUND ELEVATIONS AND AVOID RAISING EXISTING CONTOURS. AVOID STORING MATERIAL AND PLACING MATERIAL STOCKPILES IN DRAINAGE WAY. THICKNESS OF EROSION STONE SHALL BE A MINIMUM OF 8" THICK. AREA AND AMOUNT OF EROSION STONE MUST BE APPROVED BY CITY.
- PROTECT UNDERGROUND ELECTRIC HANDHOLES IN PLACE IF POSSIBLE. IF RELOCATION IS NECESSARY COORDINATE WITH UTILITY OWNER.
- PROTECT DRAINAGE WAY FROM EROSION AND SEDIMENT IMPACTS DURING CONSTRUCTION.
- MAINTAIN UPSTREAM TO DOWNSTREAM FLOW PATH OF CHANNEL AT ALL TIMES DURING PIPE INSTALLATION OR SURFACE RESTORATION. MINIMIZE DISTURBANCE TO CHANNEL WHEN CROSSING WITH EQUIPMENT. SELECT ONE LOCATION TO CROSS CHANNEL WITH EQUIPMENT. REMOVE ANY TEMPORARY FILL MATERIAL OR TEMPORARY CULVERTS PLACED IN CHANNEL FOR A TEMPORARY EQUIPMENT CROSSING.
- PROTECT AND RESTORE SLOPE TO MATCH EXISTING. INSTALL STABILIZING MATTING AND/OR EROSION STONE TO DISTURBED AREA FOR SLOPE STABILIZATION WHEN APPROVED BY CITY.
- PERFORM ALL CONSTRUCTION TO PROTECT EXISTING SLOPES FROM POTENTIAL EROSION AND SLOPE DESTABILIZATION. MINIMIZE DURATION AND LENGTH OF EXCAVATION TO THAT NECESSARY FOR PIPE INSTALLATION WITH TRENCH PROTECTION. SUBMIT CERTIFIED EXCAVATION PLAN AS REQUIRED IN ESTIMATE REFERENCE NOTES.
- INSTALL FLAT ROUND INLET GRATE IN FRAME FOR MANHOLE ST E1 THAT FITS INSIDE THE CITY'S STANDARD EAST JORDAN FRAME.



NO.	REVISIONS	DSGN	CHKD	APVD	DATE


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 225 Iowa Avenue, Muscatine, Iowa 52761-3764
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CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

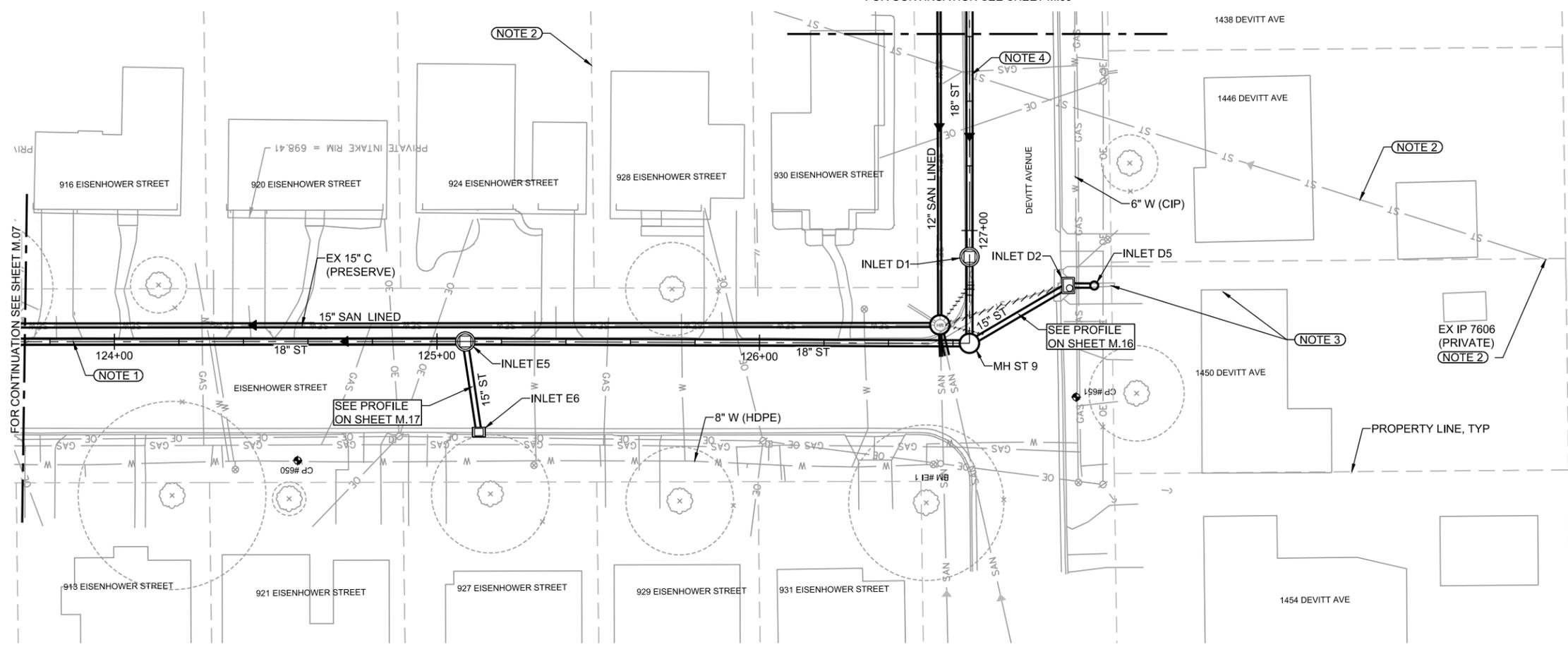
**STORM SEWER
EISENHOWER ST**

DESIGNED: KK HEIM	SCALE: 1" = 20'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: JM BRADY	M.07
APPROVED: KK HEIM	0
DATE: MARCH 12, 2025	



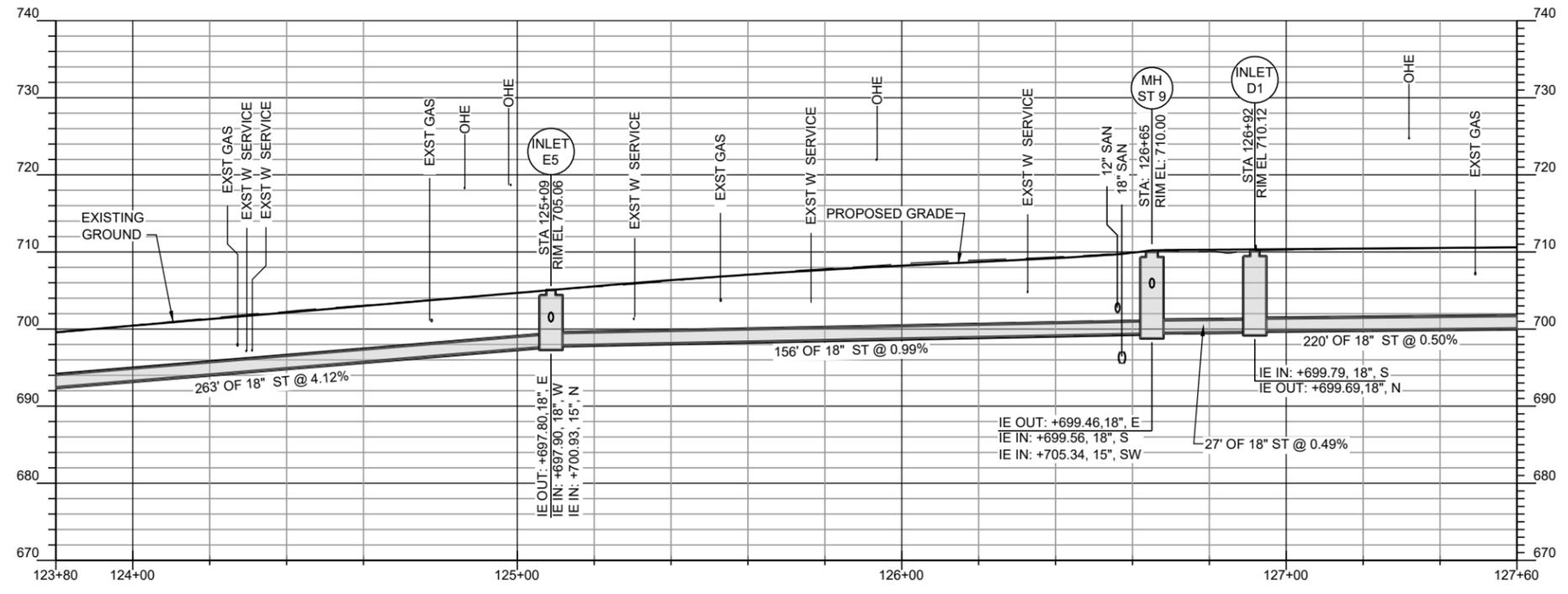
CAADD D3-RS

FOR CONTINUATION SEE SHEET M.09



NOTES

1. INSTALL NEW STORM ON ALIGNMENT SHOWN. EXISTING COMBINED SEWER WILL BE PRESERVED, LINED AND REUSED FOR SANITARY SEWER. NEW SANITARY MANHOLES WILL REPLACE EXISTING COMBINED SEWER MANHOLES. SEE MSA SHEETS.
2. CITY RECORDS SHOWS PRIVATE INTAKE IN THE BACKYARD CORNER OF PROPERTIES 1446 AND 1450 DEVITT AVE. PIPING CROSSES DEVITT AT AN UNKNOWN LOCATION AND UNKNOWN SIZE AND DISCHARGES INTO DRAINAGE SWALE IN BACKYARD OF 924 EISENHOWER ST.
3. EXISTING PRIVATE PROPERTY ROCKED DRAINAGE SWALE EXTENDS TO FRONT EDGE OF 1450 DEVITT AVENUE.
4. CITY TO PROVIDE DECISION DURING CONSTRUCTION TO CONNECT PRIVATE STORM SEWER TO NEW STORM SEWER ON DEVITT AVENUE OR MAINTAIN EXISTING ROUTING.



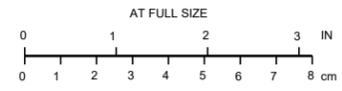
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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www.stanleyconsultants.com

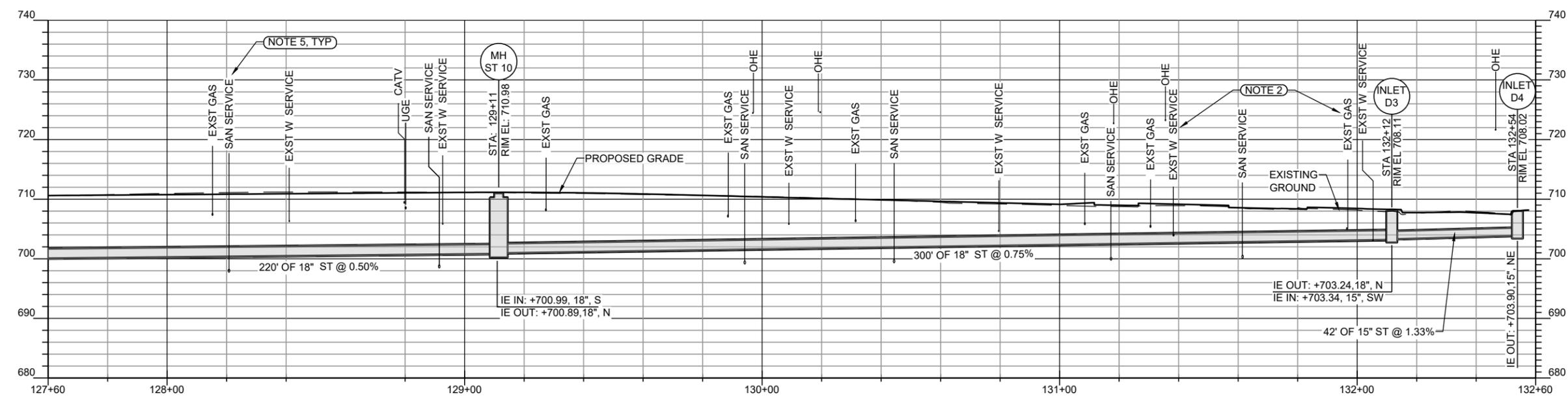
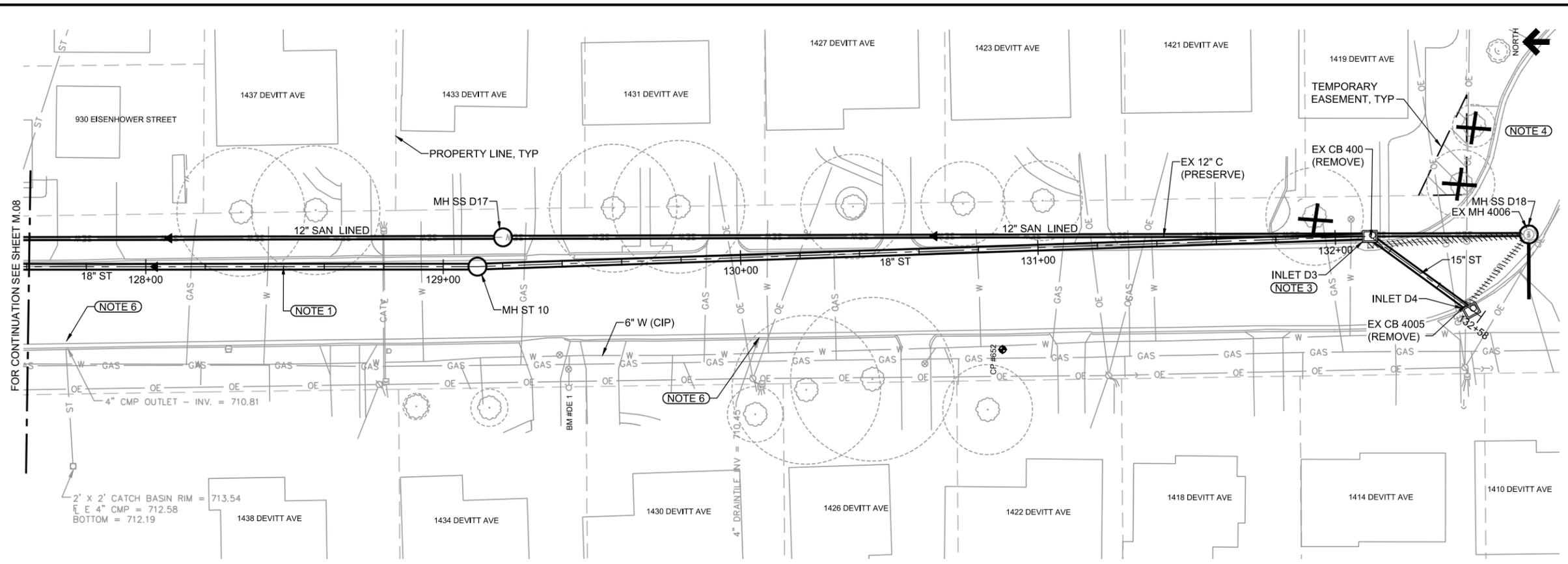
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**STORM SEWER
EISENHOWER ST & DEVITT AVE**

DESIGNED <u>KK HEIM</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	M.08
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	



CAADD D3-RS



NOTES

1. INSTALL NEW STORM AT ALIGNMENT SHOWN. EXISTING 12-INCH COMBINED SEWER WILL BE PRESERVED, LINED, AND REUSED FOR SANITARY SEWER. DISCONNECT EXISTING STORM CONNECTIONS FROM EXISTING MH 4006. NEW SANITARY MANHOLES WILL REPLACE EXISTING COMBINED MANHOLES. SEE MSA SHEETS.
2. PROTECT EXISTING WATER AND GAS SERVICES IF FEASIBLE. RELOCATE WATER SERVICE TO AVOID NEW SEWERS IF NEEDED. SEE WATER SERVICE RELOCATION DETAIL ON SHEET A.05. GAS SERVICE RELOCATION SHALL ONLY BE PERFORMED BY GAS UTILITY COMPANY.
3. NEW INLET AND STORM SEWER SITS AT A HIGHER ELEVATION THAN THE EXISTING COMBINED SEWER.
4. SEE SHEET D.10 FOR REPLACEMENT OF DEVITT PAVEMENT TO NEWELL AVENUE AND EXTENT OF TEMPORARY EASEMENTS.
5. LOCATION AND ELEVATION OF SANITARY SERVICES SHOWN IN PROFILE IS APPROXIMATE. IF NECESSARY ADJUST SEWER RISER ACCORDING TO DETAIL ON SHEET A.04 AND SUDAS FIGURE 4010.201.
6. PRIVATE DRAIN CONNECTIONS TO STREET GENERALLY SHOULD NOT BE CONNECTED TO STREET UNLESS AUTHORIZED BY THE CITY. CURB OPENING CASTINGS CAN BE USED ONLY IF CITY AUTHORIZES.

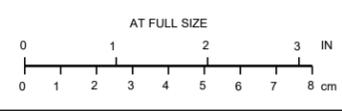
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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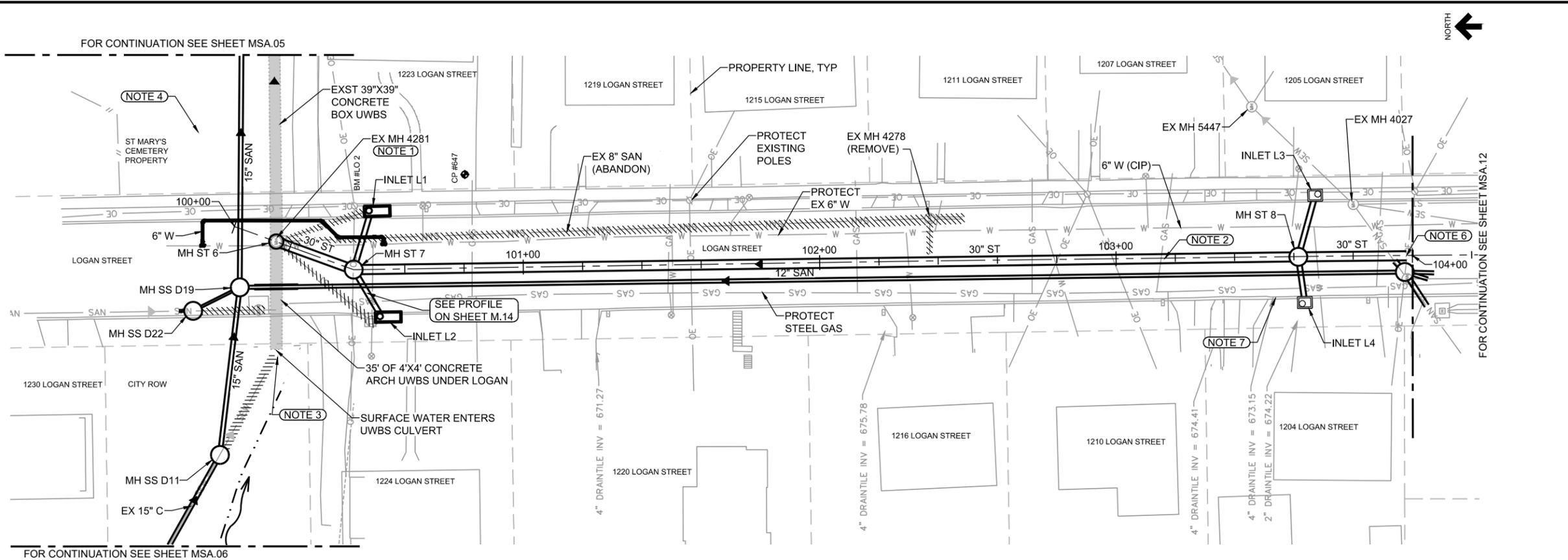
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**STORM SEWER
DEVITT AVE**

DESIGNED: KK HEIM	SCALE: 1" = 20'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: JM BRADY	M.09
APPROVED: KK HEIM	0
DATE: MARCH 12, 2025	

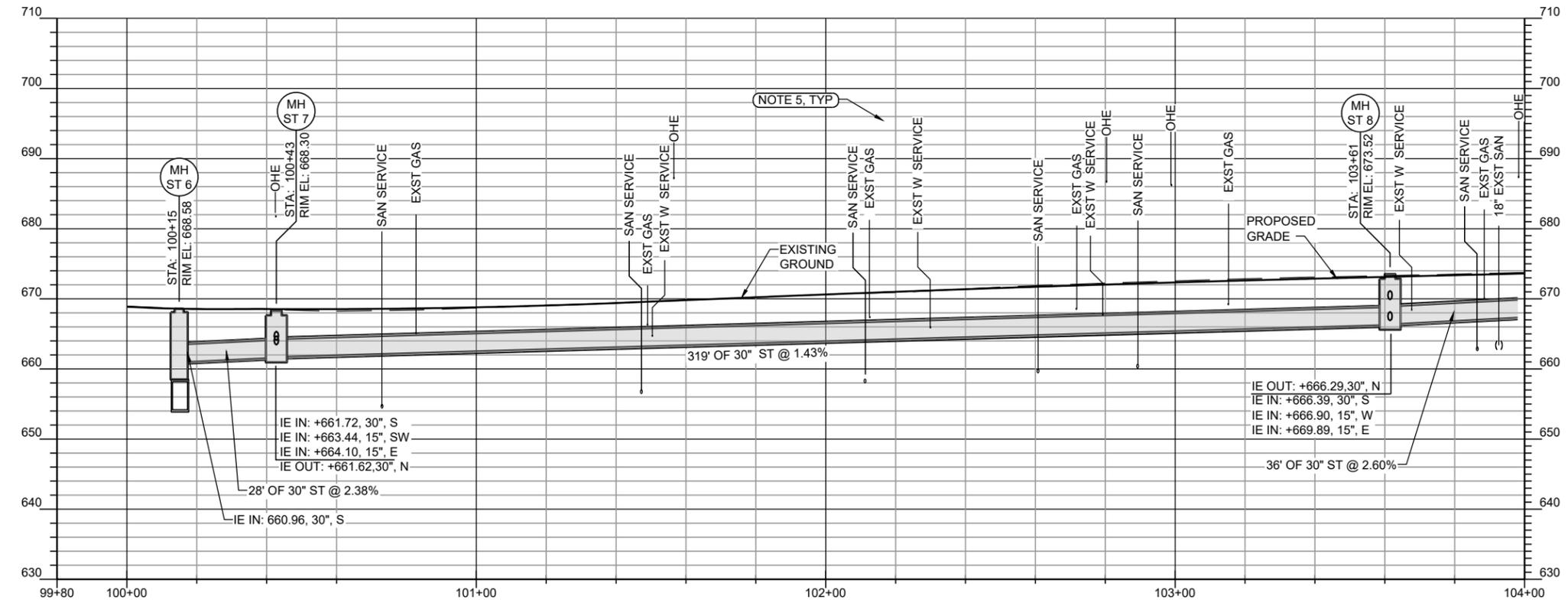


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NOTES

1. REMOVE EXISTING BRICK MH 4281 RISER AND REPLACE WITH NEW 36-INCH DIAMETER PRECAST RISER SECTIONS. EXISTING 6-INCH CIP WATER LINE MUST BE RELOCATED OUT OF SEWAGE MANHOLE. ATTACH NEW RISER TO EXISTING UWBS USING RISER CONNECTION DETAIL ON SHEET A.04. SEE WATER PLAN SHEET SHOWING WATER RELOCATION.
2. INSTALL NEW STORM SEWER ON ALIGNMENT SHOWN. STORM SEWER JOINTS MUST BE GASKETTED AND WATERTIGHT. STORM SEWER MAY CARRY COMBINED SEWAGE UNTIL SEPARATION IS ACHIEVED UPSTREAM.
3. SEE SHEET MSA.14 FOR PHOTOGRAPHS OF EXISTING 15-INCH COMBINED SEWER AT THE EXISTING UWBS ENTRANCE AND REMOVAL NOTES.
4. EXISTING CONTOURS SHOW LOCALIZED LOW POINT 20' EAST OF EAST ROW LINE FOR LOGAN STREET. AREA IS FULL OF CONCRETE DEBRIS, CINDER BLOCKS. NO PIPED OUTLET IS KNOWN. SEE SHEET MSA.05 SHOWING THE CONTOURS IN THIS AREA.
5. PROTECT EXISTING WATER AND GAS SERVICES IN PLACE IF FEASIBLE. RELOCATE WATER SERVICE TO AVOID NEW SEWERS IF NEEDED. SEE WATER SERVICE RELOCATION DETAIL ON SHEET A.05. GAS SERVICE RELOCATION SHALL ONLY BE PERFORMED BY GAS UTILITY COMPANY.
6. INSTALL STORM SEWER STUB AND TEMPORARY SEAL WITH WATERTIGHT PLUG, AND MARK IN CONTINUATION FOR FUTURE PHASE BY OTHERS.
7. PRIVATE DRAIN CONNECTIONS TO STREET GENERALLY SHOULD NOT BE CONNECTED TO STREET UNLESS AUTHORIZED BY THE CITY. CURB OPENING CASTINGS CAN BE USED ONLY IF CITY AUTHORIZES.



NO.	REVISIONS	DSGN	CHKD	APVD	DATE

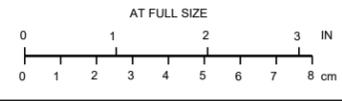


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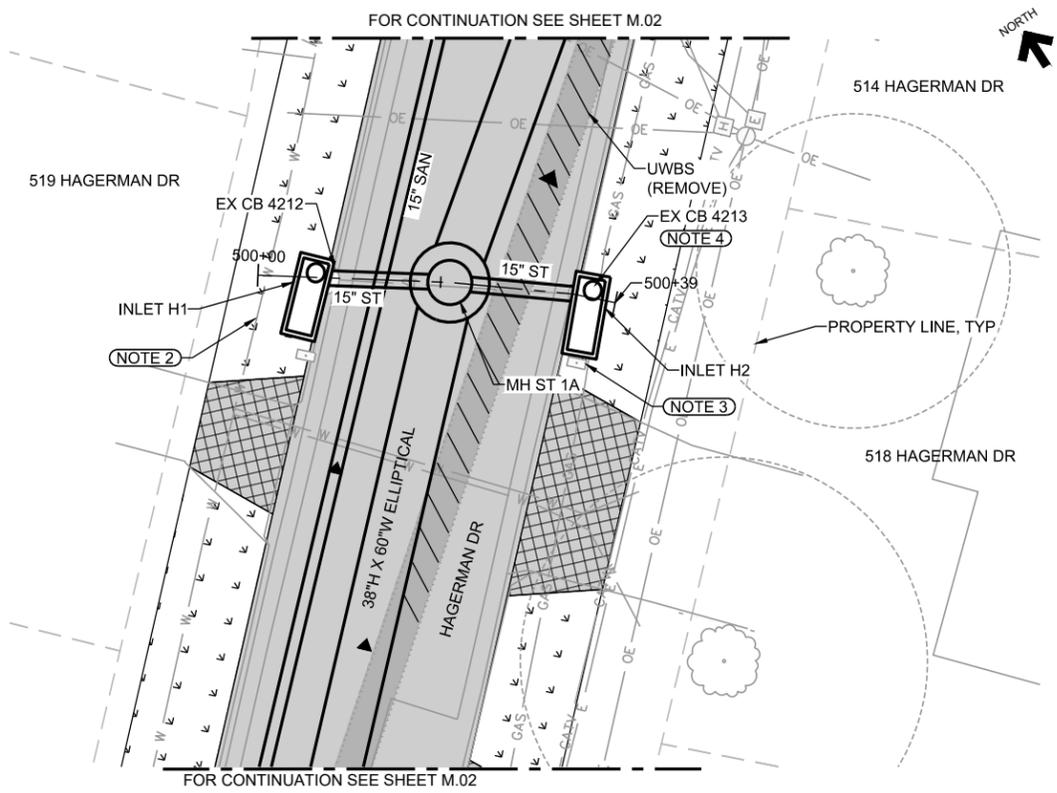
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

STORM SEWER LOGAN ST

DESIGNED <u>KK HEIM</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	M.11
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	

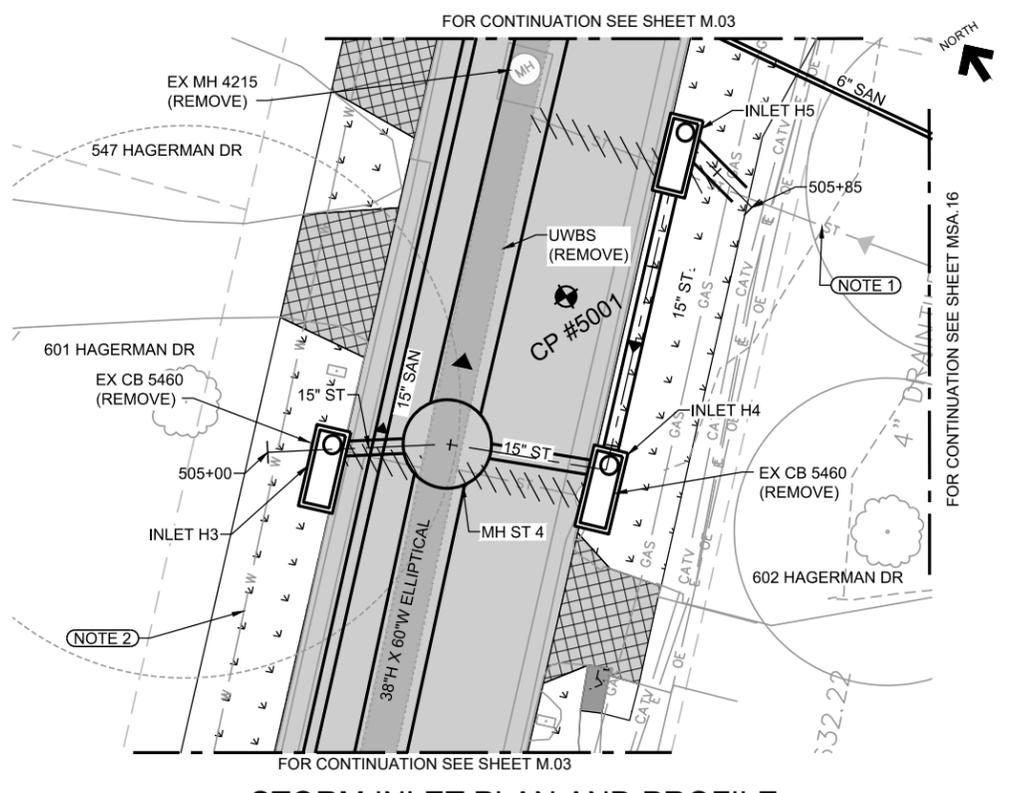
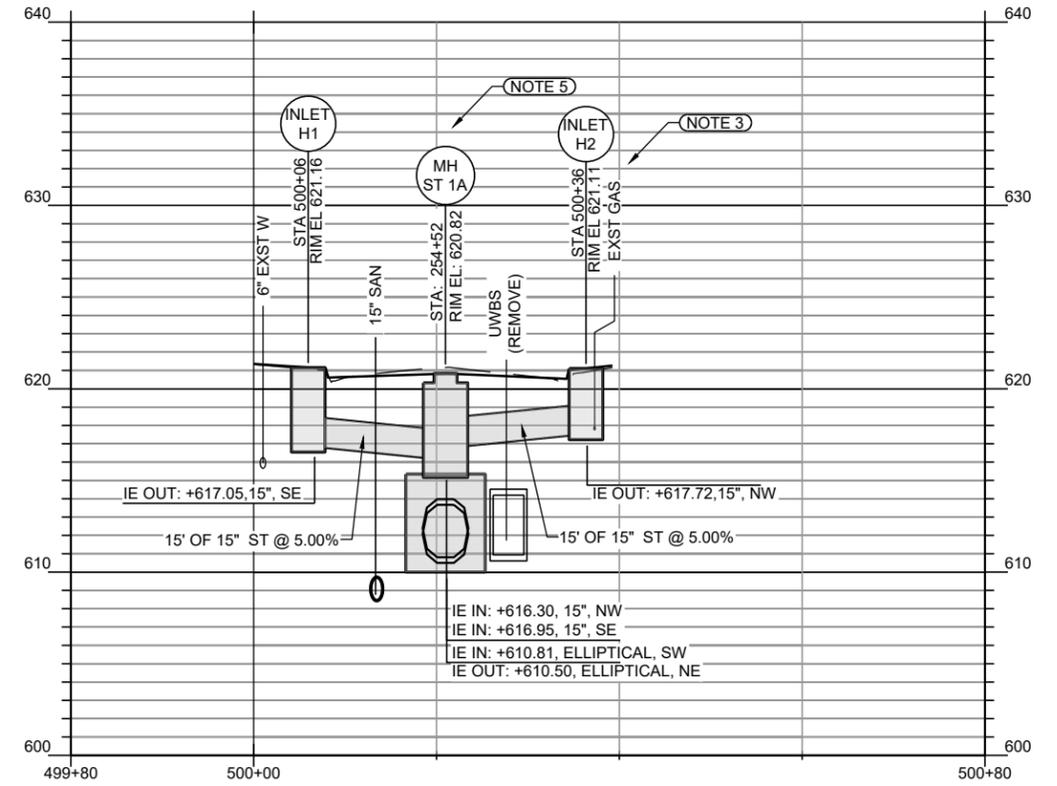


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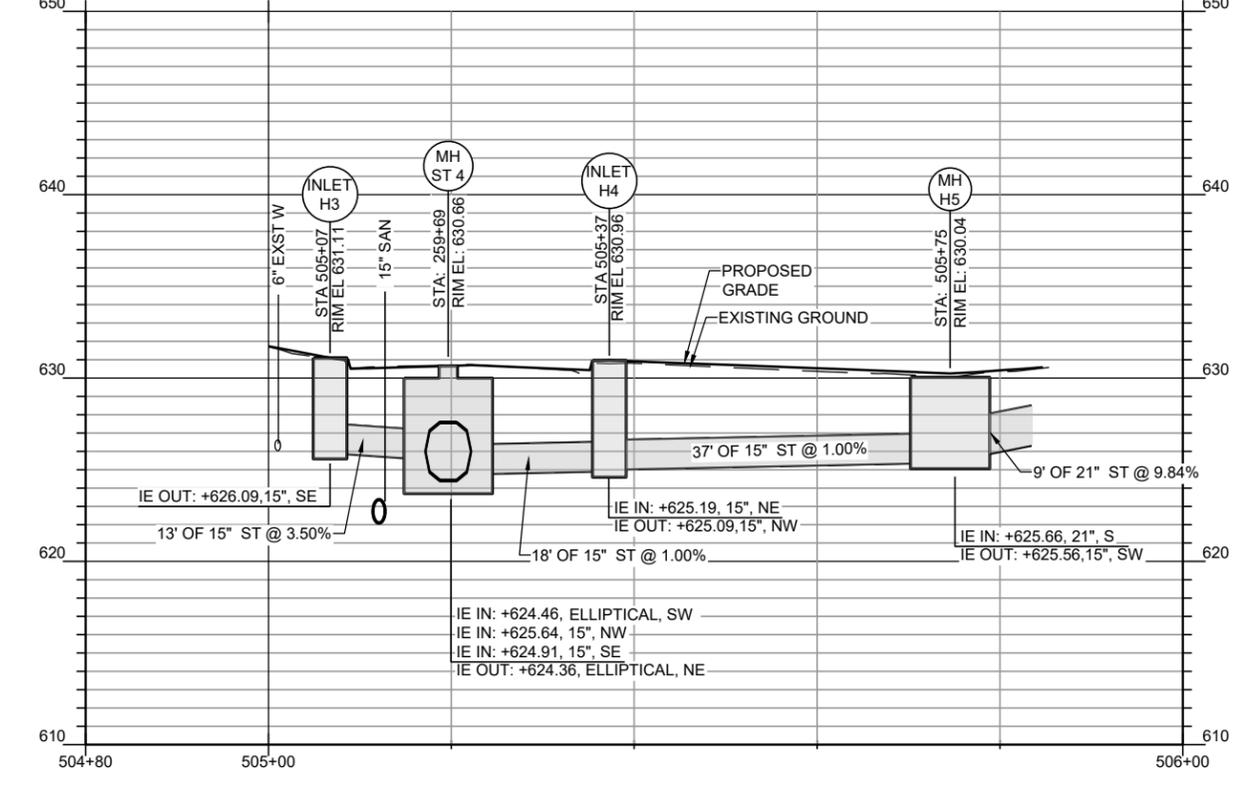
FOR CONTINUATION SEE SHEET M.02

**STORM INLET PLAN AND PROFILE
NEAR 518 HAGERMAN DR
STA 500+00**



FOR CONTINUATION SEE SHEET M.03

**STORM INLET PLAN AND PROFILE
NEAR 602 HAGERMAN DR
STA 505+00**



NOTES

1. CITY MAPPING SHOWS EXISTING STORM FROM 602 HAGERMAN PROPERTY AND IP7956 CONNECTS TO EXISTING UWBS 8-FOOT DOWNSTREAM OF MH 4215. THIS PRINT SHOWS ST CONNECTING UPSTREAM OF MH WHICH LIKELY IS INCORRECT. LOCATE WHERE EXISTING STORM CROSSES THE CURB LINE AND LOCATE INLET H5 AT THAT LOCATION. CONNECT TO EXISTING 21-INCH CONCRETE PIPE. FIELD VERIFY LOCATION AND ELEVATION OF EXISTING PIPE. EXISTING PIPE TURNS TO 21-INCH RCP AT BEND, WITHIN CITY ROW.
2. MAINTAIN CLEARANCE BETWEEN EXISTING WATER AND NEW STORM STRUCTURE ACCORDING TO CRITERIA LISTED ON SHEET A.05 AND SUDAS SPECIFICATIONS.
3. PROTECT EXISTING GAS MAIN. IF RELOCATION IS NECESSARY COORDINATE RELOCATION GAS COMPANY.
4. REMOVE EXISTING INLETS IN THEIR ENTIRETY AND REPLACE WITH NEW AT LOCATIONS SHOWN.
5. RISER SECTION IS LABELED AS MH 1A. LOWER 8' DIAMETER IS LABELED AS MH 1..

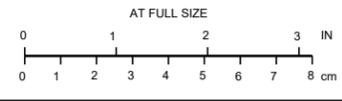
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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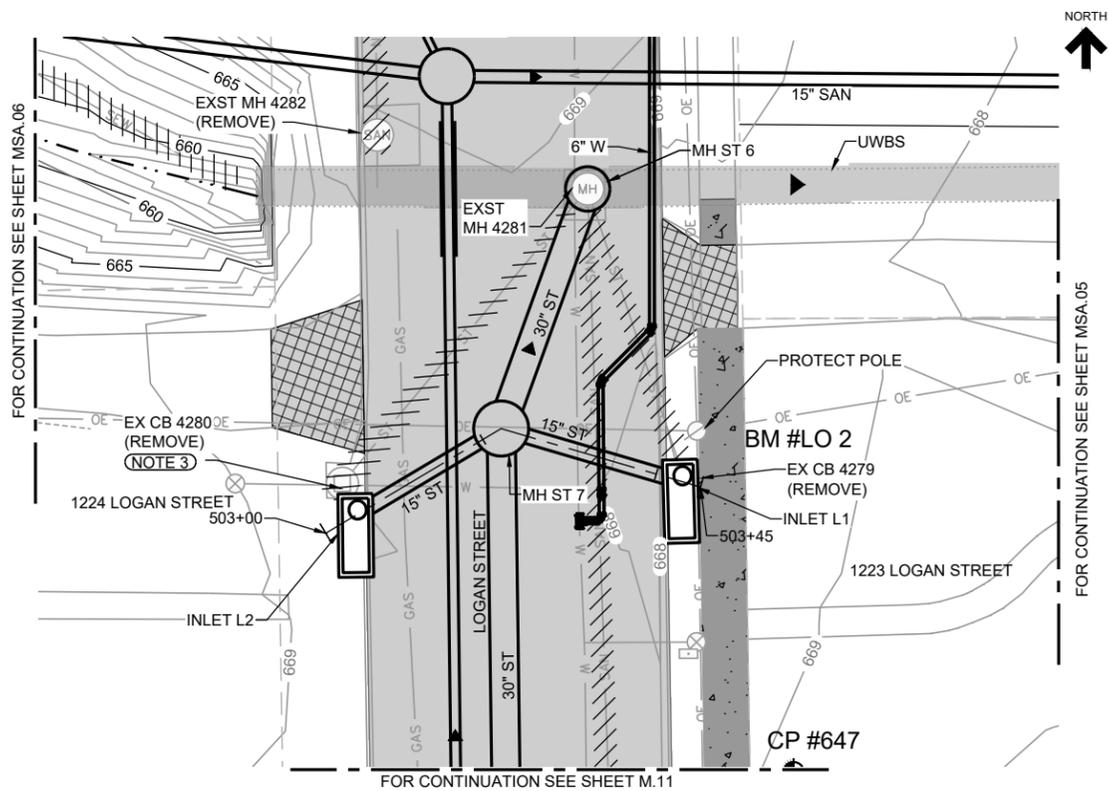
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**STORM SEWER
STORM INLETS ON HAGERMAN DRIVE**

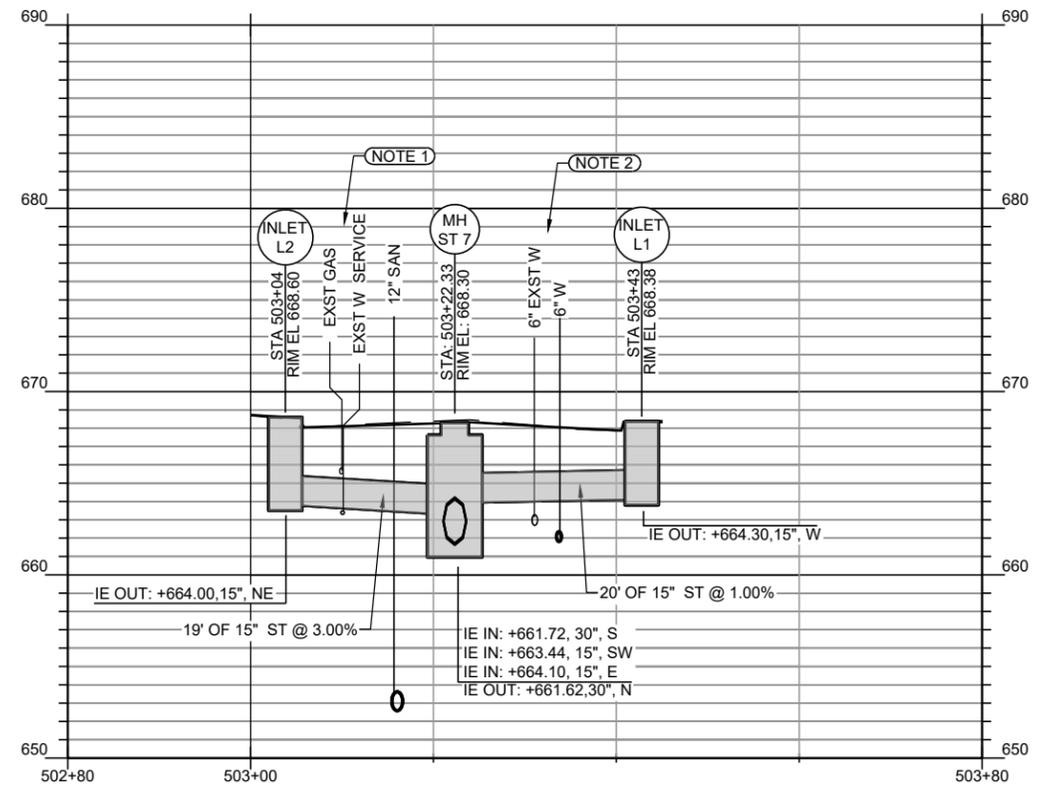
DESIGNED: KK HEIM	SCALE: 1" = 10'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: JM BRADY	M.13
APPROVED: KK HEIM	0
DATE: MARCH 12, 2025	



LOAD D3-RS



**STORM INLETS PLAN AND PROFILE
NEAR 1223 LOGAN ST
STA 503+00**



NOTES

1. PROTECT EXISTING WATER AND GAS SERVICES IF FEASIBLE. RELOCATE WATER SERVICE TO AVOID NEW SEWERS IF NEEDED. SEE WATER SERVICE RELOCATION DETAIL ON SHEET A.05. GAS SERVICE RELOCATION SHALL ONLY BE PERFORMED BY GAS UTILITY COMPANY.
2. WATER LINE WILL BE RELOCATED IN CONJUNCTION WITH RELOCATION TO REMOVE WATER MAIN FROM INSIDE EX MH 4281. SEE WATER MAIN RELOCATION PLANS. ELEVATION OF TOP OF 6-INCH WATER LINE IN MANHOLE IS 664.53.
3. AT EXISTING CB 4280 IS A 6-IN CMP CONNECTED FROM THE SOUTH. DETERMINE SOURCE OF PIPE AND CONNECT TO NEW INLET IF ACTIVE.

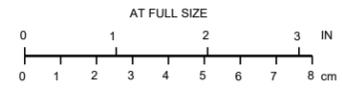
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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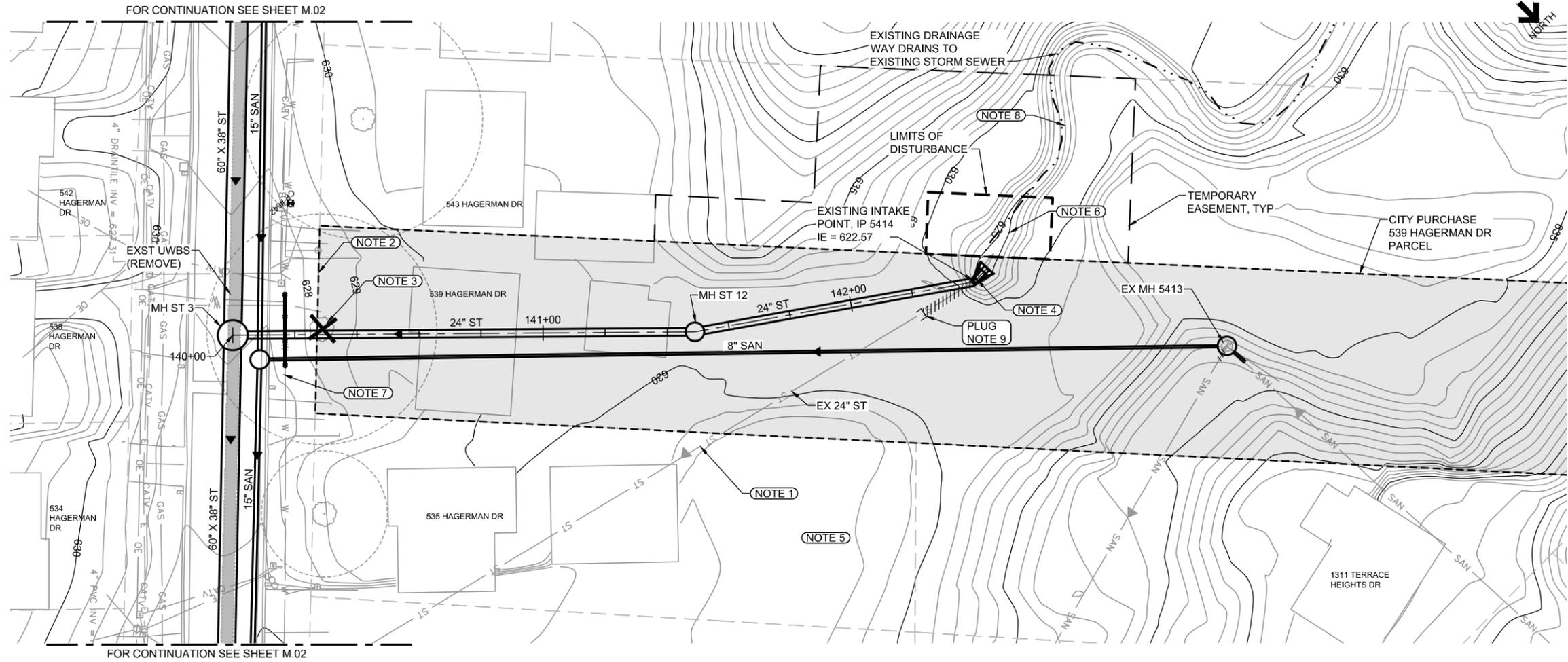
CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

**STORM SEWER
STORM INLETS ON LOGAN ST**

DESIGNED <u>KK HEIM</u>	SCALE: 1" = 10'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	M.14
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	

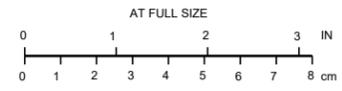
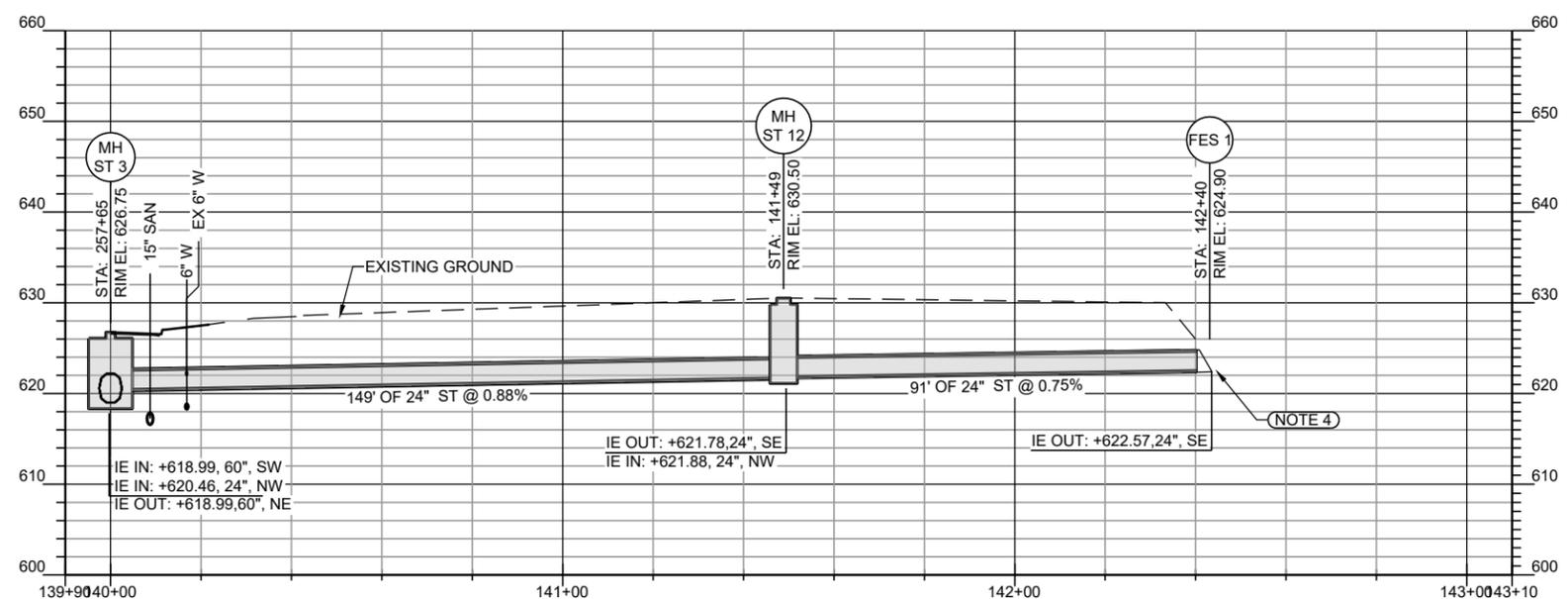


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NOTES

1. EXISTING STORM EXTENDS ACROSS 539, 535, AND 531 HAGERMAN DRIVE AND CONNECTS TO EXISTING UWBS NEAR EX MH 4214. SEE SHEET M.02 AND NOTES ABOUT PLUGGING PIPE ON HAGERMAN DRIVE.
2. INSTALL NEW 24-INCH STORM TO PROPERTY LINE AND CAP. INSTALLATION OF STORM SEWER ON 539 HAGERMAN PARCEL MAY OCCUR LATER DURING THIS CONSTRUCTION CONTRACT AFTER PARCEL PURCHASE. CONSULT CITY PRIOR TO INSTALLING STORM SEWER ON PARCEL ON EXTENT OF IMPROVEMENT.
3. CITY SHALL APPROVE TREE REMOVAL TIMING. REMOVE TREE ONLY AFTER CONFIRMATION THAT STORM SEWER WORK WILL OCCUR ON 539 HAGERMAN DR. PARCEL.
4. REMOVE EXISTING ENTRANCE PIPE, CONCRETE HEADWALL COMPONENTS AND GRADER BARS. INSTALL CIRCULAR CONCRETE PIPE APRON WITH APRON GUARD ACCORDING TO SUDAS DETAILS 4030.222, AND 4030.224. PROTECT EXISTING CHANNEL, MINIMIZE DISTURBANCE AND RESTORE TO EXISTING CONTOURING. STABILIZE CHANNEL AND SIDE SLOPES AS NEEDED.
5. CONTOURS SHOWN ON THIS SHEET ARE CITY 1' CONTOURS FROM 2000. AREA ON PRIVATE PROPERTY HAS NOT BEEN SURVEYED.
6. MINIMIZE AREA DISTURBED TO EXTENT NEEDED FOR PIPE INSTALLATION. RESTORE ANY AREA DISTURBED TO MATCH EXISTING.
7. REFER TO WATER MAIN PLANS FOR WATER RELOCATION.
8. MAINTAIN FLOW PATH FOR EXISTING DRAINAGE CHANNEL. NOTE DRAINAGE AREA EXTENDS BEYOND LOGAN STREET TO DEVITT AVENUE WITH MULTIPLE DRAINAGE CHANNELS CONTRIBUTING HIGH FLOWS AND SEDIMENT TRANSPORT DURING RAIN EVENTS TO THIS INTAKE POINT.
9. PLUG PIPE END OF EXISTING STORM SEWER COMPLETELY WITH A MINIMUM 2-FT LENGTH OF CONCRETE AFTER NEW PIPE IS INSTALLED, AND ABANDON REMAINING PIPE IN PLACE.



NO.	REVISIONS	DSGN	CHKD	APVD	DATE

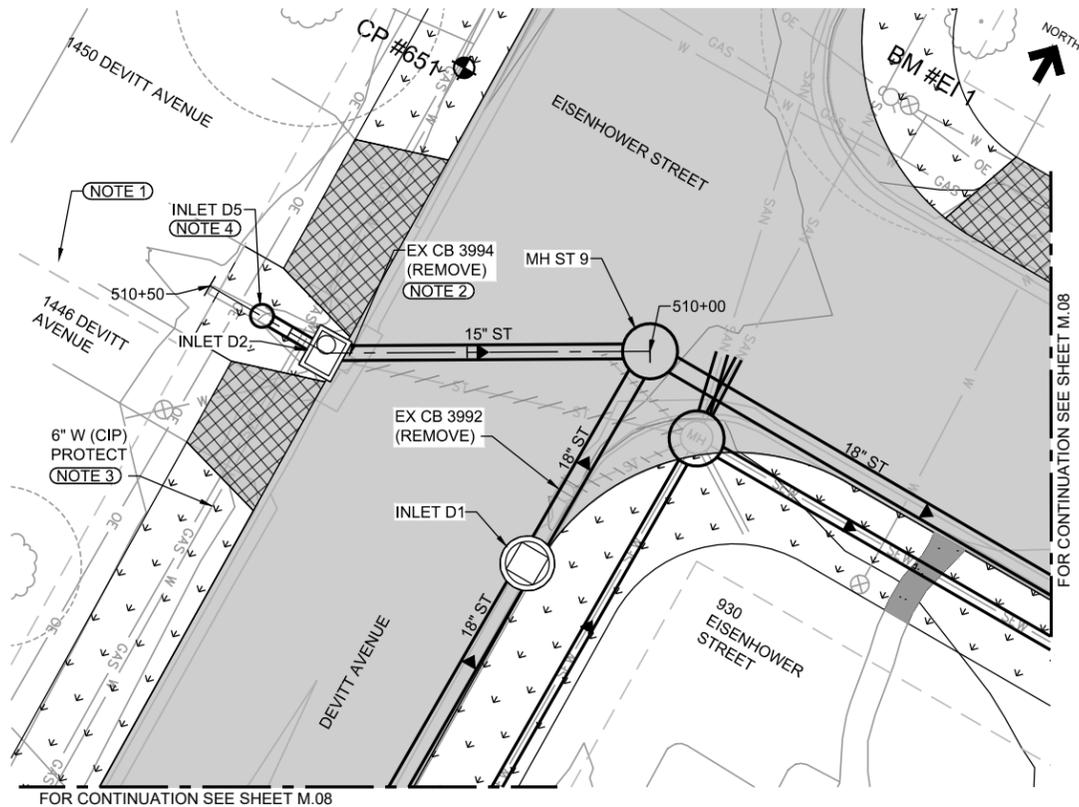

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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

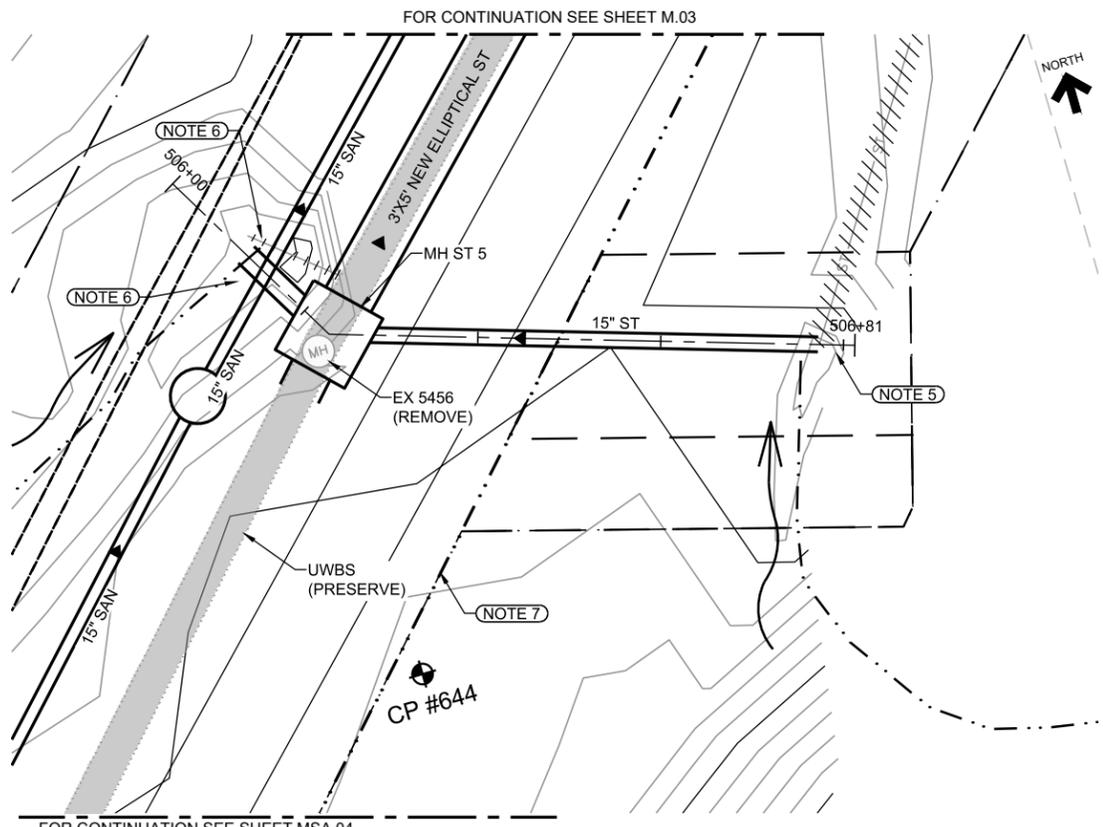
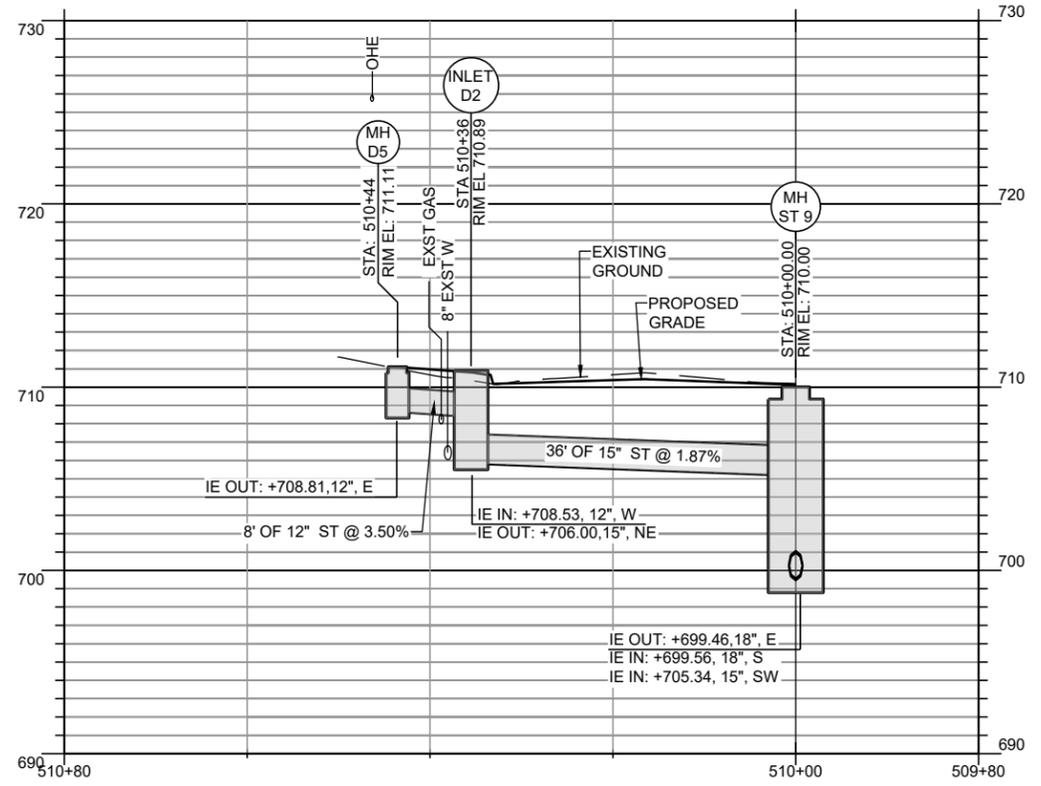
**STORM SEWER
ON PROPERTY OF 539
HAGERMAN DRIVE**

DESIGNED <u>KK HEIM</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	M.15
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	

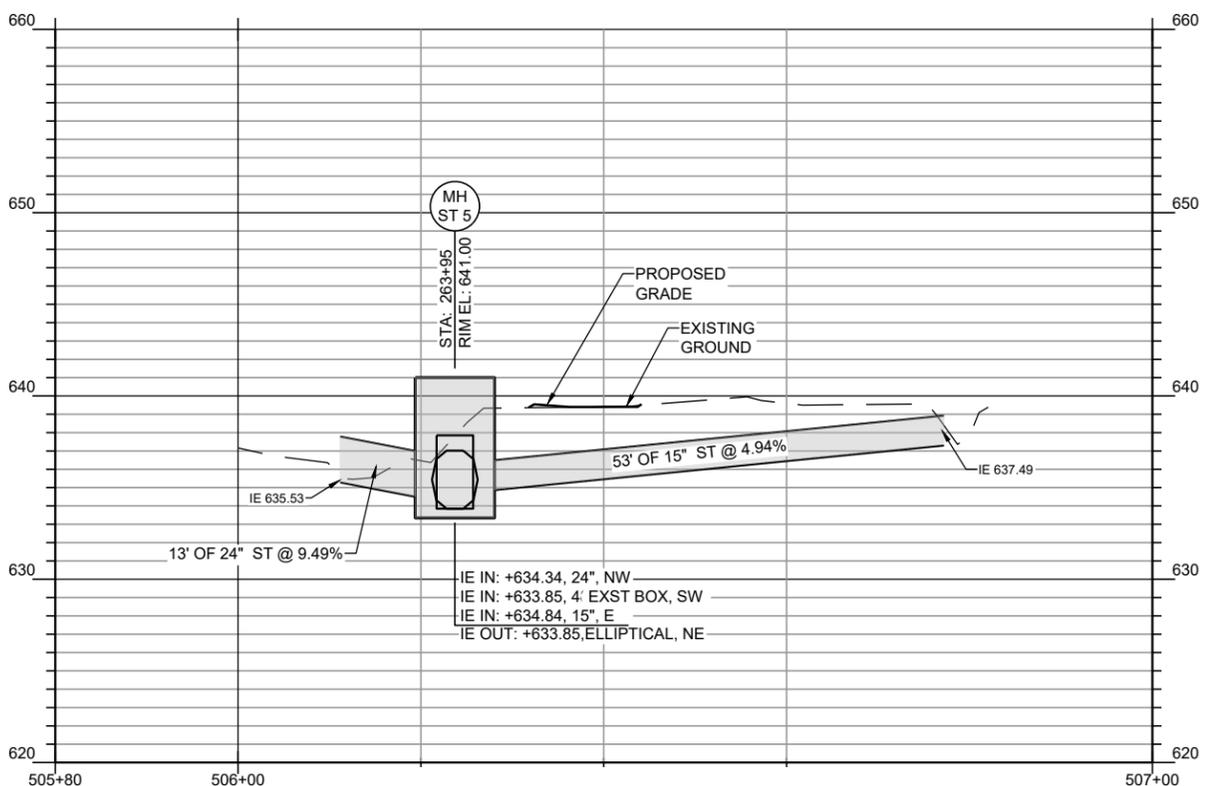
LCA00 D3-RS



**STORM INLETS PLAN AND PROFILE
NEAR 1450 DEVITT AVENUE
STA 500+00**



**STORM INLETS PLAN AND PROFILE
NEAR 618 HAGERMAN AVENUE
STA 506+00**



NOTES

1. EXISTING PRIVATE PROPERTY ROCKED DRAINAGE SWALE EXTENDS TO CURB LINE. MAINTAIN POSITIVE DRAINAGE TOWARD STREET. RESTORE ROCKED DRAINAGE SWALE TO EXTENT DISTURBED.
2. SALVAGE ALL EXISTING CASTINGS ON PROJECT AND TURN OVER TO CITY. ROUND VANE GRATE MUST BE SALVAGED AND RETURNED TO CITY.
3. PROTECT EXISTING UTILITIES. SUPPORT AS NEEDED DURING SEWER CONSTRUCTION. DETERMINE IF THERE IS AN ELEVATION CONFLICT WITH GAS LINE. COORDINATE WITH GAS COMPANY IF RELOCATION IS NEEDED.
4. INLET SHALL BE 24-INCH DIAMETER AREA INTAKE SW-512 WITH SW-604 TYPE 5 CASTING.
5. LOCATE EXISTING INTAKE POINT IP 7233. INSTALL NEW 24-INCH PIPE WITH APRON AND GUARD ACCORDING TO SUDAS DETAILS UP TO EXISTING INTAKE/LOW POINT. EXISTING DRAINTILE DISCHARGES TO THIS PIPE INTAKE. MAINTAIN DRAINTILE DISCHARGE TO DITCH. RESTORE AREA TO MATCH EXISTING CONTOURS. GRADE TO DRAIN. PROTECT AREA DISTURBED FROM EROSION WITH MATTING OR EROSION STONE/RIPRAP.
6. LOCATE END OF BROKEN 24-INCH PIPE (IP 5457) AND REMOVE BROKEN PIPE. INSTALL NEW PIPE TO DRAIN AREA WITH NEW PIPE APRON AND GUARD ACCORDING TO SUDAS DETAILS. LOCATE PIPE END AT LOW POINT AND SHAPE TO DRAIN. RESTORE DISTURBED AREA TO MATCH EXISTING CONTOURS AND PROTECT WITH EROSION MATTING OR EROSION STONE/RIPRAP IF NEEDED.
7. STAY WITHIN EASEMENTS AND CONSTRUCTION LIMITS.

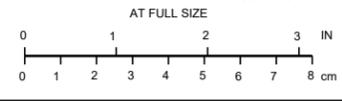
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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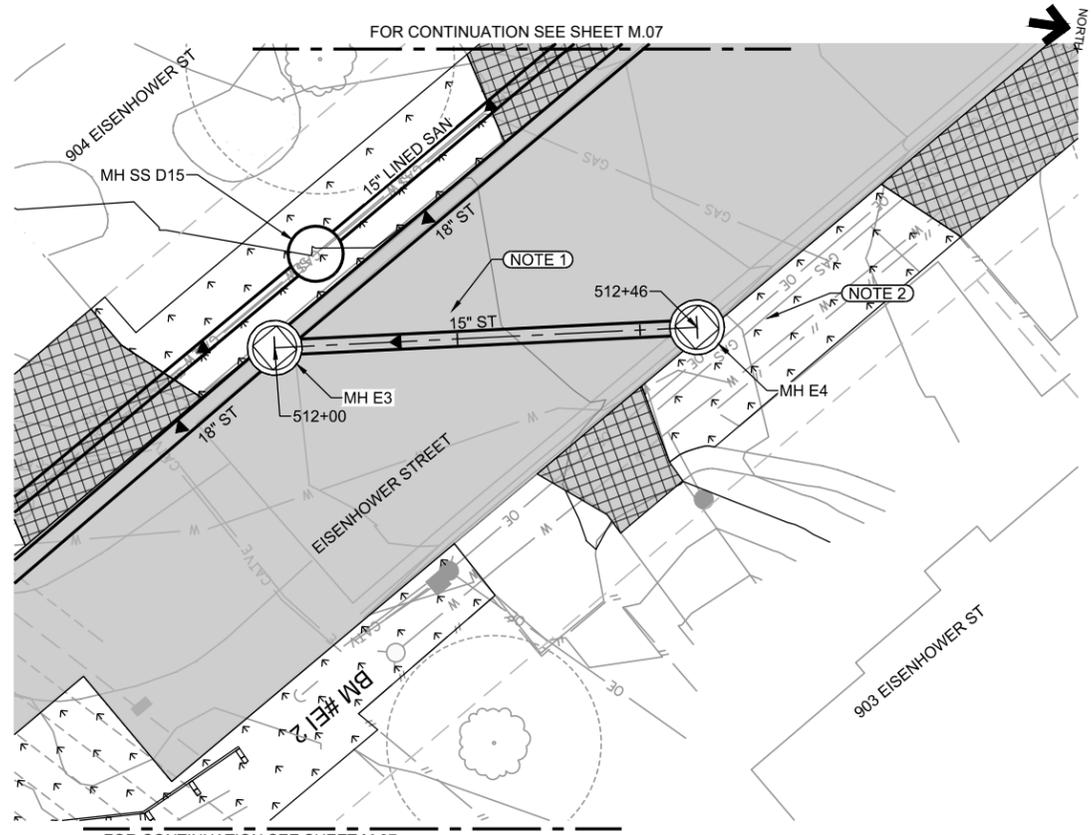
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**STORM SEWER
STORM INLETS ON DEVITT ST
& NEAR HAGERMAN DR**

DESIGNED: KK HEIM	SCALE: 1" = 10'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: JM BRADY	M.16
APPROVED: KK HEIM	0
DATE: MARCH 12, 2025	

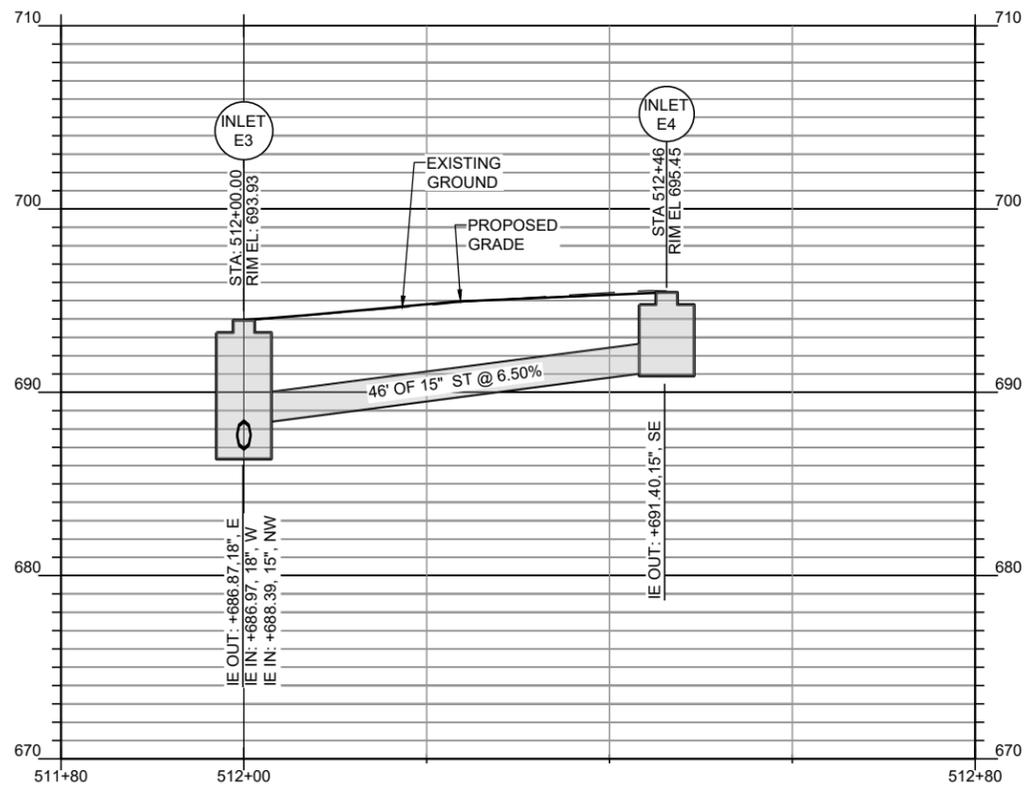


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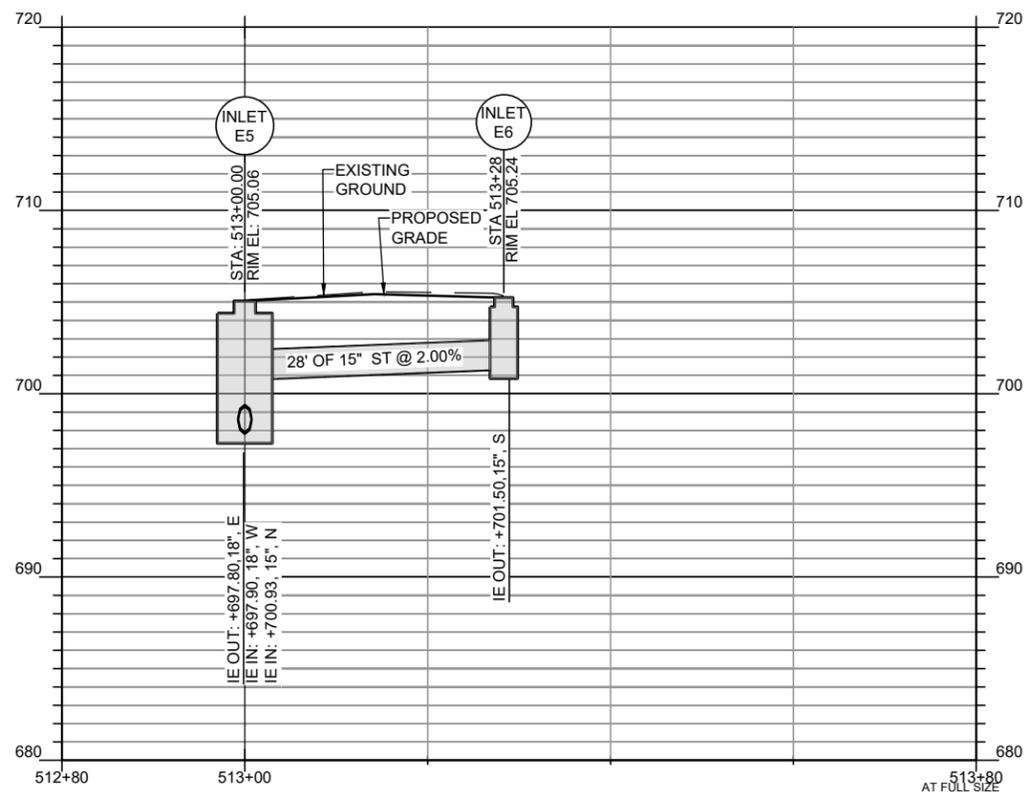
FOR CONTINUATION SEE SHEET M.07

**STORM INLETS PLAN AND PROFILE
NEAR 904 EISENHOWER ST
STA 512+00**



FOR CONTINUATION SEE SHEET M.08

**STORM INLETS PLAN AND PROFILE
NEAR 924 EISENHOWER ST
STA 513+00**



NOTES

1. INSTALL NEW INLETS AT LOCATIONS SHOWN. POSITION INLET GRATES IN CURB LINE AS SHOWN ON SUDAS DETAILS.
2. PROTECT EXISTING UTILITIES.

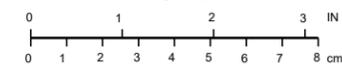
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

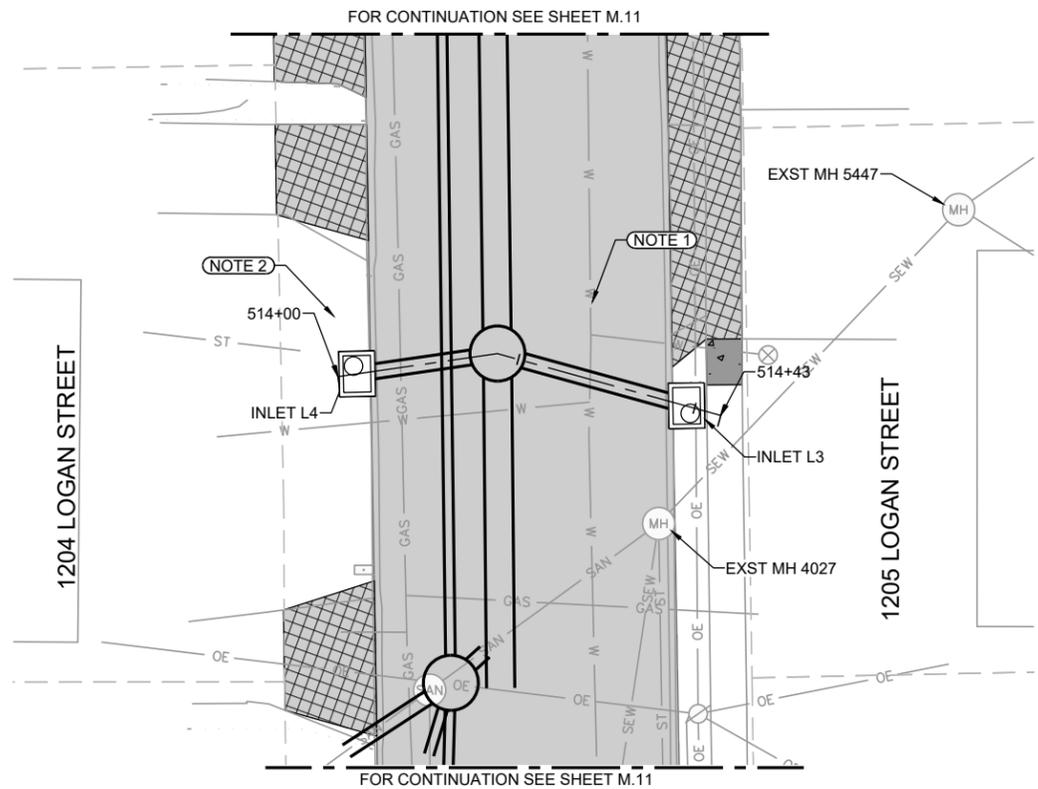
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225 Iowa Avenue, Muscatine, Iowa 52761-3764
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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

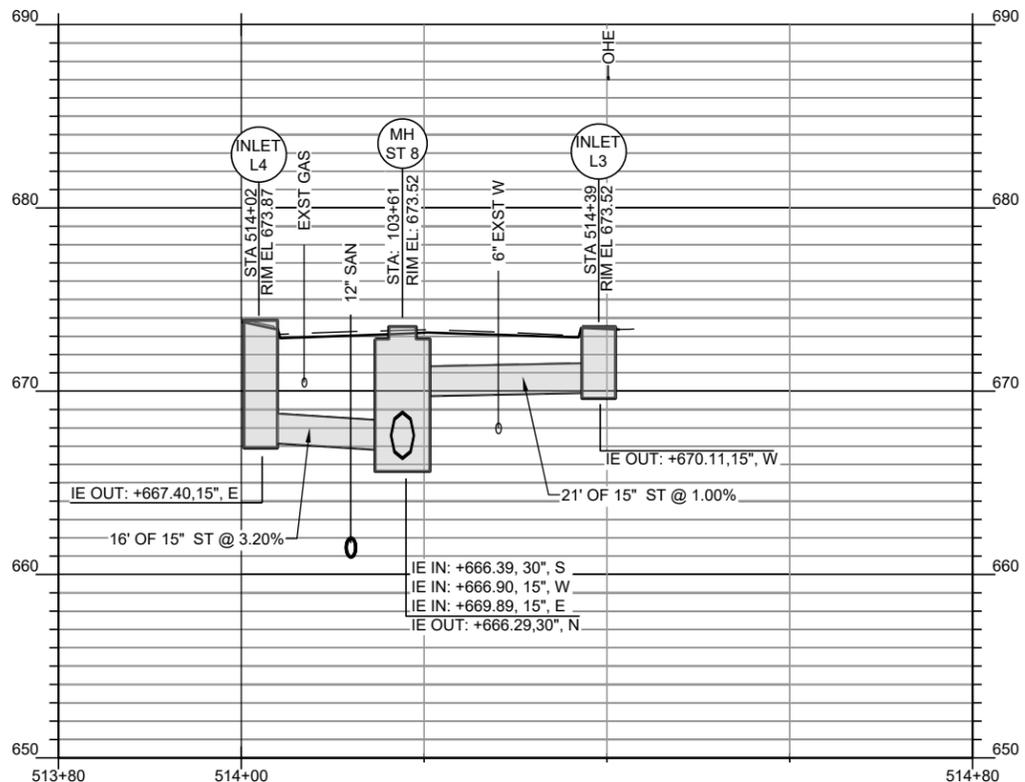
**STORM SEWER
STORM INLETS ON EISENHOWER ST**

DESIGNED: KK HEIM	SCALE: 1" = 10'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: JM BRADY	M.17
APPROVED: KK HEIM	0
DATE: MARCH 12, 2025	





STORM INLETS PLAN AND PROFILE
NEAR 1205 LOGAN ST
STA 514+00



NOTES

1. POTHOLE AND DETERMINE ELEVATION OF EXISTING WATER LINE PRIOR TO INSTALLING INLETS. MAINTAIN CLEARANCE OF 18-INCHES BETWEEN STORM SEWER AND WATER LINE. SEE SHEET A.05 AND SUDAS SPECIFICATIONS FOR CLEARANCE REQUIREMENTS.

PROVIDE MINIMUM CLEARANCE ON STORM MANHOLE FOR PLACEMENT OF PIPE OPENING AS REQUIRED ON DETAIL SW-401. CONSIDER ELIMINATING ADJUSTMENT RINGS IF NECESSARY.
2. INSTALL NEW INLETS AT LOCATIONS SHOWN. POSITION INLET STRUCTURE IN CURB LINE AS SHOWN ON SUDAS DETAILS.

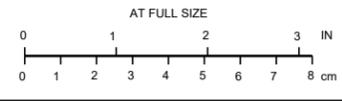
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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www.stanleyconsultants.com

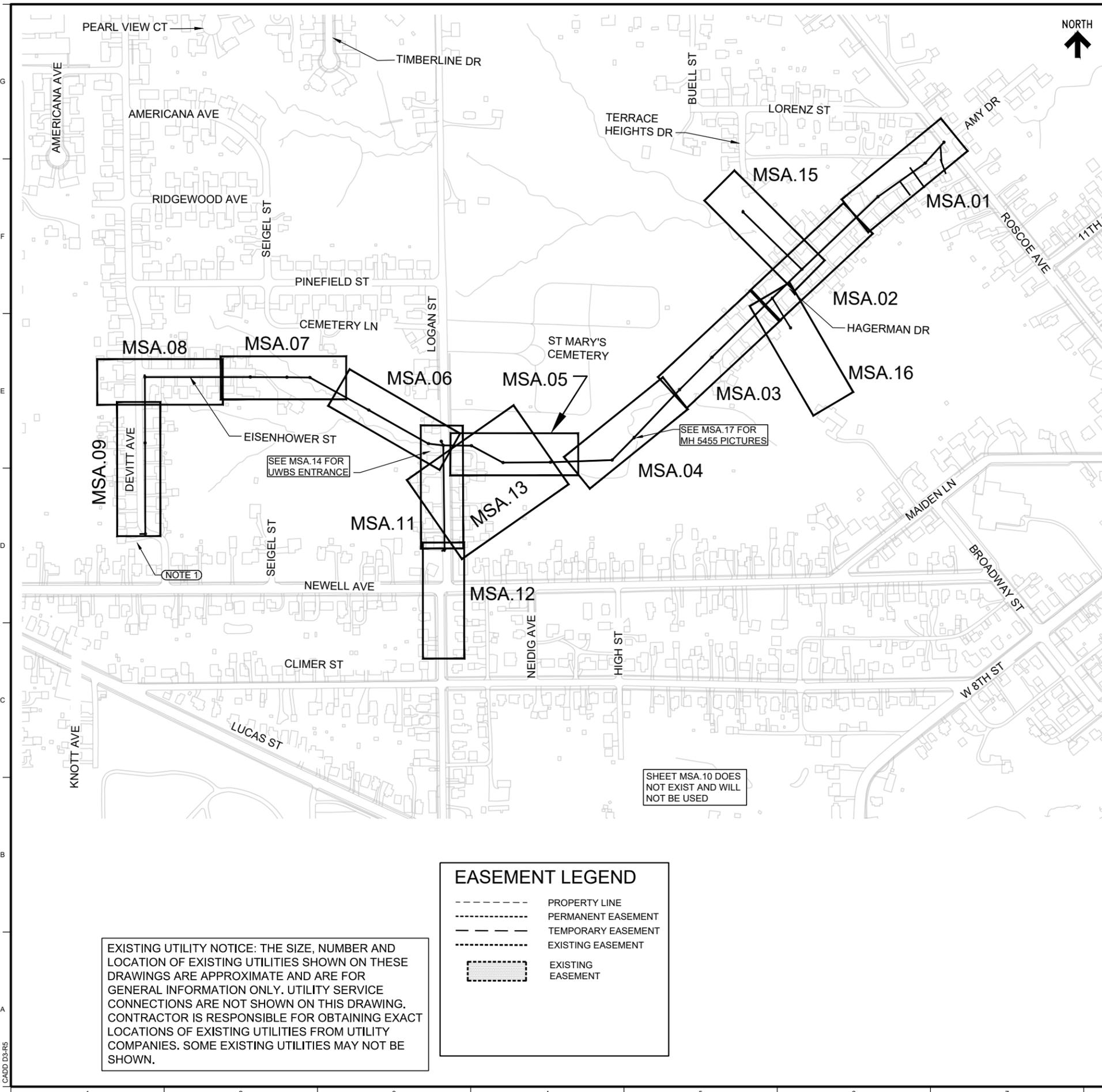
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

STORM SEWER
INLETS ON LOGAN ST

DESIGNED	KK HEIM	SCALE:	1" = 10'
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	JM BRADY		
DATE	MARCH 12, 2025		



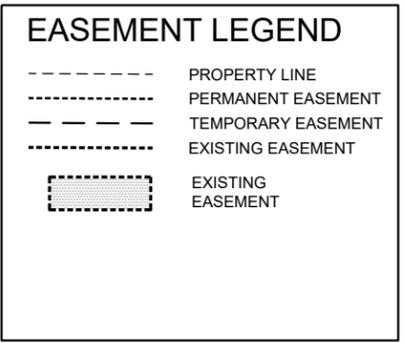
LOADD D3-RS



GENERAL NOTES

1. SHEET MSA.10 DOES NOT EXIST AND WILL NOT BE USED.
2. KEY PLAN DRAWING SHOWS PROPOSED SANITARY SEWERS SCHEMATICALLY. EXISTING UTILITIES ARE NOT SHOWN.
3. PROPOSED STORM SEWER IS SHOWN ON M SERIES DRAWINGS.
4. CONTRACTOR'S LICENSED LAND SURVEYOR SHALL PROVIDE RECORD DRAWING AS BUILT ELEVATIONS FOR ALL NEW AND EXISTING SEWERS, UTILITIES, AND SERVICE LINES ACCORDING TO SPECIFICATIONS.
5. SANITARY AND STORM SEWER PLAN DRAWINGS SHOW ONLY UTILITY SERVICES THAT WERE SURVEYED OR FIELD VERIFIED. NOT ALL SERVICES ARE SHOWN. CONTRACTOR SHALL LOCATE ALL SANITARY SERVICES ALONG PROPOSED SANITARY SEWER ALIGNMENT AND CONNECT TO NEW SANITARY SEWER. EACH PROPERTY OR RESIDENTIAL SERVICE SHALL BE ACCOUNTED FOR AND CONNECTED TO AN ACTIVE SANITARY TRUNK SEWER PRIOR TO CONTINUATION OF CONSTRUCTION PAST THAT PROPERTY. STORM CONNECTIONS SHALL NOT BE MADE TO NEW SANITARY SEWERS.
6. SANITARY SERVICE INFORMATION SHOWN IS SCHEMATIC AND MUST BE FIELD VERIFIED. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING IF SERVICES ARE LIVE AND WHETHER ITS STORM OR SANITARY. CONSULT CITY FOR CONFIRMATION ASSISTANCE.
7. CONTRACTOR SHALL STAY WITHIN CITY ROW LIMITS OR IDENTIFIED EASEMENTS AND CONSTRUCTION LIMITS AT ALL TIMES UNLESS OTHERWISE INDICATED. SURFACE REMOVAL AND REPLACEMENT LIMITS ON D SERIES DRAWINGS COINCIDE WITH CONSTRUCTION LIMITS. EASEMENT LIMITS ARE DENOTED ON SANITARY SEWER DRAWINGS. EASEMENT PLATS AND EXHIBITS WILL BE AVAILABLE TO CONTRACTOR'S SURVEYOR FOR USE DURING STAKING EASEMENTS. EASEMENT SHAPES CAN BE PROVIDED ELECTRONICALLY TO CONTRACTOR. STAKING OF EASEMENTS IS CONTRACTOR'S RESPONSIBILITY.
8. CONTRACTOR IS ENCOURAGED TO PERFORM EXPLORATORY TEST DIGS OR POTHOLING TO VERIFY DEPTH OF UTILITIES THAT COULD BE IN CONFLICT. COSTS TO PERFORM EXPLORATORY TEST DIGS OR POTHOLING ARE INCIDENTAL TO PIPE INSTALLATION UNLESS AUTHORIZED BY THE CITY AND SPECIFICALLY DEFINED AS AN ITEM TO BE PAID.
9. UNSUITABLE TRENCH EXCAVATED MATERIAL TO BE DISPOSED OF AT A LOCATION DETERMINED BY THE CONTRACTOR.
10. PRESERVE AND PROTECT TREES TO EXTENT POSSIBLE. COORDINATE WITH CITY ON EXTENT OF PROTECTION, DECISION TO REMOVE TREES, AND REMEDIAL ACTION IF DAMAGED. IF NECESSARY TRIM TREE BRANCHES BACK TO AVOID OVERHEAD CONFLICT WITH EXCAVATION MACHINERY TO PRESERVE TREES. SEE R SHEETS FOR LEGEND OF TREE REMOVALS.
11. SEE SUDAS SPECIFICATION SECTION 3010 FOR PIPE BACKFILL COMPACTION TESTING REQUIREMENTS AND FREQUENCY.
12. FIELD CONDITIONS DURING CONSTRUCTION MAY REQUIRE MODIFICATIONS TO PLAN LOCATION, PIPE SLOPES, OR ELEVATIONS OF PROPOSED GRAVITY SEWER. FIELD CHANGES MUST BE APPROVED BY CITY. SEWER CONSTRUCTION SHALL BE PERFORMED IN CONFORMANCE WITH DESIGN INTENT, CAPACITY CALCULATIONS, AND REGULATORY CRITERIA. IF NECESSARY, MODIFICATIONS TO PIPE SLOPE OR PIPE SIZE SHALL BE MADE CAREFULLY TO MAINTAIN MINIMUM DESIGN CAPACITY OF THE GRAVITY SEWERS. CONSULT DESIGN ENGINEER WHEN MODIFICATIONS REDUCE PIPE SIZE OR REDUCE/FLATTEN PIPE SLOPES TO CONFIRM PROJECT DESIGN CAPACITY IS MAINTAINED.
13. RIM ELEVATIONS OF MANHOLES ARE BASED ON PROPOSED GRADE ELEVATIONS WHERE PROPOSED GRADE ELEVATIONS ARE AVAILABLE. OTHER LOCATIONS SHALL MATCH EXISTING CONDITIONS. RIM ELEVATIONS SHALL BE ADJUSTED TO MATCH ELEVATIONS OF AS-PLACED PAVEMENT. SEE DETAIL A.05 FOR FLUSH CASTING INSTALLATION TECHNIQUE.
14. SEE C SERIES SHEETS FOR PIPE AND MANHOLES TABLES INCLUDING NORTHING AND EASTING COORDINATE OF CENTER OF MANHOLE STRUCTURE.
15. REFER TO SUDAS DETAILS APPLICABLE TO PROJECT SUMMARIZED ON SHEET A.02 TABLE AND ADDITIONAL PIPE DETAILS ON A SERIES SHEETS.
16. THE SIZE AND LOCATION OF THE UPPER WEST BRANCH SEWER ARE APPROXIMATED BASED ON BEST AVAILABLE INFORMATION. ACTUAL SIZE AND LOCATION MAY VARY FROM THAT SHOWN ON PLAN. CONTRACTOR IS REQUIRED TO CONFIRM ACTUAL LOCATION AND ELEVATION WITH EXPLORATORY EXCAVATION AT CRITICAL LOCATIONS.
17. SEE J SHEETS FOR TRAFFIC CONTROL AND STAGING PLANS.
18. WHEN EXISTING SANITARY SERVICES ARE CONNECTED TO NEW SANITARY SEWERS, REPLACE SERVICE TO A LOCATION OF 5' MAXIMUM BEYOND THE NEW BACK OF CURB WHEN SERVICE IS IN POOR CONDITION OR MATERIAL IS NOT PVC OR DIP. CONTRACTOR TO CONNECT NEW SERVICE PIPE TO AN EXISTING SERVICE PIPE IN SOUND CONDITION. ADDITIONAL SERVICE LINE REPLACEMENT BEYOND THE CURB GREATER THAN 5- FEET MUST BE APPROVED BY CITY.
19. SUBDRAIN IS NOT SHOWN ON PLAN DRAWINGS. SUBDRAIN IS REQUIRED UNDER PAVEMENT ACCORDING TO DETAIL ON SHEET B.01 AND ESTIMATE REFERENCE NOTES. SUBDRAIN SHALL BE OUTLET TO NEAREST INLET.
20. SEE C SHEETS FOR TABLES WITH INFORMATION ON MANHOLES AND INTAKES TO BE REMOVED; DROP CONNECTIONS; AND SANITARY SERVICE LINE LENGTH SUMMARY.
21. SEE WATER SHEETS FOR PROPOSED WATER WORK UNDER THIS CONTRACT.

EXISTING UTILITY NOTICE: THE SIZE, NUMBER AND LOCATION OF EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND ARE FOR GENERAL INFORMATION ONLY. UTILITY SERVICE CONNECTIONS ARE NOT SHOWN ON THIS DRAWING. CONTRACTOR IS RESPONSIBLE FOR OBTAINING EXACT LOCATIONS OF EXISTING UTILITIES FROM UTILITY COMPANIES. SOME EXISTING UTILITIES MAY NOT BE SHOWN.



SHEET MSA.10 DOES NOT EXIST AND WILL NOT BE USED

SEE MSA.17 FOR MH 5455 PICTURES

SEE MSA.14 FOR UWBS ENTRANCE

NOTE 1



NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

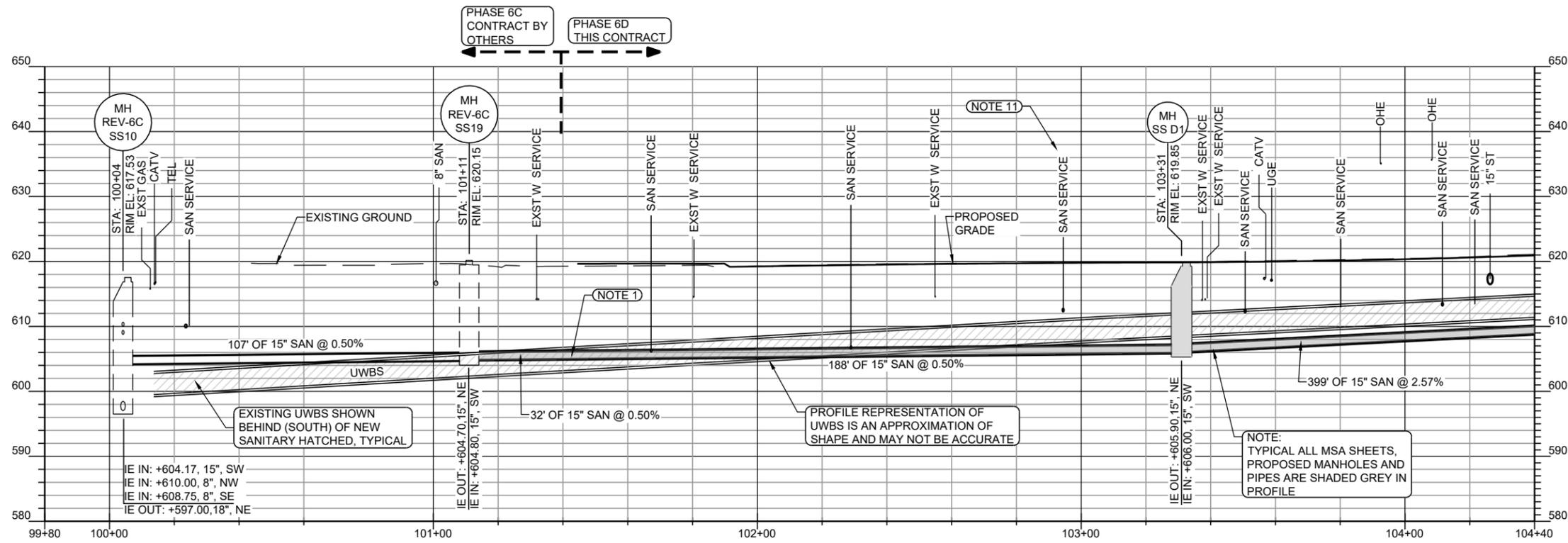
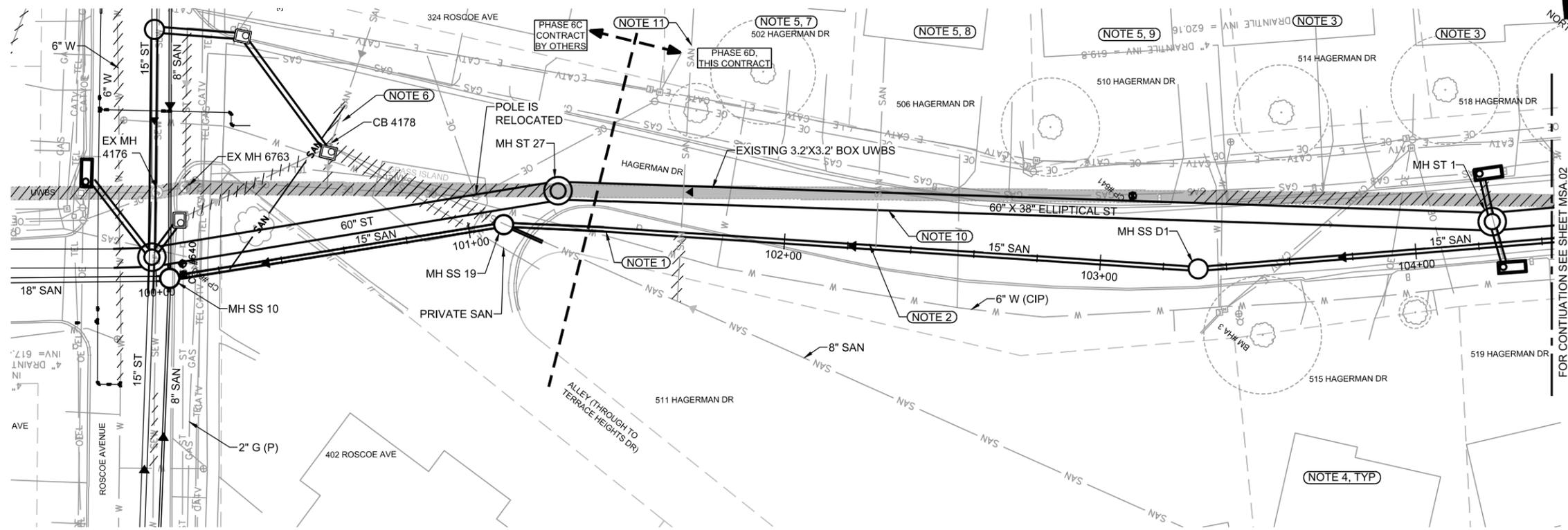
OVERALL SANITARY KEY PLAN

DESIGNED: KK HEIM	SCALE: AS NOTED
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: JM BRADY	MSA.00
APPROVED: KK HEIM	0
DATE: MARCH 12, 2025	

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NOTES

1. LOCATE PIPE END OF 15-INCH SANITARY INSTALLED IN PHASE 6C BY OTHERS. REMOVE PIPE CAP/PLUG AND CONTINUE PIPE INSTALLATION. CAPPED PIPE IS LOCATED APPROXIMATELY 32' FROM MANHOLE.
2. INSTALL NEW SANITARY ON ALIGNMENT SHOWN. CONNECT ALL ACTIVE SANITARY SERVICES CONNECTED TO EXISTING UWBS TO NEW SANITARY. PLUG ALL OPEN PIPE ENDS OF INACTIVE SERVICES AND ABANDON. FIELD VERIFY WHETHER SERVICE IS 'LIVE' AND WHETHER IT IS STORM OR SANITARY.
3. LOCATE ALL EXISTING SANITARY SERVICES ON SOUTH SIDE OF HAGERMAN DRIVE AND CONNECT TO NEW SANITARY SEWER ON NORTH SIDE OF HAGERMAN DRIVE. PLUG EXISTING SERVICE CONNECTIONS AT UWBS WITH CONCRETE. NEW SERVICES MAY REQUIRE INSTALLATION UNDER UWBS USING TRENCHLESS TECHNOLOGIES. SERVICES FOR 514 AND 518 HAGERMAN ARE ANTICIPATED NEEDING TO BE BORED UNDER THE EXISTING UWBS TO CONNECT TO NEW SANITARY ON THE NORTH.
4. INTERCEPT ALL NORTH SIDE SANITARY SERVICES ON HAGERMAN DRIVE THAT CURRENTLY CONNECT TO EXISTING UWBS AND CONNECT TO NEW SANITARY ON THE NORTH. PLUG SERVICE CONNECTION TO UWBS WITH CONCRETE AT UWBS AND WHERE SERVICE IS INTERCEPTED IN TRENCH.
5. CONFIRM EXISTING SAN SERVICE FOR 502, 506, 510 HAGERMAN DRIVE CAN BE PICKED UP AND CONNECTED TO NEW SANITARY ON NORTH SIDE OF EXISTING UWBS BY GOING OVER THE TOP OF UWBS.
6. EXISTING SERVICE FOR 324 ROSCOE GOES TO DEEP EXISTING INLET CB 4178 AND WILL BE PICKED UP IN PHASE 6C.
7. EXISTING 502 ROSCOE AVE SERVICE CONNECTS TO 8-INCH SANITARY NORTH OF THE UWBS THAT DISCHARGES TO EXISTING INLET CB4178. INTERCEPT SERVICE LINE FROM 502 AND CONNECT TO NEW SANITARY IN HAGERMAN.
8. EXISTING 506 ROSCOE AVE SERVICE GOES OVER EXISTING UWBS AND CONNECTS TO UWBS ON NORTH SIDE OF STRUCTURE.
9. EXISTING 510 ROSCOE SERVICE JOINS SERVICE LINE OF 514 ROSCOE AS A SINGLE SERVICE LINE (STACKED) CONNECTED TO UWBS. FIND SERVICES AND ELIMINATE STACKED SERVICE WITH INDIVIDUAL NEW CONNECTIONS TO NEW SANITARY MAINLINE SEWER.
10. PERFORM EXPLORATORY EXCAVATION TO DETERMINE BOTTOM OF UWBS ELEVATION PRIOR TO BEGINNING WORK FOR TRENCHLESS CONSTRUCTION OF SANITARY SERVICES. ELEVATIONS SHALL BE COLLECTED BY A SURVEYOR AND PROVIDED TO CITY AND DESIGN ENGINEER AT LEAST 2 WEEKS PRIOR TO BEGINNING HAGERMAN DRIVE SANITARY.
11. EXISTING SERVICES ARE GENERALLY NOT SHOWN ON ALL PLAN DRAWINGS. LOCATE EXISTING SERVICE AND CONNECT TO NEW SANITARY. ESTIMATED EXISTING SANITARY SERVICE LINE ELEVATIONS ARE SHOWN IN PROFILE THIS DRAWING.



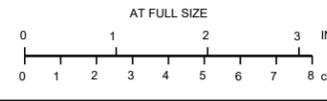
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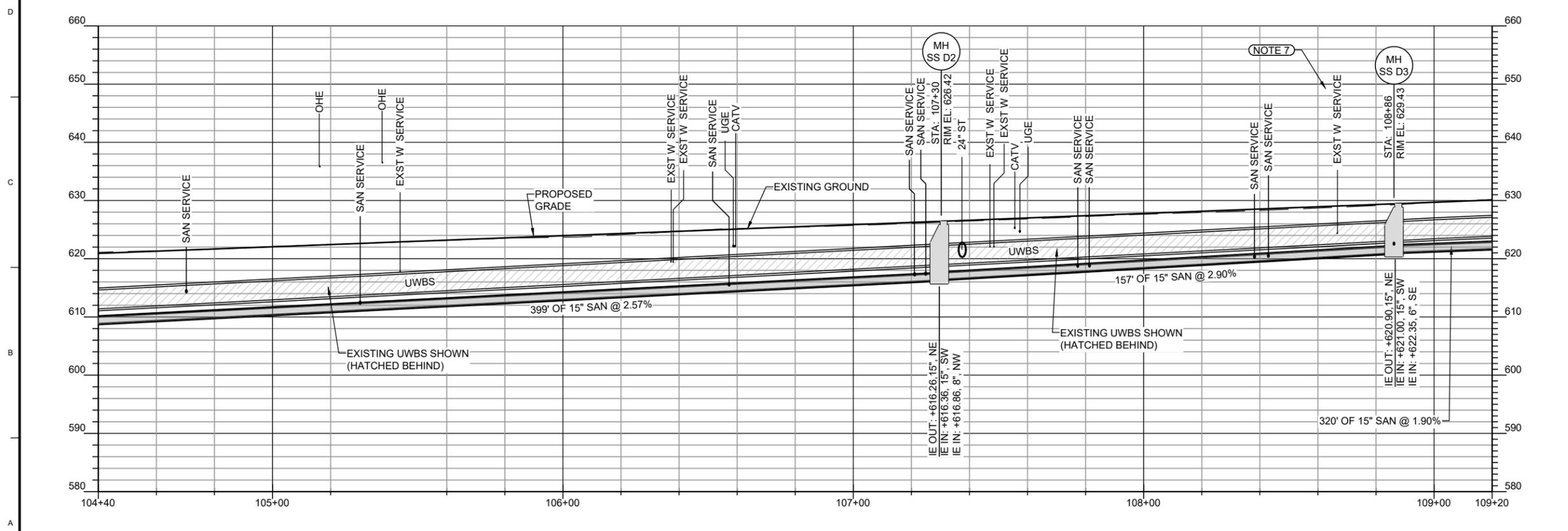
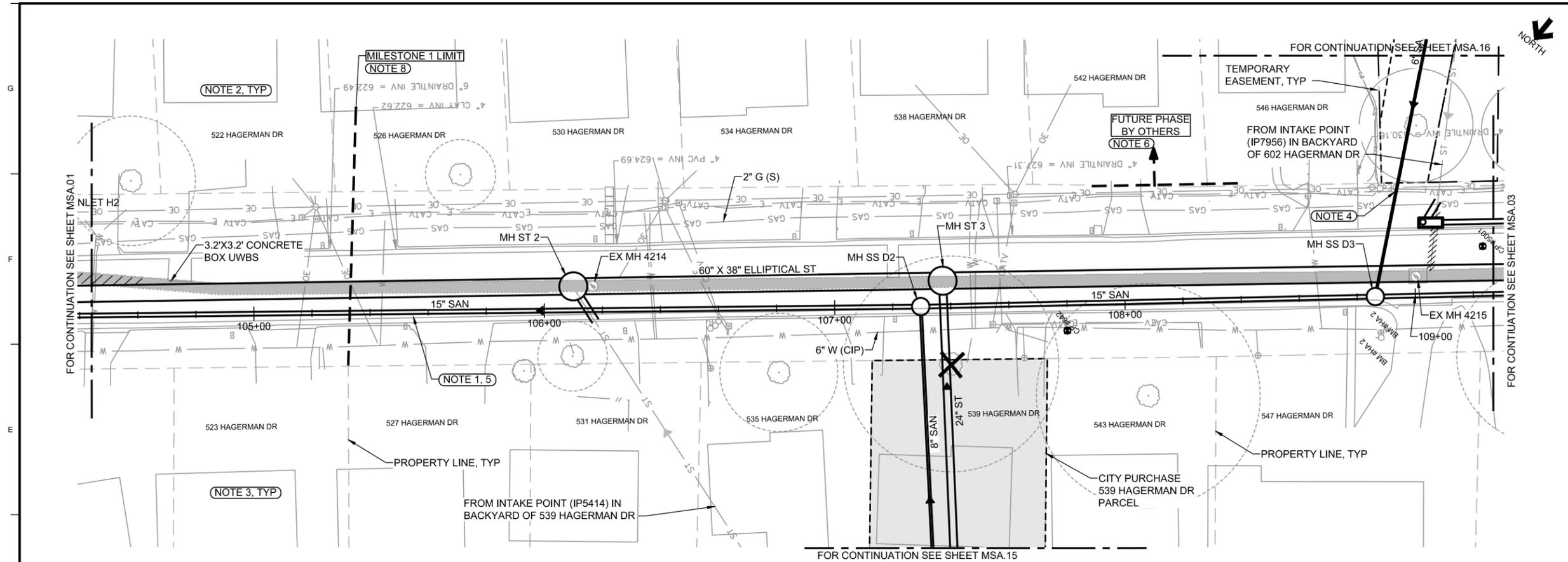
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

SANITARY SEWER HAGERMAN DRIVE SHEET 1

DESIGNED: KK HEIM	SCALE: 1" = 20'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: JM BRADY	MSA.01
APPROVED: KK HEIM	0
DATE: MARCH 12, 2025	



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NOTES

1. INSTALL NEW SANITARY ON ALIGNMENT SHOWN. CONNECT ALL ACTIVE SANITARY SERVICES CONNECTED TO EXISTING UWBS TO NEW SANITARY. PLUG ALL OPEN PIPE ENDS OF INACTIVE SERVICES AND ABANDON. FIELD VERIFY WHETHER SERVICE IS 'LIVE' AND WHETHER IT IS STORM OR SANITARY.
2. LOCATE ALL EXISTING SANITARY SERVICES ON SOUTH SIDE OF HAGERMAN DRIVE AND CONNECT TO NEW SANITARY SEWER ON NORTH SIDE OF HAGERMAN DRIVE. PLUG EXISTING SERVICE CONNECTIONS TO UWBS. SERVICES MAY REQUIRE INSTALLATION UNDER UWBS USING TRENCHLESS TECHNOLOGIES.
3. INTERCEPT ALL NORTH SIDE SANITARY SERVICES ON HAGERMAN DRIVE THAT CURRENTLY CONNECT TO EXISTING UWBS AND CONNECT TO NEW SANITARY ON THE NORTH.
4. INSTALL SERVICE LINE STUB FOR 702 MAIDEN LANE TO RIGHT OF WAY LINE. CAP SERVICE LINE WITH WATERTIGHT CAP AND INSTALL BURIED MARKER TO DETECT LOCATION OF SERVICE LINE IN THE FUTURE. IN THE FUTURE, SERVICE LINE WILL BE EXTENDED ACROSS PRIVATE PROPERTY AND DISCONNECTED FROM THE STORM INTAKE.
5. PERFORM EXPLORATORY EXCAVATION TO DETERMINE BOTTOM OF UWBS ELEVATION PRIOR TO BEGINNING WORK FOR TRENCHLESS CONSTRUCTION OF SANITARY SERVICES. ELEVATIONS SHALL BE COLLECTED BY A SURVEYOR AND PROVIDED TO CITY AND DESIGN ENGINEER AT LEAST 2 WEEKS PRIOR TO BEGINNING HAGERMAN DRIVE SANITARY.
6. WORK IN THIS PHASE 6D MUST STOP AT THE RIGHT OF WAY LINE. DO NOT PERFORM ANY EXCAVATION OR GROUND DISTURBING WORK ON PRIVATE PROPERTY FOR NEW SERVICE LINE.
7. PROTECT EXISTING WATER AND GAS SERVICES. RELOCATE WATER SERVICES IF NEEDED ACCORDING TO DETAIL ON SHEET A.05.
8. INSTALL PIPE AND MAINLINE PAVING TO MILESTONE 1 LIMIT, BEYOND THE DRIVEWAYS FOR 522 AND 523 HAGERMAN DRIVE BY THE MILESTONE 1 CONTRACT DATE.

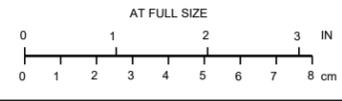
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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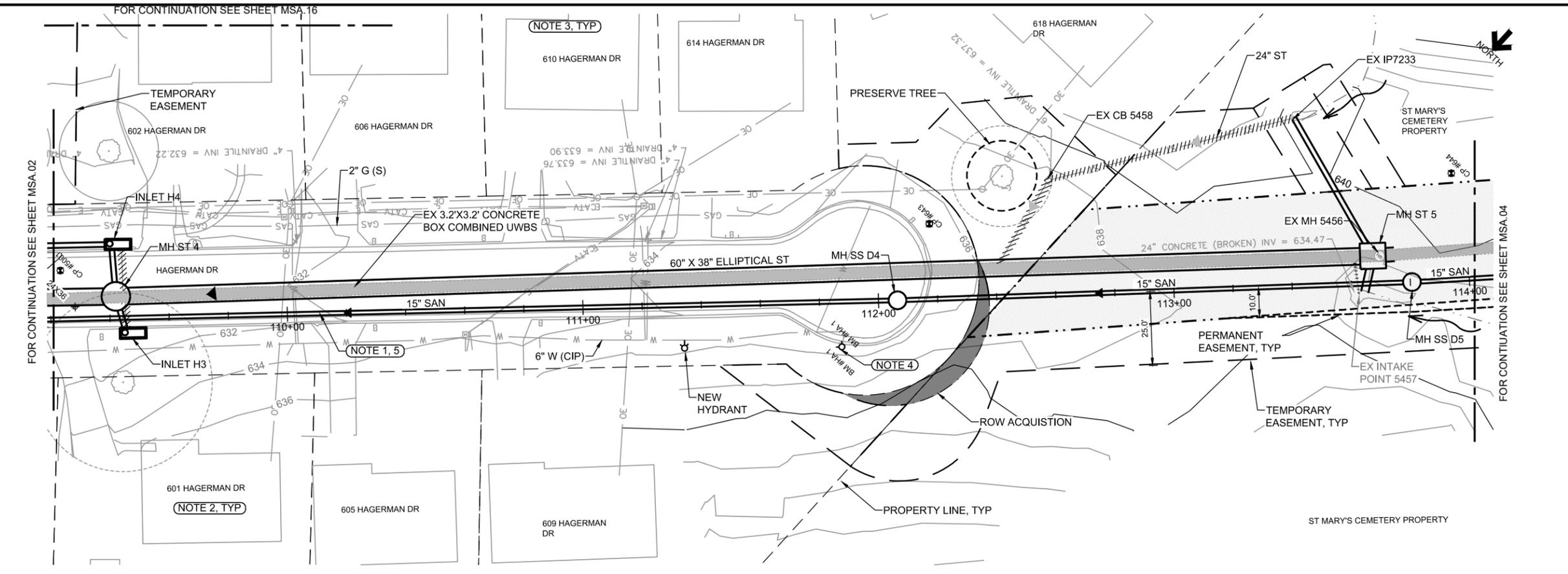
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SEWER
HAGERMAN DRIVE
SHEET 2**

DESIGNED: KK HEIM	SCALE: 1" = 20'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: JM BRADY	MSA.02
APPROVED: KK HEIM	0
DATE: MARCH 12, 2025	

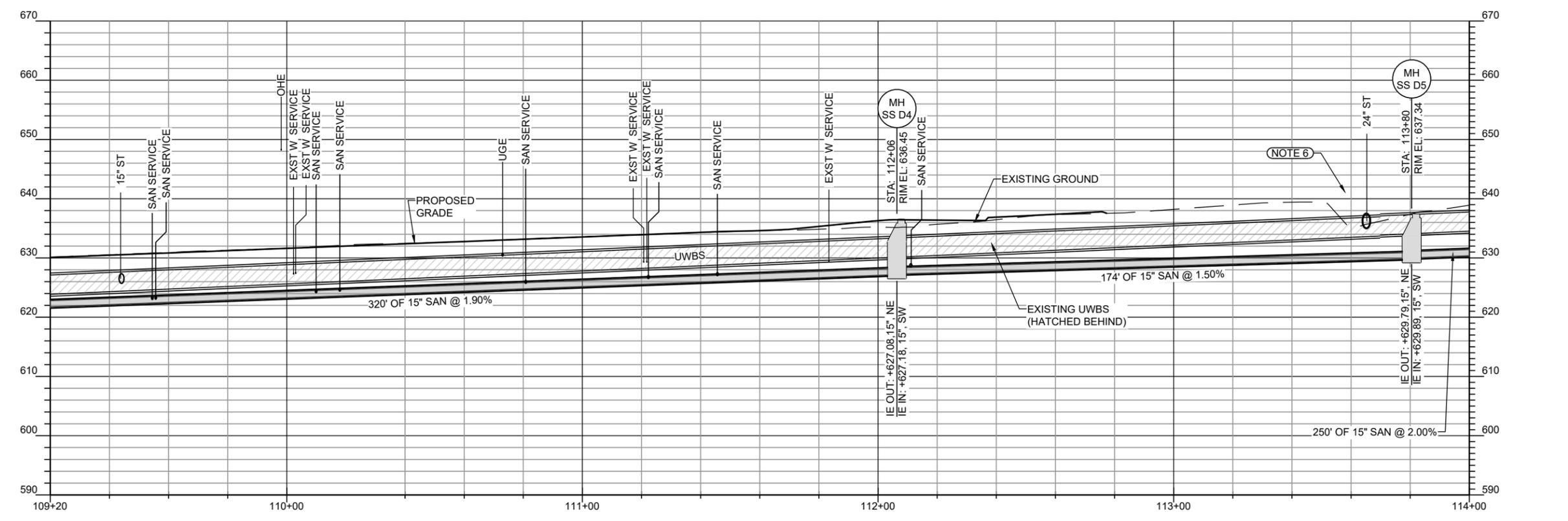


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NOTES

1. INSTALL NEW SANITARY ON ALIGNMENT SHOWN. CONNECT ALL ACTIVE SANITARY SERVICES CONNECTED TO EXISTING UWBS TO NEW SANITARY. PLUG ALL OPEN PIPE ENDS OF INACTIVE SERVICES AND ABANDON. FIELD VERIFY WHETHER SERVICE IS 'LIVE' AND WHETHER IT IS STORM OR SANITARY.
2. LOCATE ALL EXISTING SANITARY SERVICES AND CONNECT TO NEW SANITARY SEWER.
3. LOCATE ALL EXISTING SANITARY SERVICES ON SOUTH SIDE OF HAGERMAN DRIVE AND CONNECT TO NEW SANITARY SEWER ON NORTH SIDE OF HAGERMAN DRIVE. PLUG EXISTING SERVICE CONNECTIONS TO UWBS. SERVICES MAY REQUIRE INSTALLATION UNDER UWBS USING TRENCHLESS TECHNOLOGIES.
4. MPW TO REMOVE AND REPLACE EXISTING HYDRANT AT A LOCATION THAT DOES NOT CONFLICT WITH NEW CUL-DE-SAC.
5. PERFORM EXPLORATORY EXCAVATION TO DETERMINE BOTTOM OF UWBS ELEVATION PRIOR TO BEGINNING WORK FOR THE TRENCHLESS CONSTRUCTION OF SANITARY SERVICES. ELEVATIONS SHALL BE COLLECTED BY A SURVEYOR AND PROVIDED TO CITY AND DESIGN ENGINEER AT LEAST 2 WEEKS PRIOR TO BEGINNING HAGERMAN DRIVE SANITARY.
6. PRESERVE DRAINAGE PATH TO EXISTING COMBINED SEWER AND PROPOSED STORM SEWER. RESTORE CONTOURS TO MATCH EXISTING AND PROVIDE POSITIVE DRAINAGE.



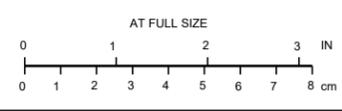
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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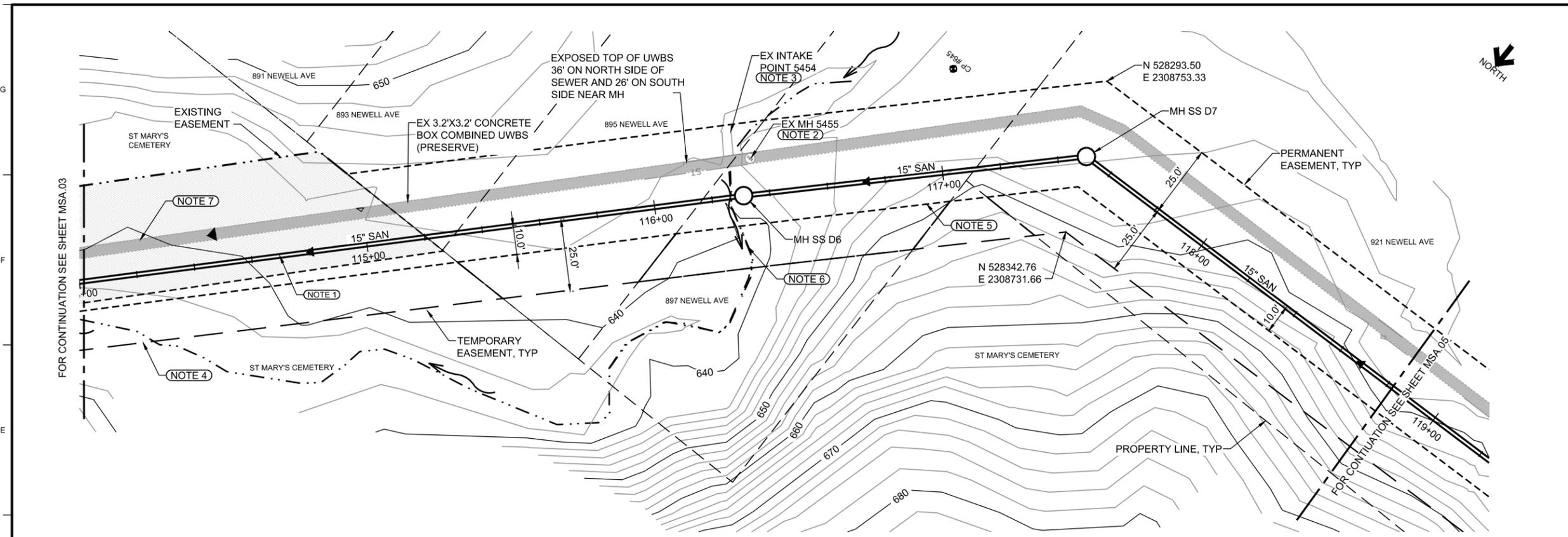
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SEWER
HAGERMAN DRIVE
SHEET 3**

DESIGNED: KK HEIM	SCALE: 1" = 20'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: JM BRADY	MSA.03
APPROVED: KK HEIM	0
DATE: MARCH 12, 2025	

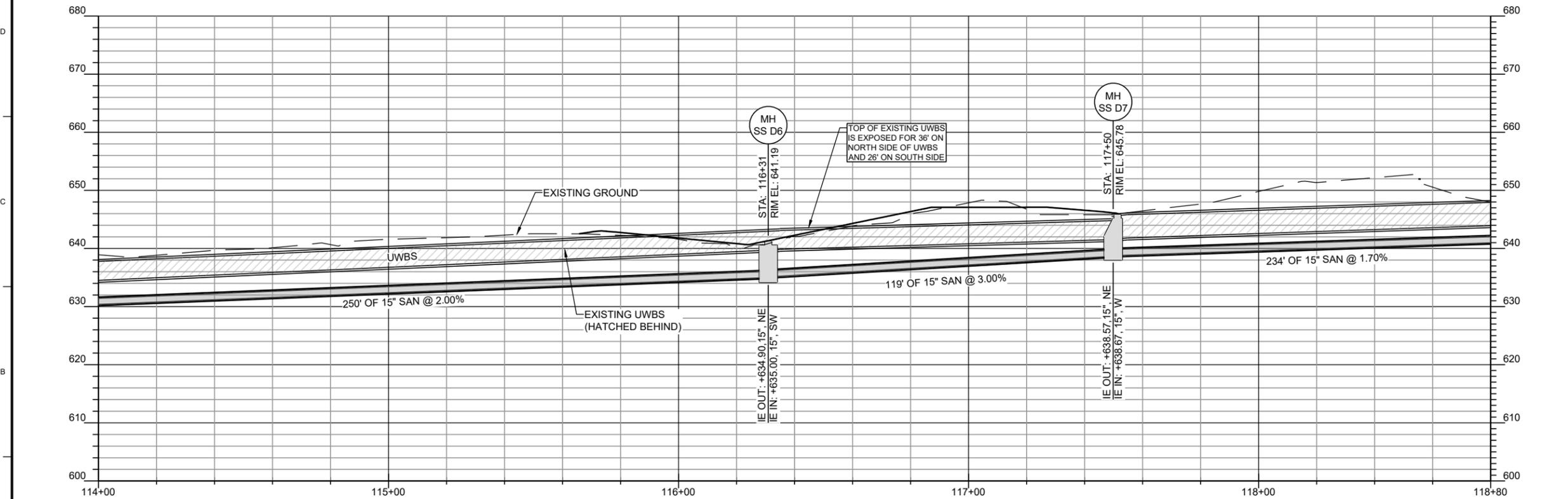


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NOTES

1. INSTALL NEW SANITARY ON ALIGNMENT SHOWN. CONNECT ALL ACTIVE SANITARY SERVICES TO NEW SANITARY. PLUG ALL OPEN PIPE ENDS OF INACTIVE SERVICES AND ABANDON. FIELD VERIFY WHETHER SERVICE IS 'LIVE' AND WHETHER IT IS STORM OR SANITARY.
2. REMOVE BRICK RISER SECTION AND CASTING FROM MH 5455. PREVENT BRICKS FROM FALLING INTO SEWER. INSTALL NEW CASTING TO TOP OF EXISTING UWBS. CONTRACTOR TO MEASURE SIZE OF OPENING PRIOR TO ORDERING CASTING. CASTING SHALL HAVE A BOLT DOWN LID. SECURE CASTING FRAME TO TOP OF UWBS BY ANCHORING INTO CONCRETE STRUCTURE. SEE MSA.17 FOR PHOTOS OF EXISTING MH.
3. REPAIR EXISTING PIPE AND INTAKE POINT 5454 INTO UWBS. SEE MSA.17 FOR PHOTOS OF BROKEN PIPE. INSTALL 1 OR 2 PIPE SEGMENTS OF RCP WITH APRON AND GUARD.
4. CONSTRUCTION TO STAY WITHIN EASEMENTS SHOWN. CONTRACTOR TO STAKE EASEMENTS AND CONSTRUCTION LIMITS.
5. PERFORM ALL CONSTRUCTION TO PROTECT EXISTING SLOPES FROM POTENTIAL EROSION AND SLOPE DESTABILIZATION. MINIMIZE DURATION AND LENGTH OF PIPE EXCAVATION TO THAT NECESSARY FOR PIPE INSTALLATION WITH TRENCH PROTECTION. SUBMIT CERTIFIED EXCAVATION PLAN AS REQUIRED IN ESTIMATE REFERENCE NOTES.
6. PROTECT EXISTING DRAINAGE PATHS AND RESTORE TO EXISTING CONTOURS IF DISTURBED.
7. PROTECT EXISTING UWBS AND AVOID CONTINUOUS CONSTRUCTION TRAFFIC ON TOP OF EXISTING STRUCTURE.

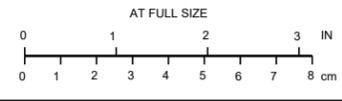


NO.	REVISIONS	DSGN	CHKD	APVD	DATE

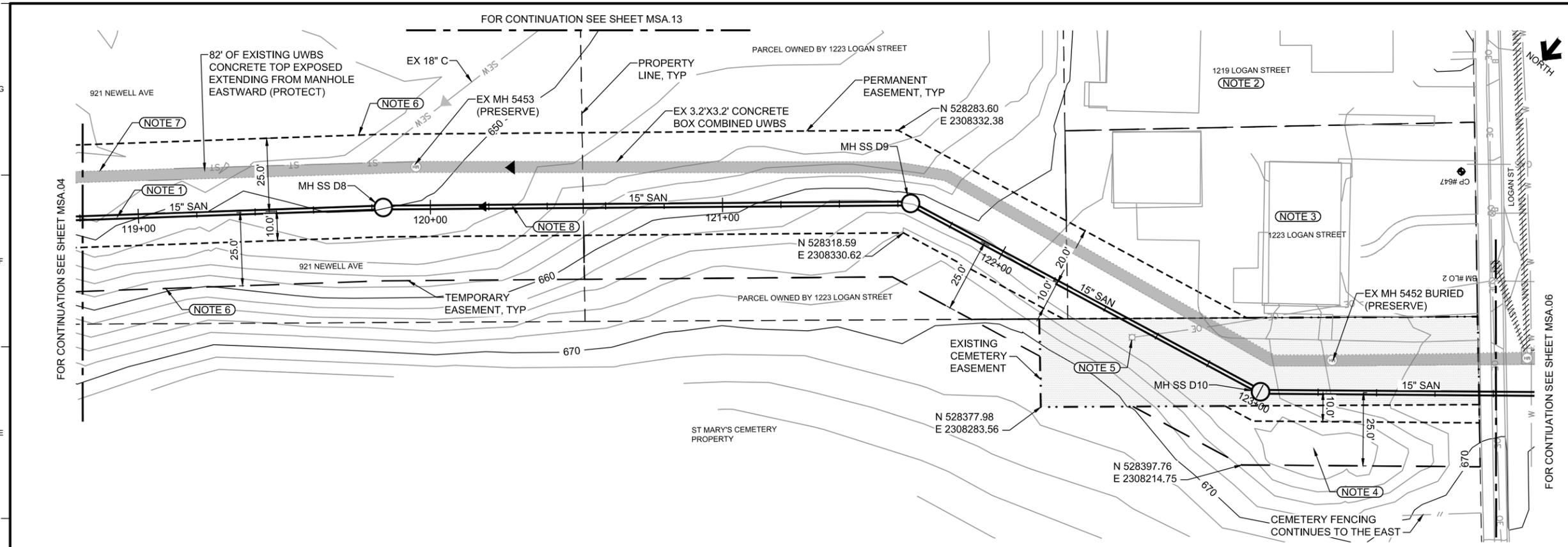
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SEWER
HAGERMAN DRIVE
SHEET 4**

DESIGNED	KK HEIM	SCALE:	1" = 20'
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	JM BRADY	MSA.04	0
APPROVED	KK HEIM	DATE	MARCH 12, 2025

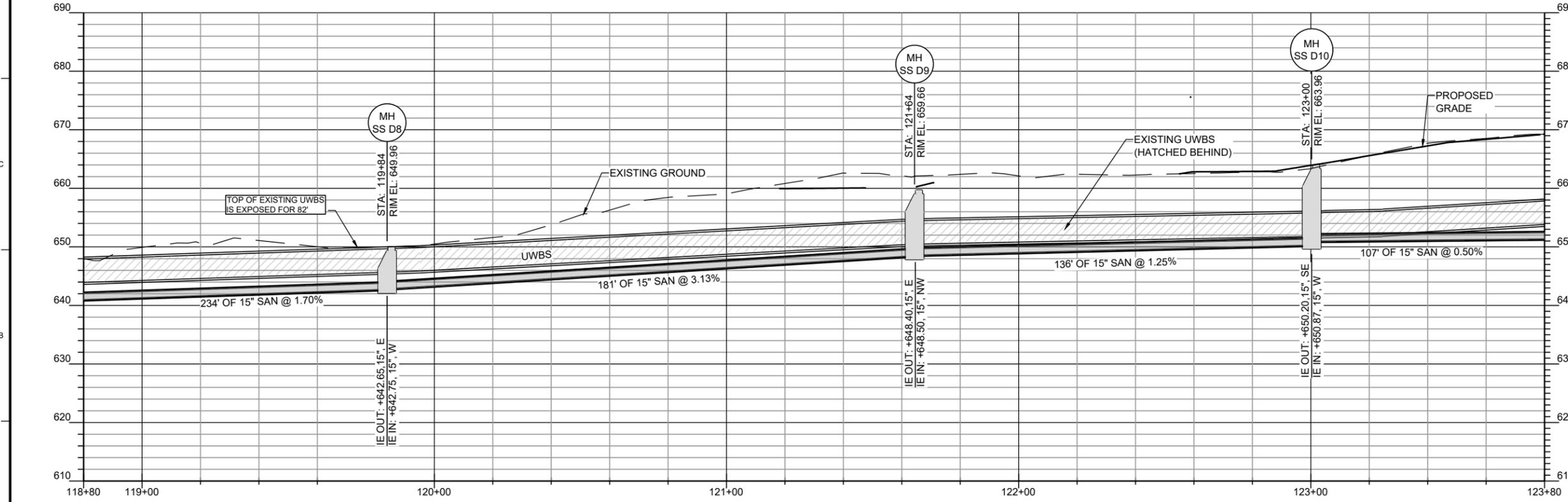


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NOTES

1. INSTALL NEW SANITARY ON ALIGNMENT SHOWN. CONNECT ALL ACTIVE SANITARY SERVICES CONNECTED TO EXISTING UWBS TO NEW SANITARY. PLUG ALL OPEN PIPE ENDS OF INACTIVE SERVICES AND ABANDON. FIELD VERIFY WHETHER SERVICE IS 'LIVE' AND WHETHER IT IS STORM OR SANITARY.
2. SANITARY SERVICE FOR 1219 LOGAN STREET IS KNOWN TO CONNECT TO EXISTING LOGAN SANITARY.
3. EXISTING HOUSE SANITARY SERVICE FOR 1223 LOGAN ST. IS KNOWN TO CONNECT TO EXISTING UWBS. NEW SERVICE SHALL BE CONNECTED TO NEW SANITARY ON LOGAN. INTERNAL OR EXTERNAL HOME RE-PLUMBING MAY BE NEEDED. IF CONNECTION TO LOGAN ST IS NOT FEASIBLE, CONNECT TO NEW SANITARY NORTH OF EXISTING UWBS BY TRENCHLESS CONSTRUCTION UNDER UWBS.
4. EXISTING LOW AREA FILLED WITH TREES AND DEBRIS. REMOVE DEBRIS. RESTORE AREA TO EXISTING CONTOURS.
5. COORDINATE WITH MPW TO TEMPORARILY REMOVE LIGHTING POLE AND REPLACE. POLE IS ON PRIVATE PROPERTY IN EXISTING EASEMENT.
6. CONSTRUCTION TO STAY WITHIN EASEMENTS SHOWN. CONTRACTOR TO STAKE EASEMENTS AND CONSTRUCTION LIMITS.
7. PROTECT EXISTING UWBS AND AVOID CONTINUOUS CONSTRUCTION TRAFFIC ON TOP OF EXISTING STRUCTURE.
8. PERFORM ALL CONSTRUCTION TO PROTECT EXISTING SLOPES FROM POTENTIAL EROSION AND SLOPE DESTABILIZATION. MINIMIZE DURATION AND LENGTH OF PIPE EXCAVATION TO THAT NECESSARY FOR PIPE INSTALLATION WITH TRENCH PROTECTION. SUBMIT CERTIFIED EXCAVATION PLAN AS REQUIRED IN ESTIMATE REFERENCE NOTES.



NO.	REVISIONS	DSGN	CHKD	APVD	DATE

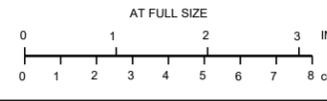
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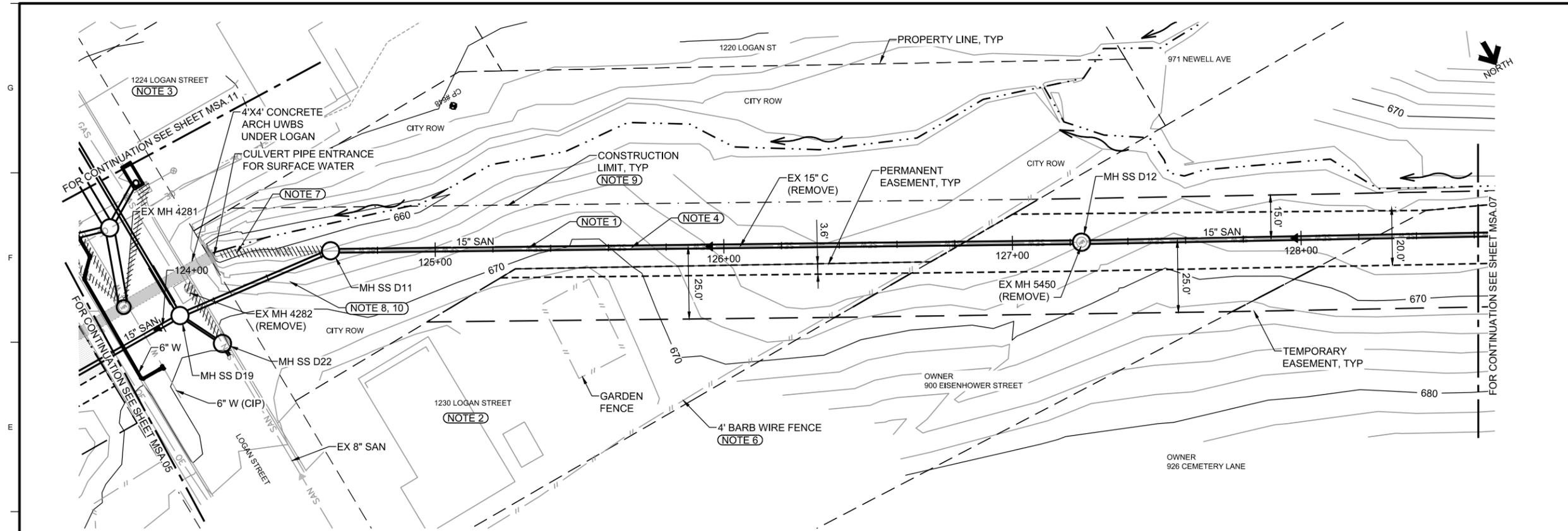
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SEWER
HAGERMAN DRIVE
SHEET 5**

DESIGNED: KK HEIM	SCALE: 1" = 20'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: JM BRADY	MSA.05
APPROVED: KK HEIM	0
DATE: MARCH 12, 2025	

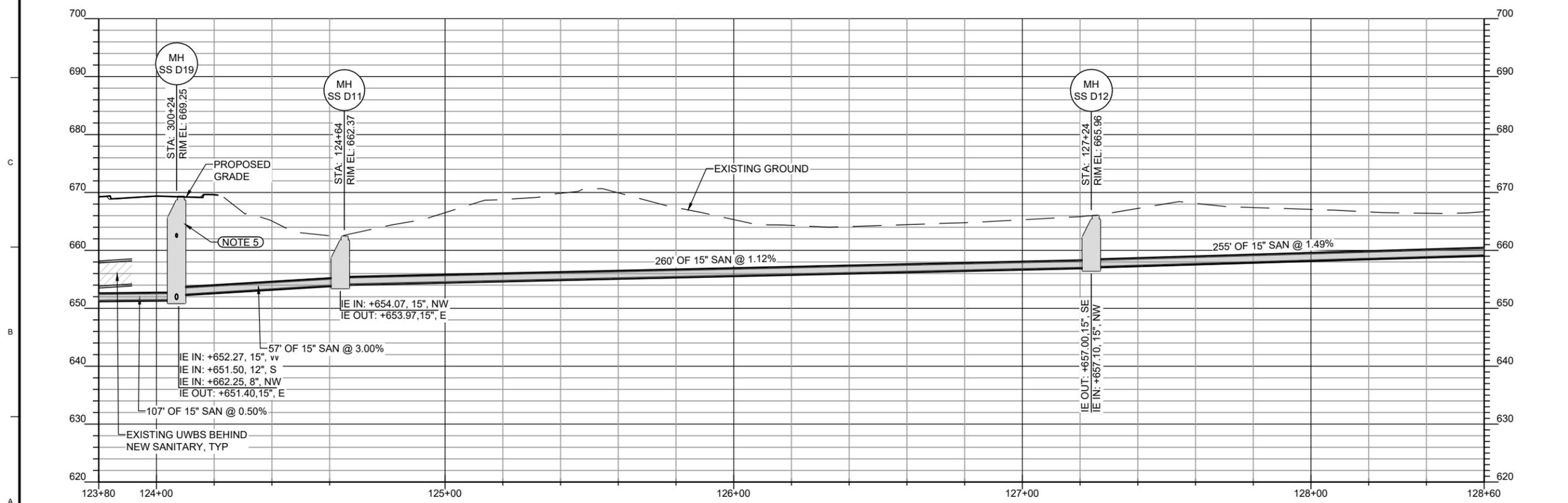


LOADD D3-RS



NOTES

1. INSTALL NEW SANITARY ON ALIGNMENT OF EXISTING COMBINED AS SHOWN. REMOVE EXISTING COMBINED SEWER AND MANHOLES AS WORK PROGRESSES AND CONNECT ALL ACTIVE SANITARY SERVICES TO NEW SANITARY. PLUG ALL OPEN PIPE ENDS OF INACTIVE PIPES. FIELD VERIFY WHETHER PIPE IS 'LIVE' AND WHETHER IT IS STORM OR SANITARY.
2. EXISTING SANITARY SERVICE LINE FOR HOUSE 1230 LOGAN STREET CURRENTLY CONNECTS TO EXISTING 15" C TOWARD CREEK. INTERCEPT SERVICE LINE AND CONNECT TO NEW SANITARY SEWER.
3. EXISTING SANITARY SERVICE LINE FOR HOUSE 1224 LOGAN STREET CURRENTLY CONNECTS TO EXISTING SANITARY IN LOGAN STREET.
4. WHEN NEW SANITARY IS CONSTRUCTED ON ALIGNMENT OF EXISTING COMBINED, UPSTREAM FLOWS INCLUDING STORM AND SANITARY SEWAGE FROM EISENHOWER STREET AND DEVITT AVENUE WILL BE INTERCEPTED IN NEW SANITARY PIPE. MAINTAIN POSITIVE DRAINAGE OF UPSTREAM PIPED FLOWS DURING CONSTRUCTION OF NEW SEWER.
5. INSTALL INTERNAL DROP CONNECTION IN ACCORDANCE WITH DETAIL ON SHEET A.04.
6. REMOVE AND REPLACE FENCE TO MATCH EXISTING MATERIAL AND LOCATION.
7. SEE SHEET MSA.14 FOR ABANDONMENT AND REMOVAL OF EXISTING COMBINED SEWER WITHIN EXISTING UWBS. PROTECT EXISTING UWBS.
8. RESTORE DISTURBED AREA TO MATCH EXISTING CONTOURS. USE SLOPE PROTECTION LIKE RIPRAP OR EROSION TURF MATTING.
9. STAY IN LIMITS OF CONSTRUCTION LIMITS AND EASEMENTS. STAKE LIMITS TO ESTABLISH BOUNDARIES.
10. PERFORM ALL CONSTRUCTION TO PROTECT EXISTING SLOPES FROM POTENTIAL EROSION AND SLOPE DESTABILIZATION. MINIMIZE DURATION AND LENGTH OF PIPE EXCAVATION TO THAT NECESSARY FOR PIPE INSTALLATION WITH TRENCH PROTECTION. SUBMIT CERTIFIED EXCAVATION PLAN AS REQUIRED IN ESTIMATE REFERENCE NOTES.



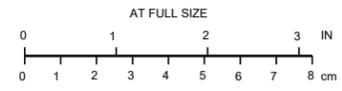
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CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

**SANITARY SEWER
 LOGAN ST TO EISENHOWER ST**

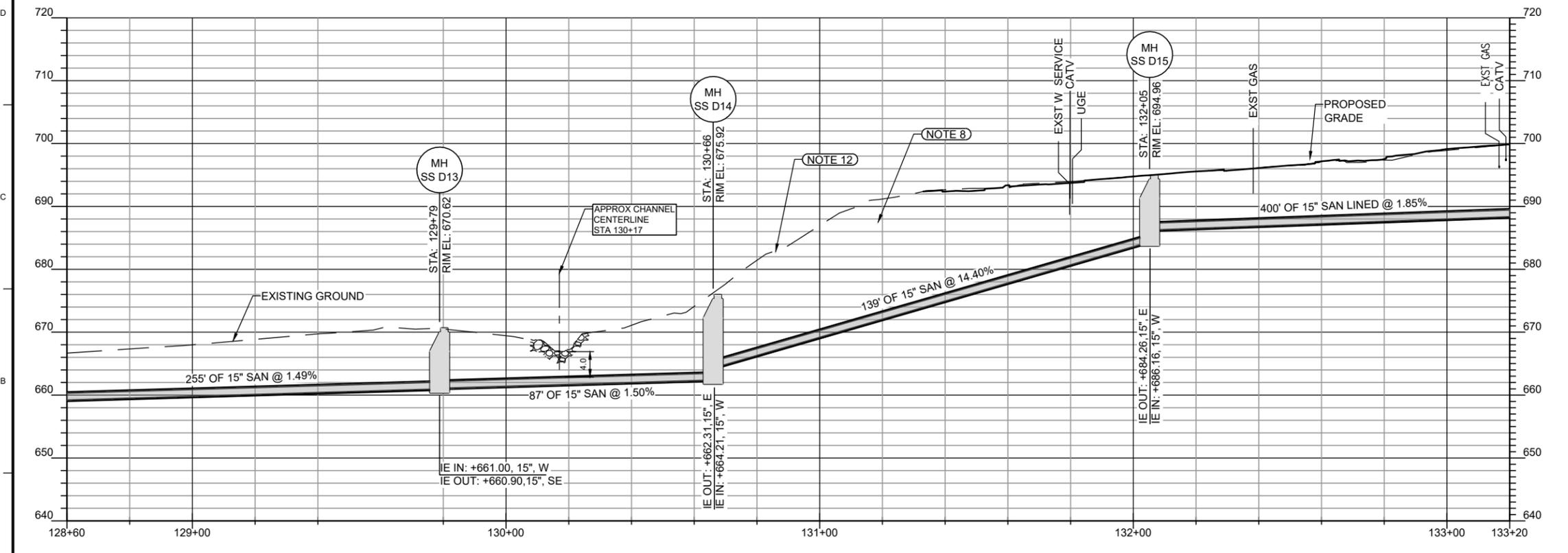
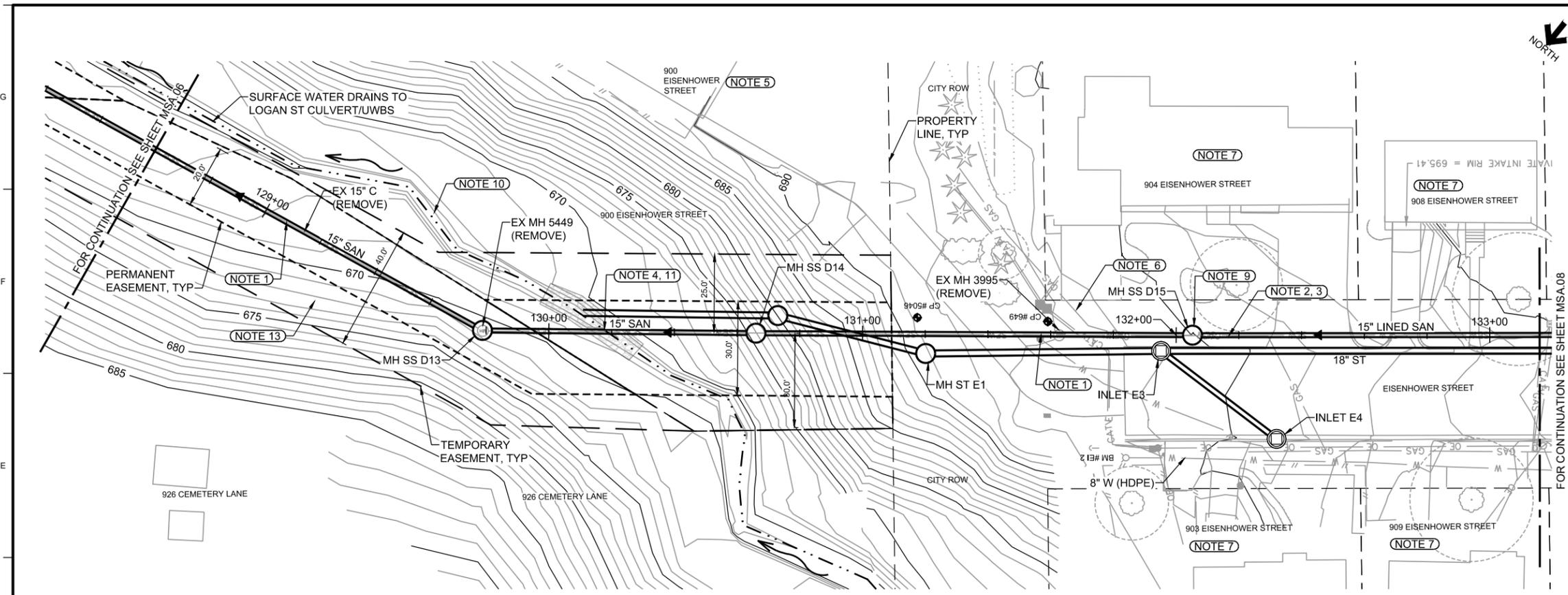
DESIGNED <u>KK HEIM</u>	SCALE: 1" = 20'
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CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	MSA.06
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	



LOAD D3-RS

NOTES

- EAST OF NEW MH SS D 15, NEW SANITARY SEWER WILL BE INSTALLED ON ALIGNMENT OF EXISTING 15-INCH COMBINED SEWER. REMOVE EXISTING COMBINED SEWER AND MANHOLES AS WORK PROGRESSES AND CONNECT ALL ACTIVE SANITARY SERVICES TO NEW SANITARY. PLUG ALL OPEN PIPE ENDS OF INACTIVE PIPES. FIELD VERIFY WHETHER PIPE IS "LIVE" AND WHETHER IT IS STORM OR SANITARY.
- EXISTING 15-INCH CLAY COMBINED SEWER ON EISENHOWER WILL BE PRESERVED WEST OF NEW MH SS D 15 AND LINED WITH CIPP LINER, AND REUSED FOR SANITARY SEWER. SEE SPECS FOR LINING REQUIREMENTS. EXISTING MANHOLES WILL BE REPLACED IN THEIR ENTIRETY AND NEW MANHOLES INSTALLED AT LOCATIONS SHOWN. ACTIVE SANITARY SERVICES SHALL BE IDENTIFIED AND SERVICE REINSTATED.
- FOR SEWER LINING, CONTRACTOR SHALL ESTABLISH A PUBLIC INFORMATION AND NOTIFICATION PROGRAM AS DETAILED IN SUDAS SPEC 4050, 1.07 C.
- EXISTING CHANNEL SHALL BE RESTORED TO PRE-CONSTRUCTION CONTOURS. AVOID RAISING CONTOURS. LINE DISTURBED DRAINAGE WAY WITH EROSION STONE. AVOID STORING MATERIAL AND PLACING MATERIAL STOCKPILES IN DRAINAGE WAY.
- LOCATE EXISTING SANITARY SERVICE FOR 900 EISENHOWER AND CONNECT TO NEW SANITARY SEWER.
- PROTECT GAS LINE. COORDINATE PROTECTION AND POTENTIAL RELOCATION OF GAS SERVICE WITH GAS COMPANY.
- LOCATE ALL EXISTING SANITARY SERVICES AND REINSTATE SERVICES TO LINED SEWER.
- ELEVATION OF EXISTING SEWER IS HIGHER THAN PROPOSED SEWER THROUGH THIS AREA. REMOVE EXISTING.
- INSTALL NEW MANHOLE AT LOCATION SHOWN OVER EXISTING 15-INCH CLAY SEWER WHICH WILL REMAIN AND PIPE LINED. SEE FIGURE 6010.303.
- MAINTAIN UPSTREAM TO DOWNSTREAM FLOW PATH OF CHANNEL ALL TIMES DURING PIPE INSTALLATION OR SURFACE RESTORATION. MINIMIZE DISTURBANCE TO CHANNEL WHEN CROSSING WITH EQUIPMENT. REMOVE ANY TEMPORARY FILL MATERIAL OR TEMPORARY CULVERTS PLACED IN CHANNEL FOR A TEMPORARY EQUIPMENT CROSSING.
- INSTALL EROSION STONE (IDOT 4130) WITH 3 TO 6 INCHES GRADATION TO MINIMUM THICKNESS OF 1-FOOT ALONG CHANNEL SECTION. BACKFILL TRENCH WITH GRANULAR BACKFILL BETWEEN TOP OF PIPE ENVELOPE AND BOTTOM OF EROSION STONE LAYER. INSTALL MECHANICAL JOINT DUCTILE IRON PIPE LINED WITH PROTECTO 401 OR APPROVED WATER TIGHT PIPE BETWEEN MANHOLES. CENTER GRANULAR BACKFILL AND 15-FEET EACH SIDE OF CHANNEL CENTER LINE.
- PROTECT AND RESTORE SLOPE TO MATCH EXISTING. INSTALL STABILIZING MATTING TO DISTURBED AREA.
- PERFORM ALL CONSTRUCTION TO PROTECT EXISTING SLOPES FROM POTENTIAL EROSION AND SLOPE DESTABILIZATION. MINIMIZE DURATION AND LENGTH OF EXCAVATION TO THAT NECESSARY FOR PIPE INSTALLATION WITH TRENCH PROTECTION. SUBMIT CERTIFIED EXCAVATION PLAN AS REQUIRED IN ESTIMATE REFERENCE NOTES.



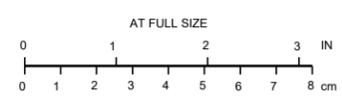
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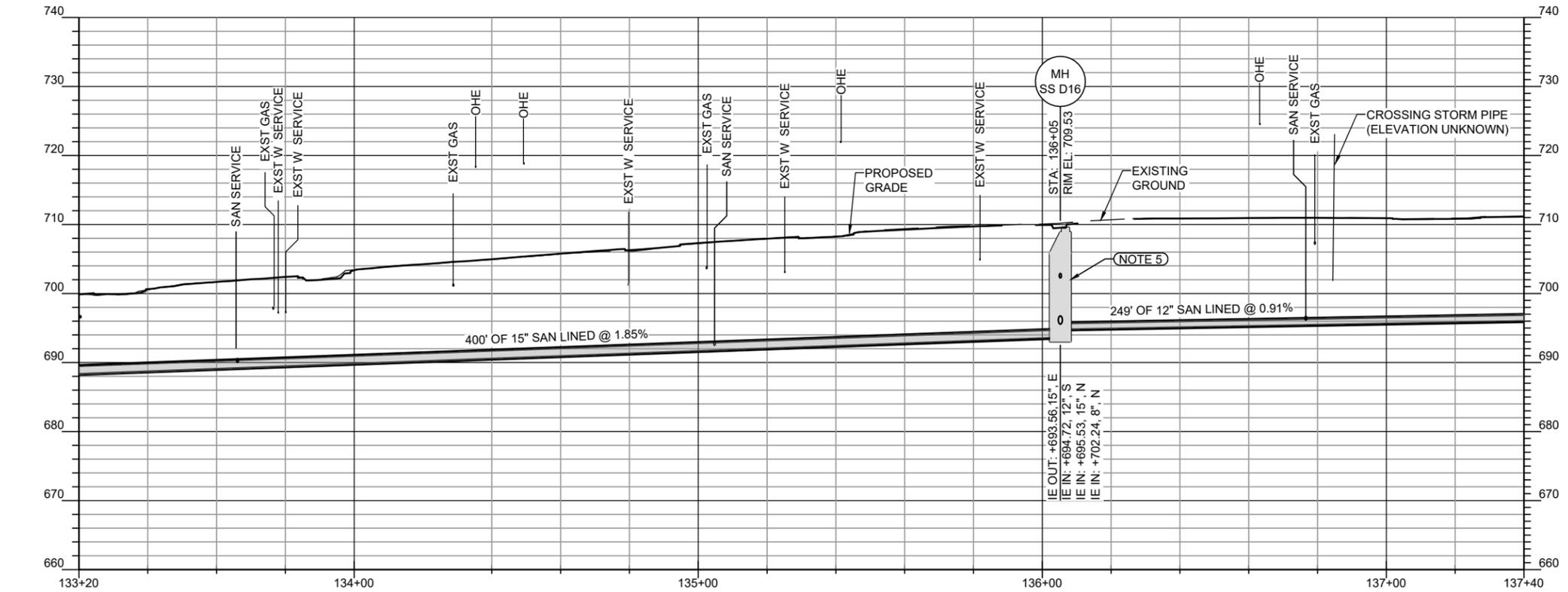
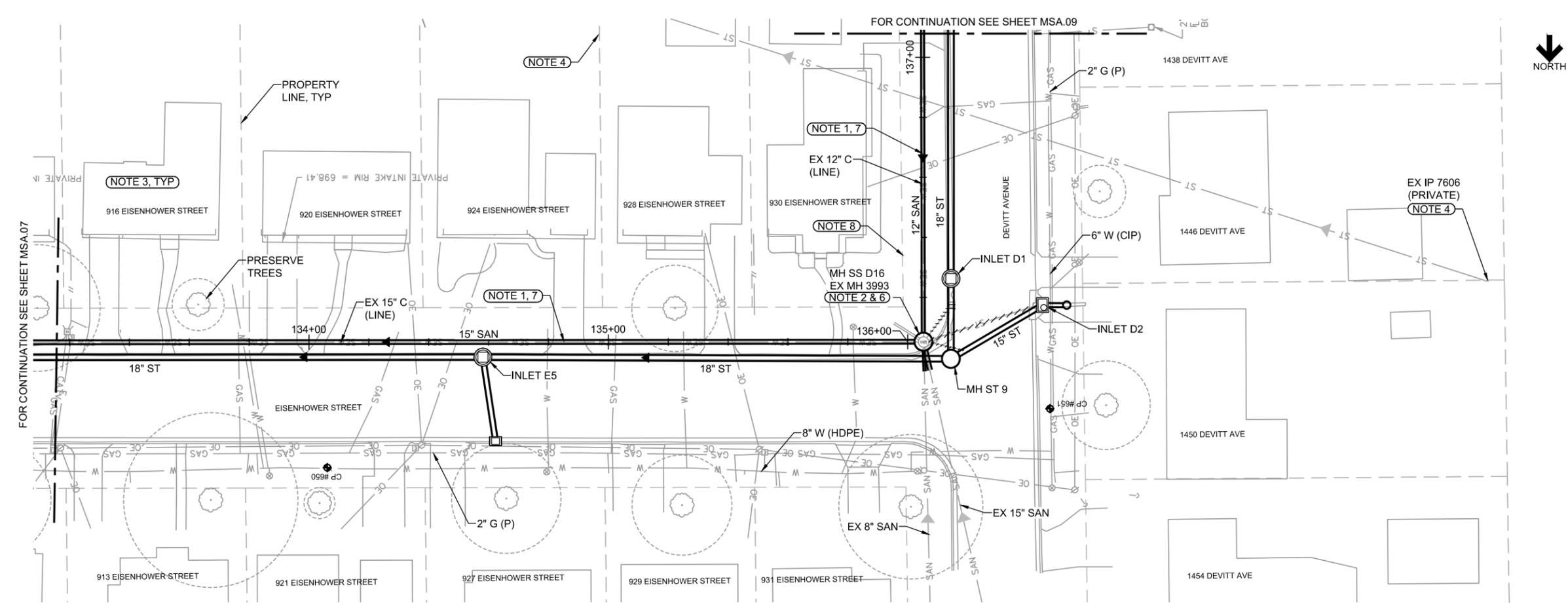
CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

**SANITARY SEWER
 EISENHOWER STREET**

DESIGNED: KK HEIM	SCALE: 1" = 20'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: JM BRADY	MSA.07
APPROVED: KK HEIM	0
DATE: MARCH 12, 2025	



CADD D3-RS



NOTES

- EXISTING 12-INCH CLAY COMBINED SEWER ON DEVITT AND 15-INCH CLAY COMBINED SEWER ON EISENHOWER WILL BE PRESERVED, LINED WITH CIPP LINER, AND REUSE FOR SANITARY SEWER. SEE SPECS FOR LINING REQUIREMENTS. EXISTING MANHOLES WILL BE REPLACED IN THEIR ENTIRETY AND NEW MANHOLES INSTALLED AT LOCATIONS SHOWN. ACTIVE SANITARY SERVICES SHALL BE IDENTIFIED AND SERVICE REINSTATED.
- REMOVE EXISTING MH 3993 AND REPLACE WITH NEW MH. CONFIRM EACH OF THE FOUR 6-INCH PIPES CONNECTED TO EXISTING MH ARE SANITARY AND CONNECT INTO MAINLINE SEWER WITH WYE CONNECTIONS, IF SPACE ALLOWS. HIGH SERVICE LINE CONNECTIONS TO MANHOLE ARE NOT PREFERRED. INVERTS ON EXISTING SERVICES AT MH INCLUDE:
 IE IN: 704.10, 6" PVC, S
 IE IN: 702.81, 6" PVC, SE
 IE IN: 702.61, 6" DIP, SE
 IE IN: 702.36, 6" DIP, SW

 CONNECT TWO SANITARY LINES FROM NORTH TO NEW MANHOLE AT ELEVATIONS SHOWN. THERE IS AN EXISTING 12-INCH CLAY LINE FROM THE WNW AT IE = 701.09 THAT IS CAPPED. LINE CAN BE REMOVED. INSTALL INTERNAL DROP CONNECTION ON 8-INCH LINE FROM THE NORTH.
- LOCATE ALL EXISTING SANITARY SERVICES AND REINSTATE SERVICES TO LINED SEWER.
- CITY RECORDS SHOW PRIVATE INTAKE IN THE BACKYARD CORNER OF PROPERTIES 1446 AND 1450 DEVITT AVE. PIPING CROSSES DEVITT AT AN UNKNOWN LOCATION AND UNKNOWN SIZE AND DISCHARGES INTO DRAINAGE SWALE IN BACKYARD OF 924 EISENHOWER ST.
- INSTALL INTERNAL DROP CONNECTION ACCORDING TO DETAIL ON SHEET A.04.
- LOCATE NEW MANHOLE CASTING OUTSIDE OF CURB LINE. ROTATE CONE IF NEEDED.
- FOR SEWER LINING, CONTRACTOR SHALL ESTABLISH A PUBLIC INFORMATION AND NOTIFICATION PROGRAM AS DETAILED IN SUDAS SPEC 4050, 1.07 C.
- PERFORM WORK WITHIN RIGHT OF WAY (ROW). WORKING OUTSIDE OF ROW IS PROHIBITED.

NO.	REVISIONS	DSGN	CHKD	APVD	DATE

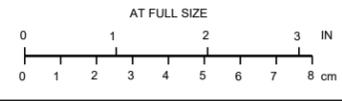


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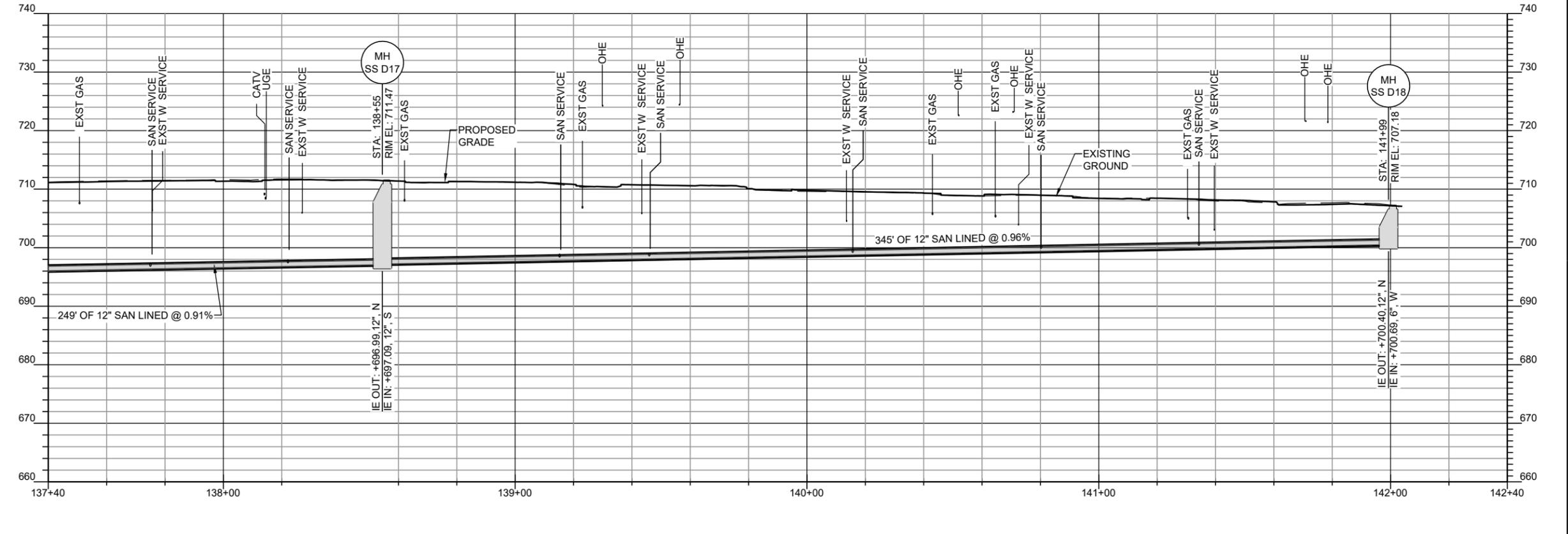
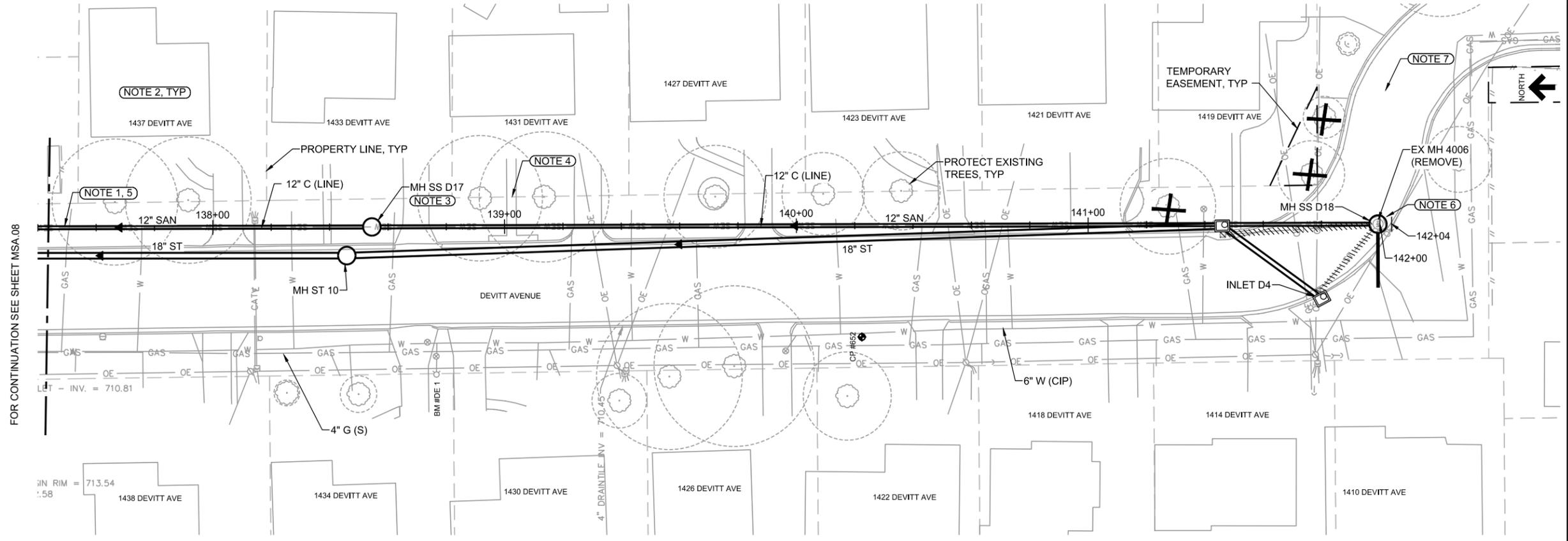
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SEWER
EISENHOWER ST & DEVITT AVE**

DESIGNED <u>KK HEIM</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	MSA.08
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	



CADD D3-RS



NOTES

1. EXISTING 12-INCH CLAY COMBINED SEWER ON DEVITT WILL BE PRESERVED, LINED WITH CIPP LINER, AND REUSE FOR SANITARY SEWER. SEE SPECS FOR LINING REQUIREMENTS. EXISTING MANHOLES WILL BE REPLACED IN THEIR ENTIRETY AND NEW MANHOLES INSTALLED AT LOCATIONS SHOWN. ACTIVE SANITARY SERVICES SHALL BE IDENTIFIED AND SERVICE REINSTATED.
2. LOCATE ALL EXISTING SANITARY SERVICES AND REINSTATE SERVICES TO LINED SEWER.
3. INSTALL NEW MANHOLE AT LOCATION SHOWN OVER EXISTING 12-INCH CLAY SEWER WHICH WILL REMAIN AND PIPE LINED. SEE FIGURE 6010.303.
4. PERFORM WORK WITHIN THE RIGHT OF WAY (ROW). WORKING OUTSIDE OF ROW IS PROHIBITED.
5. FOR SEWER LINING, CONTRACTOR SHALL ESTABLISH A PUBLIC INFORMATION AND NOTIFICATION PROGRAM AS DETAILED IN SUDAS SPEC 4050, 1.07 C.
6. AT EXISTING MH 4006 REPLACE WITH NEW MANHOLE. CONFIRM EXISTING 6-INCH CLAY PIPE FROM WEST IS AN ACTIVE SANITARY SERVICE AND CONNECT TO NEW SANITARY MANHOLE AT ELEVATION SHOWN. DISCONNECT CONNECTIONS TO STORM SEWER AND INSTALL NEW STORM SYSTEM AS DETAILED ON M SHEETS.
7. SEE SHEET D.10 FOR REPLACEMENT OF DEVITT AVENUE PAVEMENT TO NEWELL AVENUE AND TEMPORARY EASEMENT BOUNDARIES FOR PAVEMENT PLACEMENT.

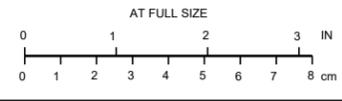
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CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

**SANITARY SEWER
 DEVITT AVENUE**

DESIGNED: KK HEIM	SCALE: 1" = 20'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: JM BRADY	MSA.09
APPROVED: KK HEIM	0
DATE: MARCH 12, 2025	

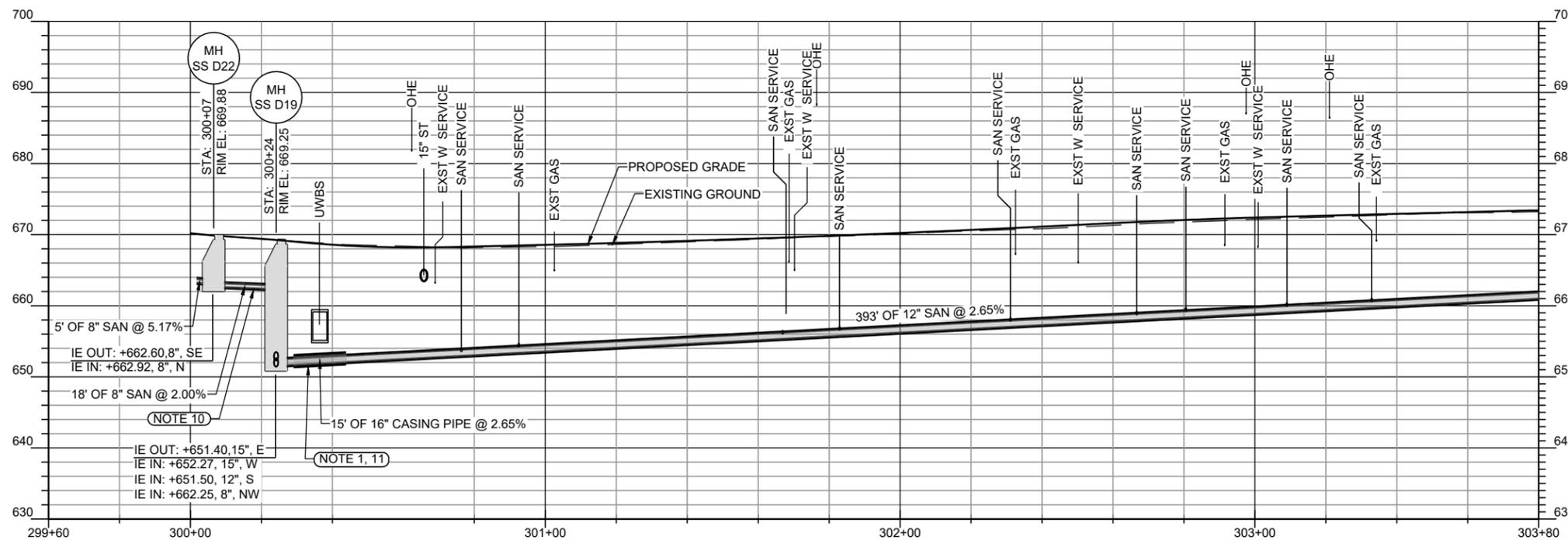
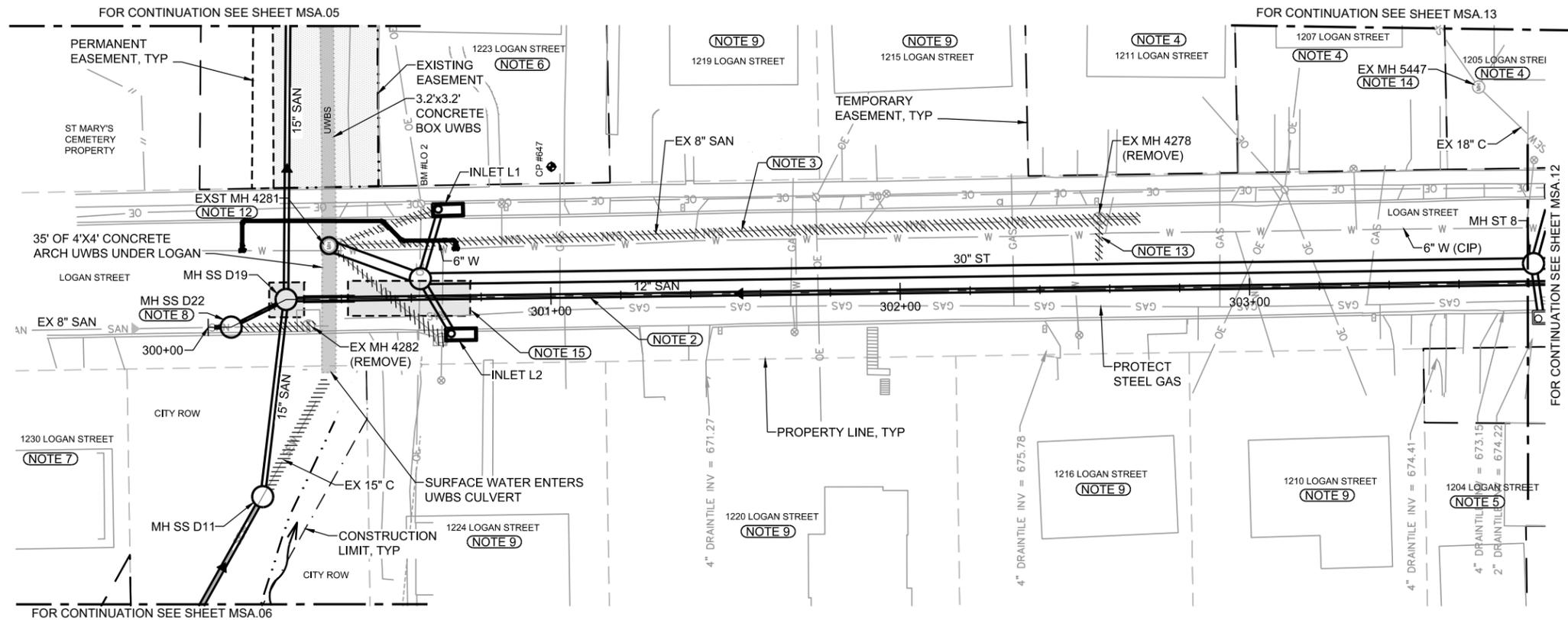


FOR CONTINUATION SEE SHEET MSA.08

CADD D3-RS

NOTES

1. TRENCHLESS CONSTRUCTION UNDER UWBS. INSTALL CASING IF REQUIRED FOR TRENCHLESS METHOD SELECTED. PROVIDE CASING DIAMETER AND CASING SPACERS IN ACCORDANCE WITH SUDAS SECTION 3020. PROTECT ALL EXISTING UTILITIES. PROTECT EXISTING UWBS TO REMAIN.
2. INSTALL NEW SANITARY ON ALIGNMENT SHOWN. LOCATE ALL ACTIVE SANITARY SERVICES AND CONNECT TO NEW SANITARY. PLUG ALL OPEN ENDS OF INACTIVE SERVICES; AND ABANDON REMAINING PIPING IN PLACE. FIELD VERIFY WHETHER SERVICE IS 'LIVE' AND WHETHER IT IS STORM OR SANITARY.
3. ABANDON EXISTING 8-INCH SANITARY AND CONNECT ALL SANITARY SERVICES TO NEW SANITARY. REMOVE EXISTING PIPE TO EXTENT POSSIBLE WITHIN EXPOSED TRENCHES. PLUG REMAINING PIPE ENDS WITH CONCRETE AND ABANDON REMAINING PIPING IN PLACE. PROTECT EXISTING WATER MAIN. MAINTAIN EXISTING UNTIL ALL SANITARY SEWAGE FROM LOGAN STREET AND UPSTREAM SOURCES IS DIVERTED TO NEW SANITARY.
4. EXISTING SANITARY SERVICE FOR 1211, 1207, AND 1205 LOGAN STREET FLOWS TO THE 18-INCH COMBINED SEWER EAST OF THE HOUSES. LOCATE EXISTING SERVICE AND DETERMINE IF HOUSE REQUIRES RE-PLUMBING INSIDE OR IF THE SERVICE CAN BE INTERCEPTED OUTSIDE THE HOUSE IN THE YARD. CONNECT HOUSE TO NEW SANITARY SEWER IN LOGAN STREET.
5. EXISTING SANITARY SERVICE FOR 1204 LOGAN STREET AND 941 NEWELL AVENUE CONNECTS TO EXISTING SANITARY UPSTREAM OF EXISTING MH 4026 (SEE SHEET MSA.12) THAT IS ESTIMATED TO EXTEND ACROSS THE PROPERTIES OF 941 AND 949 NEWELL AVENUE AND TERMINATES NEAR EXISTING MH 3704 ON NEWELL AVENUE. LOCATE SERVICES AND CONNECT TO SANITARY IN LOGAN ST. EXISTING SERVICES SHOULD BE ABLE TO BE INTERCEPTED IN YARDS.
6. EXISTING HOUSE SANITARY SERVICE FOR 1223 LOGAN STREET IS KNOWN TO CONNECT TO EXISTING UWBS. NEW SERVICE SHALL BE CONNECTED TO NEW SANITARY. INTERNAL OR EXTERNAL HOME RE-PLUMBING MAY BE NEEDED.
7. EXISTING SANITARY SERVICE LINE FOR HOUSE 1230 LOGAN STREET CURRENTLY CONNECTS TO EXISTING 15" C IN WOODED RAVINE AREA TO SOUTH. INTERCEPT SERVICE LINE AND CONNECT TO NEW SANITARY SEWER.
8. REMOVE EXISTING MH 4282 AND PLUG CONNECTION TO UWBS. INSTALL NEW MH SS D22 OVER EXISTING 8-INCH SANITARY AND CONNECT TO EXISTING SANITARY.
9. ADDRESSES ARE KNOWN TO FLOW TO EXISTING 8-INCH SANITARY ON EAST SIDE OF LOGAN. CONNECT TO NEW SANITARY ON WEST SIDE OF LOGAN.
10. INSTALL INTERNAL DROP CONNECTION IN ACCORDANCE WITH DETAIL ON A.04.
11. PERFORM EXPLORATORY EXCAVATION TO DETERMINE BOTTOM OF UWBS ELEVATION PRIOR TO BEGINNING WORK FOR TRENCHLESS CONSTRUCTION. ELEVATIONS SHALL BE COLLECTED BY A SURVEYOR AND PROVIDED TO CITY AND DESIGN ENGINEER AT LEAST 2 WEEKS PRIOR TO BEGINNING LOGAN STREET SANITARY.
12. SEE WATER PLANS FOR WATER RELOCATION OUTSIDE OF MH.
13. DETERMINE IF 4-INCH PVC FROM WEST AT EX MH 4278 IS SANITARY AND CONNECT TO NEW SANITARY SEWER WHERE SERVICE CROSSES TRENCH. DETERMINE IF 4-INCH DIP AND 8-INCH CLAY PIPES FROM SOUTH AT EX MH 4278 ARE SANITARY SERVICES AND CONNECT TO NEW SANITARY.
14. AT MH 5447 DETERMINE IF 4-INCH PVC FROM SE IS SANITARY AND IF IT SERVES 1205 LOGAN STREET. CONNECT SERVICE TO NEW SANITARY IN LOGAN STREET.
15. LOCATION AND SIZE OF BORE AND RECEIVING PITS ARE SUGGESTED. CONTRACTOR TO PROTECT EXISTING SITE FEATURES TO REMAIN. CAREFULLY BACKFILL AND COMPACT AROUND EXISTING UTILITIES.



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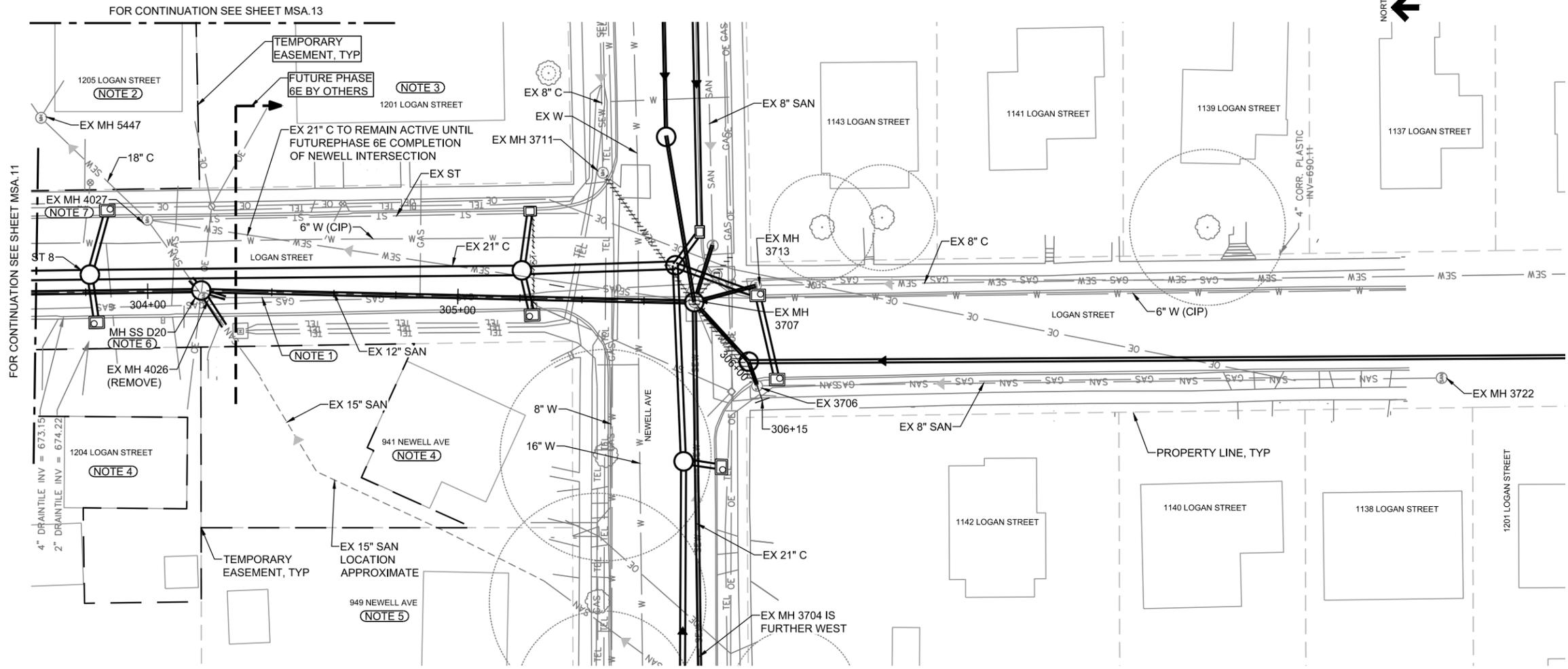

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CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

**SANITARY SEWER
LOGAN STREET**

DESIGNED: <u>KK HEIM</u>	SCALE: 1" = 20'
DRAWN: <u>GM REEVES</u>	NO. 17660.60.30
CHECKED: <u>ER SCHALLERT</u>	REV.
APPROVED: <u>JM BRADY</u>	MSA.11
APPROVED: <u>KK HEIM</u>	0
DATE: <u>MARCH 12, 2025</u>	

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FOR CONTINUATION SEE SHEET MSA.11

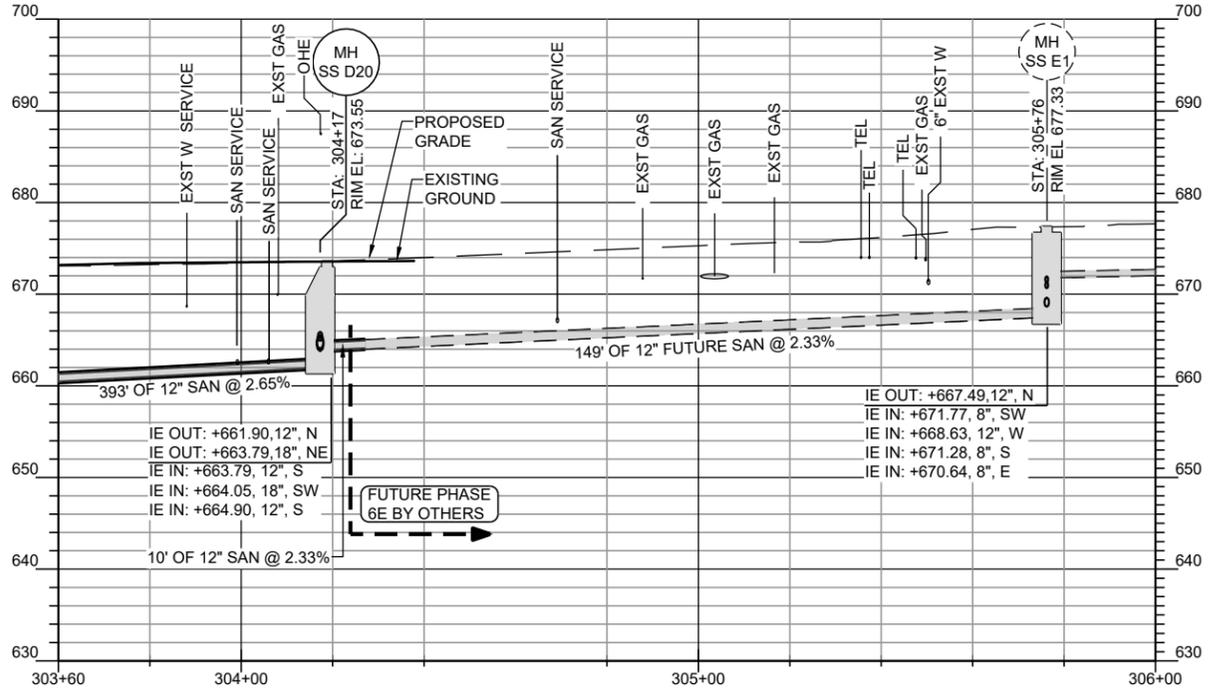
FOR CONTINUATION SEE SHEET MSA.13

NOTES

- EXISTING SANITARY EXTENDS BETWEEN EX 4026 AND 3707 ON LOGAN TO NEWELL. EXACT LOCATION OF SANITARY ON LOGAN IS UNKNOWN AND DOES NOT CONNECT TO MH 3707. INSTALL NEW MH SS D20 AND REMOVE EX MH 4026. CONNECT TO EXISTING SANITARY FROM THE SOUTH AT IE 664.90 UNTIL FUTURE PHASE OR VERIFICATION OF NO FLOW OR SERVICES ARE CONNECTED TO SEWER. CONNECT TO EXISTING SAN TO SW AT IE 664.05 UNTIL FUTURE PHASE. IF NEEDED TO MAINTAIN FLOWS FROM SOUTH TEMPORARILY, CONNECT NEW MH D20 TO EXISTING 18-INCH PIPE TO THE NORTHEAST FLOWING TOWARD MH 4027 AT IE 663.79. PLUG PIPE TO NORTHEAST IN THE FUTURE, (BY OTHERS). MAINTAIN ALL FLOWS ENTERING COMBINED MH 4027 UNTIL FUTURE SEPARATION IN PHASE 6E. TEMPORARY CONNECTIONS TO EXISTING SW AND S SEWERS TO BE PERFORMED WITHOUT DROP CONNECTIONS DUE TO TEMPORARY NATURE.
- EXISTING SANITARY SERVICE FOR 1205 LOGAN STREET FLOWS TO THE 18-INCH COMBINED SEWER BEHIND THE HOUSES TO THE EAST. LOCATE EXISTING SERVICE AND DETERMINE IF HOUSE REQUIRES RE-PLUMBING INSIDE OR IF THE SERVICE CAN BE INTERCEPTED OUTSIDE THE HOUSE. CONNECT HOUSE TO NEW SANITARY SEWER IN LOGAN STREET.
- EXISTING SANITARY SERVICE FOR 1201 LOGAN STREET FLOWS TO THE 21-INCH COMBINED SEWER IN LOGAN STREET. CONNECT SERVICE TO NEW 8-INCH SANITARY IN LOGAN STREET IN FUTURE PHASE.
- EXISTING SANITARY SERVICE FOR 1204 LOGAN STREET AND 941 NEWELL AVENUE CONNECTS TO EXISTING SANITARY UPSTREAM OF EXISTING MH 4026 TO THE SOUTHWEST THAT IS ESTIMATED TO EXTEND ACROSS THE PROPERTIES OF 941 AND 949 NEWELL AVE AND TERMINATES NEAR EXISTING MH 3704 ON NEWELL AVENUE. EXISTING MH 3704 IS LOCATED 127' WEST OF EXMH 3707. LOCATE SERVICES AND CONNECT TO SANITARY IN LOGAN STREET. EXISTING SERVICES LIKELY CAN BE INTERCEPTED IN THE YARDS. CONNECTING SERVICES FOR 1204 LOGAN, 941 NEWELL AVE. AND 949 NEWELL MAY NEED TO OCCUR IN PHASE 6E TO TIE INTO NEW LOGAN STREET SANITARY.
- EXISTING SAN SERVICE FOR 949 NEWELL AVE. CONNECTS TO EXISTING 15" (OR 18") SAN CROSSING PROPERTY 941 NEWELL AVE. SERVICE MAY NEED TO BE PICKED UP IN LOGAN STREET OR IN A FUTURE PHASE ON NEWELL AVENUE.

NOTES CONTINUED

- AT MH SS D20, CONNECT TO EXISTING 15 (OR 18) INCH SANITARY FROM SOUTHWEST THAT RUNS THROUGH 941 NEWELL AVENUE PROPERTY UNTIL UPSTREAM FLOWS ARE SEPARATED IN FUTURE PHASE. CONNECTION SHALL BE PLUGGED IN THE FUTURE. TEMPORARILY CONNECT TO EXISTING 12-INCH SANITARY FROM SOUTH. CONFIRM FLOW FROM EXISTING SOUTHWEST AND SOUTH SANITARY BRANCHES IS LIMITED TO SERVICE CONNECTIONS FOR 941 AND 949 NEWELL, AND 1204 LOGAN. IF ADDITIONAL FLOWS BESIDES THESE SERVICES CONTRIBUTE TO THESE SEWERS ALERT CITY AND DESIGN ENGINEER.
- PROTECT AND REUSE EXISTING MH 4027. AT MH MAINTAIN ALL EXISTING CONNECTIONS UNTIL UPSTREAM FLOWS ARE SEPARATED AND CONNECTED TO NEW STORM OR SANITARY SEWERS IN FUTURE PHASES. MINIMAL RIM ADJUSTMENT IS ANTICIPATED AND IS INCIDENTAL TO PAVEMENT INSTALLATION.



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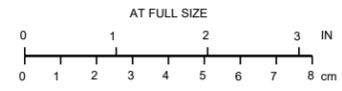


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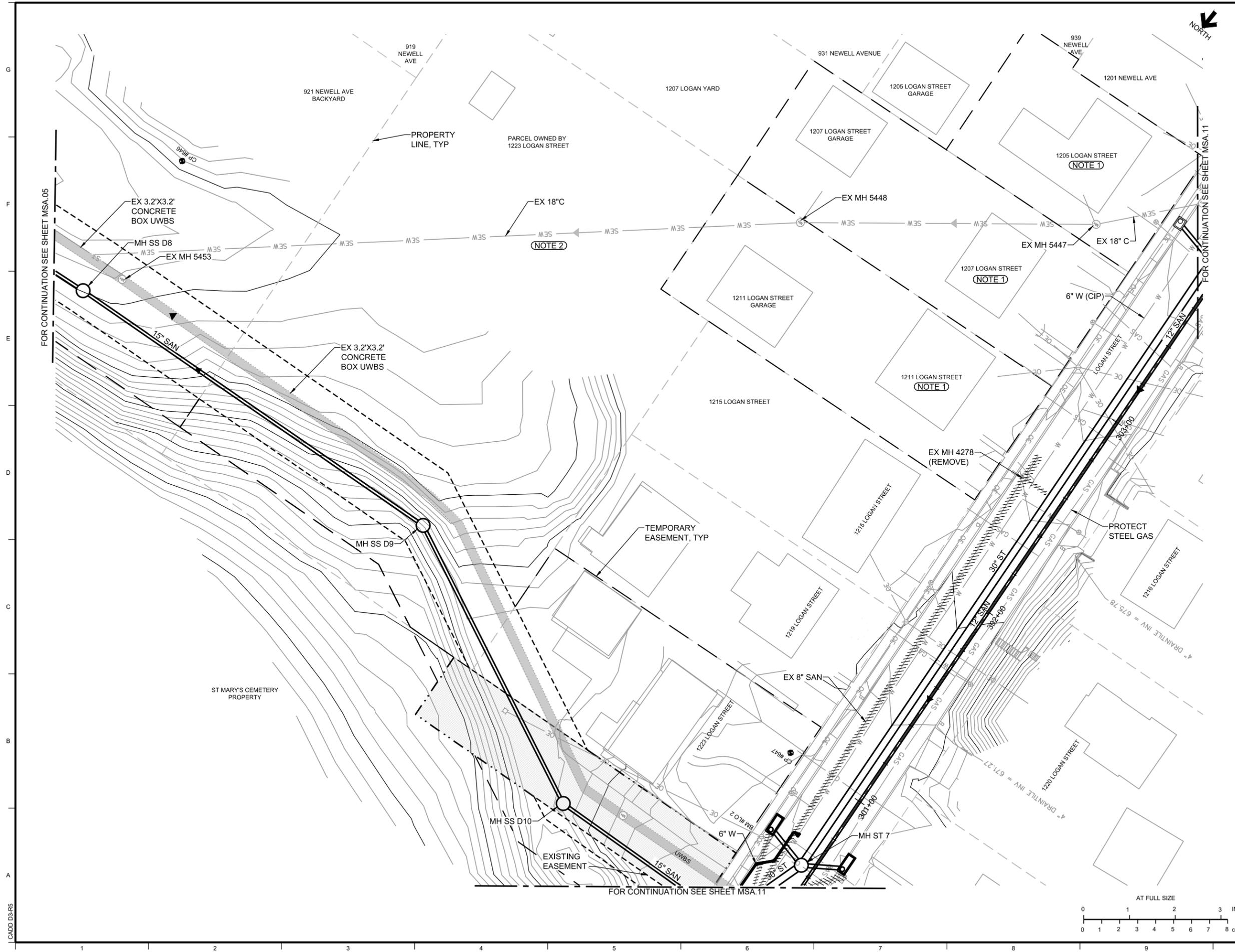
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SEWER
LOGAN STREET
SHEET 2**

DESIGNED <u>KK HEIM</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	MSA.12
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	



LADD D3-RS



NOTES

- EXISTING SANITARY SERVICE FOR 1211, 1207, AND 1205 LOGAN STREET FLOWS TO THE 18-INCH COMBINED SEWER BEHIND THE HOUSES. LOCATE EXISTING SERVICE AND DETERMINE IF HOUSE REQUIRES RE-PLUMBING INSIDE OR IF THE SERVICE CAN BE INTERCEPTED OUTSIDE THE HOUSE IN THE YARD. CONNECT HOUSE TO NEW SANITARY SEWER IN LOGAN STREET.
- DRAWING PROVIDED TO SHOW LOCATION INFORMATION ON EXISTING 18-INCH COMBINED ACROSS PRIVATE PROPERTY.

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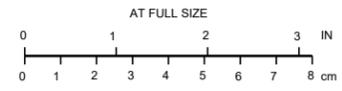


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CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

**SANITARY SEWER
 EXISTING COMBINED
 BRANCH TO LOGAN**

DESIGNED <u>KK HEIM</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	MSA.13
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	



LADD D3-RS



PHOTO 1: UWBS ENTRANCE WEST OF LOGAN STREET



PHOTO 2: CREEK AND PIPE ENTRANCE



PHOTO 3:
INTERIOR OF UWBS SHOWING EXISTING COMBINED SEWER PIPE

NOTES

1. PHOTOS ARE TAKEN SHOWING THE BEGINNING OF THE UWBS AT THE CREEK AND COMBINED SEWER ENTRANCE WEST OF LOGAN STREET. PHOTOS ARE FROM 2021 SURVEY.
2. MAINTAIN PATH FOR SURFACE /CREEK FLOW INTO EXISTING UWBS AT ALL TIMES.
3. PROTECT EXISTING UWBS AND HEADWALL.

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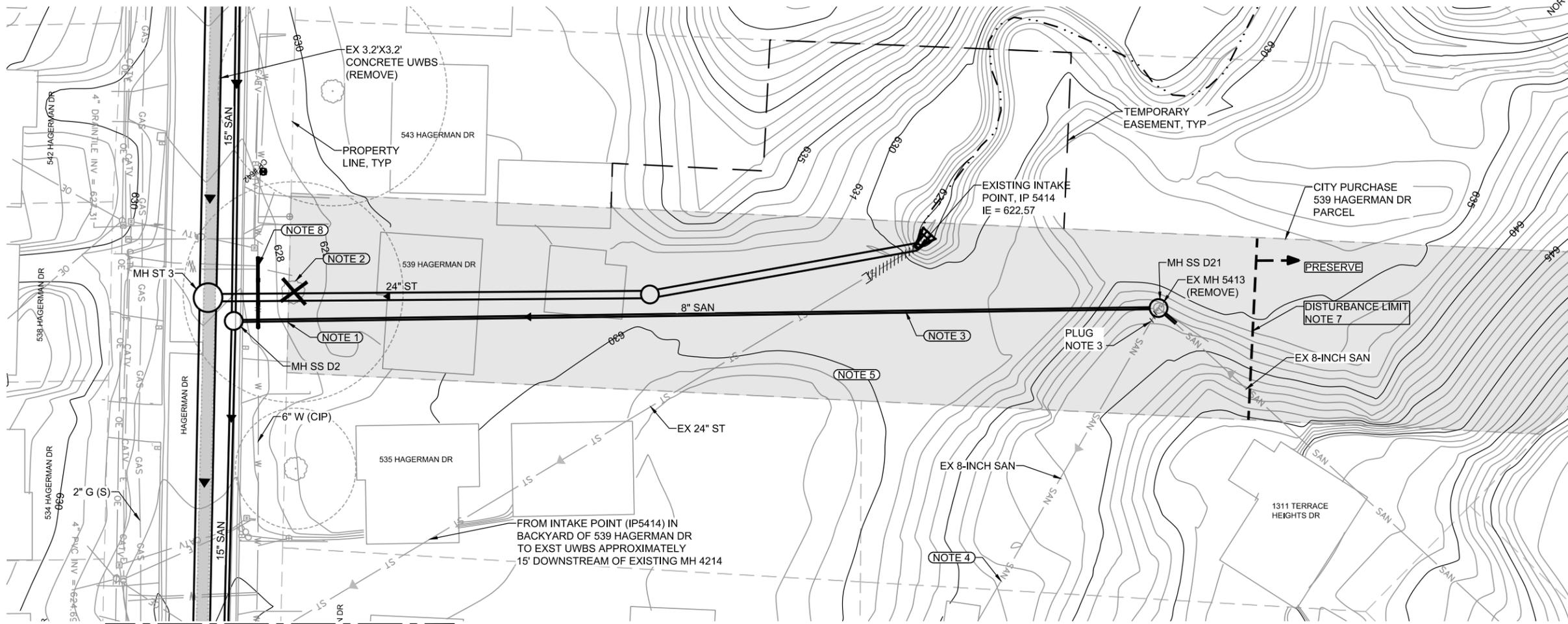
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SEWER
LOGAN AND UWBS**

DESIGNED <u>PM JOHNSON</u>	SCALE: 1" = 20'	REV.
DRAWN <u>GM REEVES</u>	NO. 17660.60.30	
CHECKED <u>ER SCHALLERT</u>		
APPROVED <u>KK HEIM</u>		
APPROVED <u>PM JOHNSON</u>		
DATE <u>MARCH 12, 2025</u>	MSA.14	0



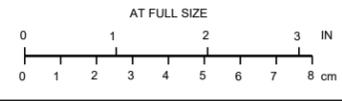
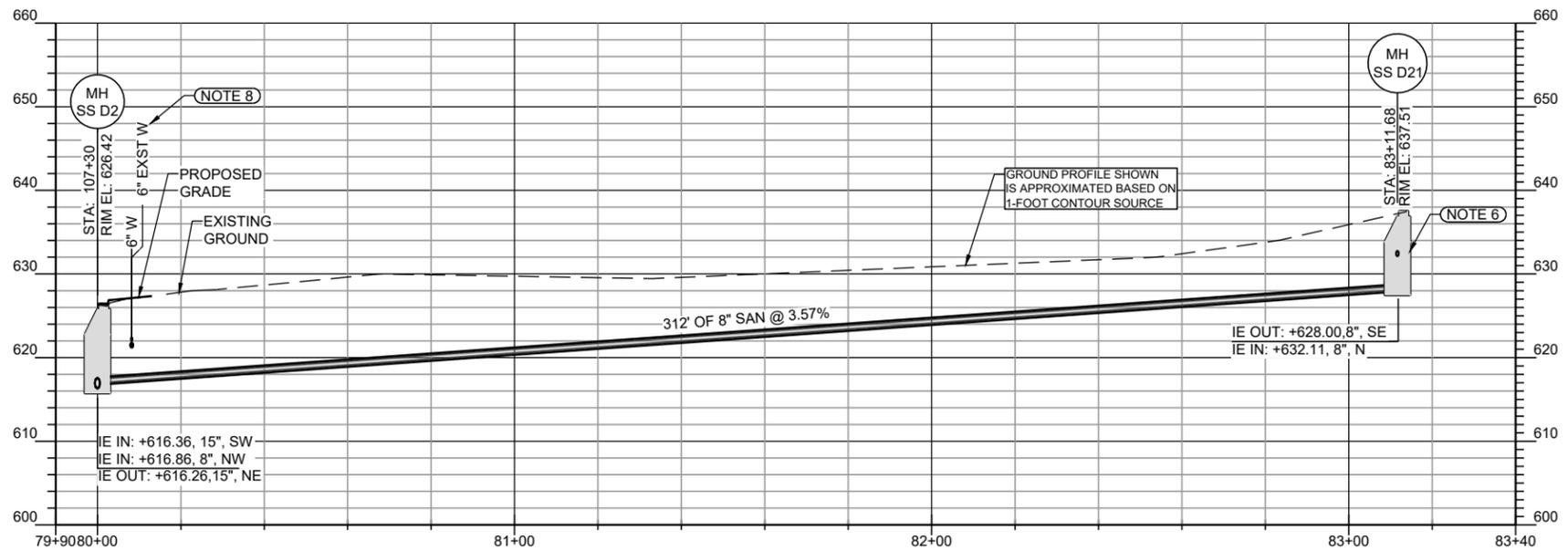
FOR CONTINUATION SEE SHEET MSA.02



FOR CONTINUATION SEE SHEET MSA.02

NOTES

1. INSTALL NEW 8-INCH SANITARY TO PROPERTY LINE AND PLUG TEMPORARILY. INSTALLATION OF SANITARY SEWER ON 539 HAGERMAN PARCEL MAY OCCUR LATER DURING THIS CONSTRUCTION CONTRACT AFTER PARCEL PURCHASE. CONSULT CITY PRIOR TO INSTALLING SANITARY SEWER ON PARCEL AND EXTENT OF IMPROVEMENT.
2. CITY SHALL APPROVE TREE REMOVAL TIMING. REMOVE TREE ONLY AFTER CONFIRMATION SEWER WORK WILL OCCUR ON 539 HAGERMAN DR. PARCEL.
3. AFTER CITY AUTHORIZATION TO INSTALL SANITARY LINE, PROCEED TO INSTALL NEW SANITARY THROUGH PROPERTY AND CONNECT TO EXISTING SEWER FROM TERRACE HEIGHTS DRIVE. REMOVE EXISTING MANHOLE AND REPLACE WITH NEW. PLUG PIPE END TO NORTHEAST WITH 2' LENGTH CONCRETE PLUG.
4. EXISTING 8" SANITARY EXTENDS ACROSS BACKYARDS TO HAGERMAN DRIVE AND CONNECTS TO EXISTING DEEP INLET CB 4178. SEE SHEET MSA.01 FOR LOCATION. PHASE 6C PROJECT BY OTHERS WILL CONNECT THIS SANITARY BRANCH TO NEW SANITARY IN HAGERMAN DRIVE.
5. CONTOURS SHOWN ON THIS SHEET ARE CITY 1' CONTOURS FROM 2000. AREA ON PRIVATE PROPERTY HAS NOT BEEN SURVEYED.
6. INSTALL INTERNAL DROP CONNECTION ACCORDING TO DETAIL ON SHEET A.04.
7. MINIMIZE AREA DISTURBED TO EXTENT NEEDED FOR PIPE AND MANHOLE INSTALLATION.
8. REFER TO WATER MAIN PLANS FOR WATER RELOCATION.



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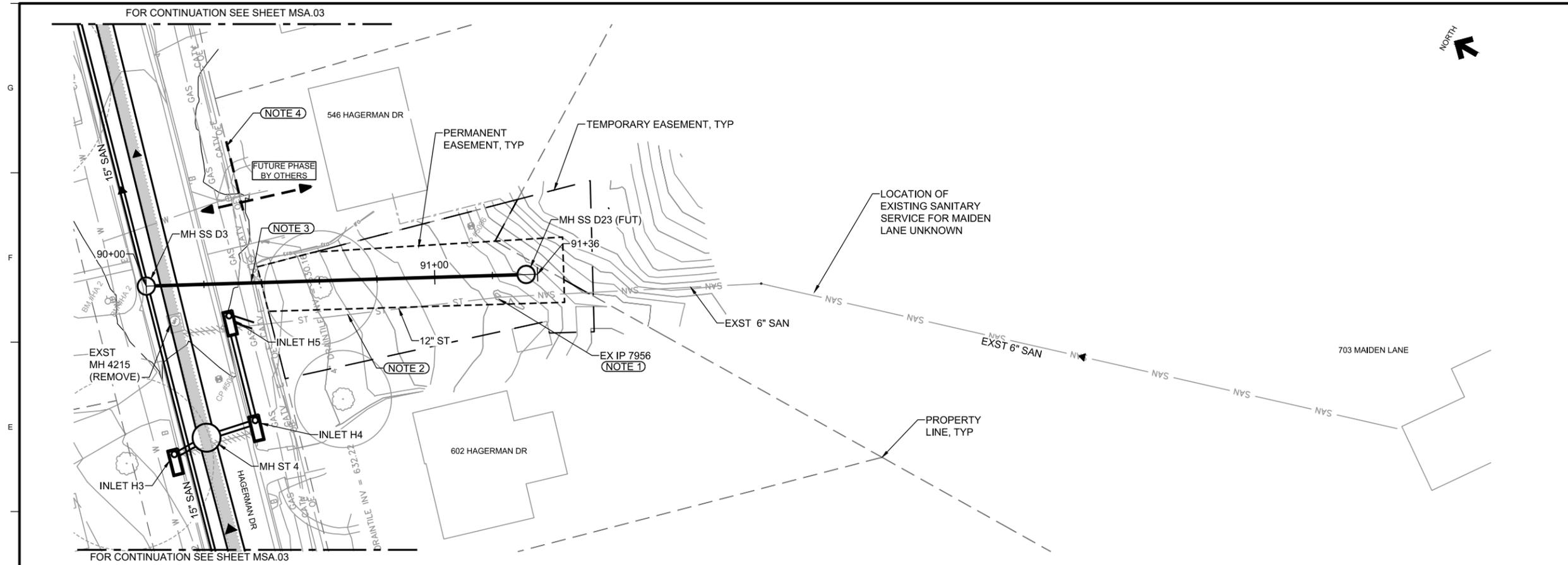
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CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

**SANITARY SEWER
 539 HAGERMAN DRIVE**

DESIGNED <u>KK HEIM</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	MSA.15
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	

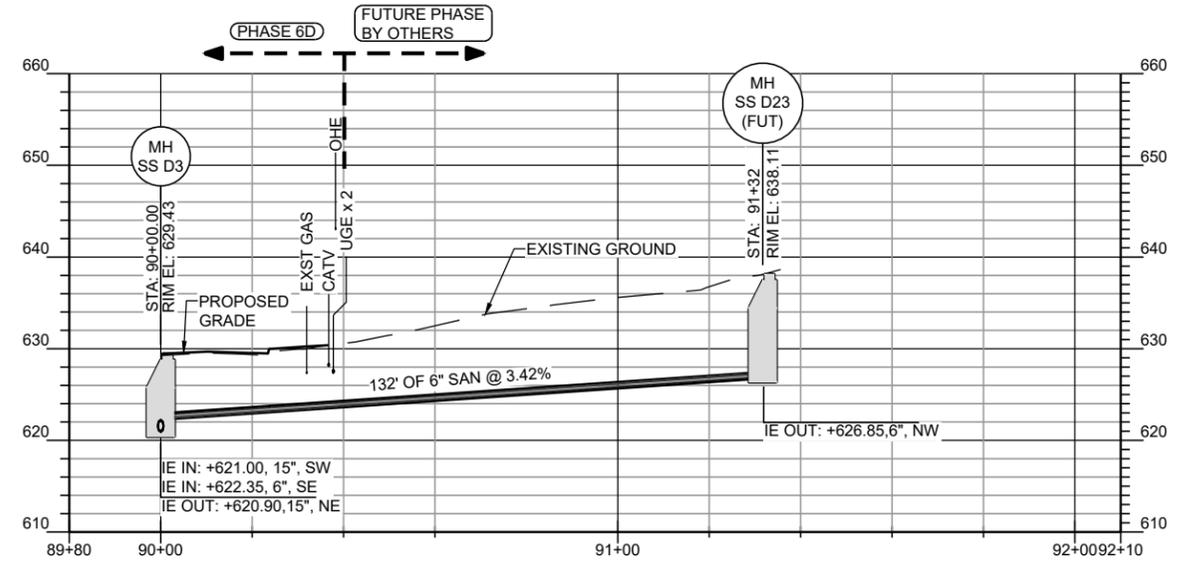
CADD D3-RS



NOTES

- EXISTING SANITARY SERVICE FOR 703 MAIDEN LANE DISCHARGES TO CORRUGATED PLASTIC INTAKE PIPE ON PROPERTY OF 602 HAGERMAN DRIVE. EXISTING PIPE INVERT OF STORM INTAKE IS IE = 635.46.
- CITY MAP SHOWS EXISTING STORM PIPE FROM 602 HAGERMAN DR YARD CONNECTING TO UWBS APPROXIMATELY 8' DOWNSTREAM OF EX MH 4215. THIS PRINT SHOWS STORM CONNECTING UPSTREAM OF MH WHICH LIKELY IS INCORRECT. CITY MAPPING SHOWS A BEND IN THE EXISTING STORM LINE IN CITY ROW APPROXIMATELY 31' UPSTREAM FROM CENTERLINE OF EXISTING UWBS. ACTUAL STORM ALIGNMENT IS NOT STRAIGHT AND INCLUDES AT LEAST ONE BEND.
- INSTALL SERVICE LINE STUB FOR 702 MAIDEN LANE TO RIGHT OF WAY LINE. CAP SERVICE LINE WITH WATERTIGHT CAP AND INSTALL BURIED MARKER TO DETECT LOCATION OF SERVICE LINE IN THE FUTURE. IN THE FUTURE, SERVICE LINE WILL BE EXTENDED ACROSS PRIVATE PROPERTY AND DISCONNECTED FROM THE STORM INTAKE.
- WORK IN THIS PHASE 6D MUST STOP AT THE RIGHT OF WAY LINE. DO NOT PERFORM ANY EXCAVATION OR GROUND DISTURBING WORK ON PRIVATE PROPERTY FOR NEW SERVICE LINE.

WORK IN THIS PHASE 6D MUST STOP AT THE RIGHT OF WAY LINE. DO NOT PERFORM ANY EXCAVATION OR GROUND DISTURBING WORK ON PRIVATE PROPERTY FOR NEW SERVICE LINE



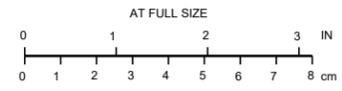
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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www.stanleyconsultants.com

CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SERVICE FOR
703 MAIDEN LANE**

DESIGNED <u>KK HEIM</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	MSA.16
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	



LADD D3-RS



NOTE 3

PHOTO 1: UWBS BROKEN PIPE SOUTHEAST OF UWBS



NOTE 4

PHOTO 2: MANHOLE 5455 BRICK RISER SECTIONS ON UWBS

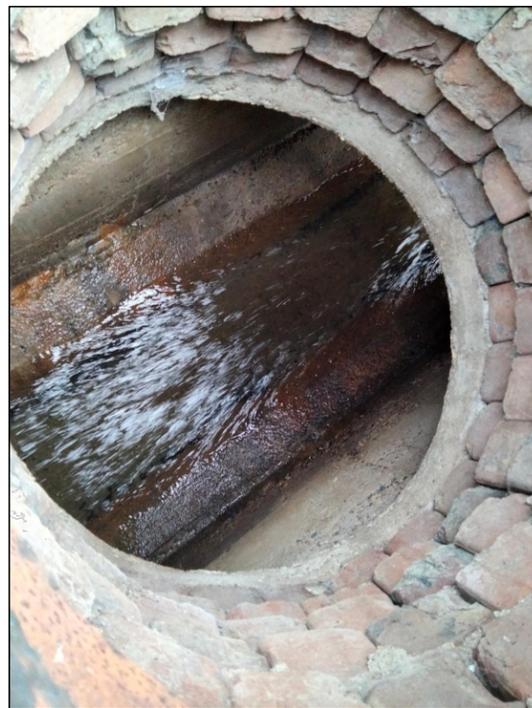


PHOTO 3: MANHOLE 5455 - APPROXIMATELY 5 LAYERS OF BRICK RISER



EXISTING 3.2' X 3.2' CONCRETE BOX COMBINED UWBS (PRESERVE)
NOTE 5

PHOTO 4: EXPOSED TOP OF UWBS LOOKING DOWNSTREAM (NORTHEAST)

NOTES

1. ALL PHOTOS ARE TAKEN NEAR EXISTING MH 5455. REFER TO SHEET MSA.04 FOR LOCATION ON PARCELS 897 AND 895 NEWELL AVENUE.
2. PHOTOS ARE FROM MARTIN AND WHITACRE SURVEY DONE IN 2021.
3. REPLACE PIPE TO MATCH EXISTING SIZE AND LENGTH. PATCH ANY HOLES OR OPENINGS IN UWBS TO FORM A SEALED WATERTIGHT CONNECTION. MAINTAIN POSITIVE DRAINAGE TO PIPE AND RESTORE AREA TO MATCH EXISTING CONTOURS AND PROTECT FROM EROSION. INSTALL PIPE APRON AND GUARD. SEE SUDAS FIGURE 4030.222 AND 4030.224.
4. REMOVE BRICK RISER SECTION AND CASTING FROM MH 5455. PREVENT BRICKS FROM FALLING INTO SEWER. INSTALL NEW CASTING TO TOP OF EXISTING UWBS. CONTRACTOR TO MEASURE SIZE OF OPENING PRIOR TO ORDERING CASTING. CASTING SHALL HAVE A BOLT DOWN LID. SECURE CASTING FRAME TO TOP OF UWBS BY ANCHORING INTO CONCRETE STRUCTURE.
5. AVOID DRIVING OVER EXPOSED PORTIONS OF SEWER WITH EQUIPMENT. PROTECT EXISTING EXPOSED AND BURIED PORTIONS OF UWBS FROM REPEATED CONSTRUCTION TRAFFIC LOADING.

NO.	REVISIONS	DSGN	CHKD	APVD	DATE



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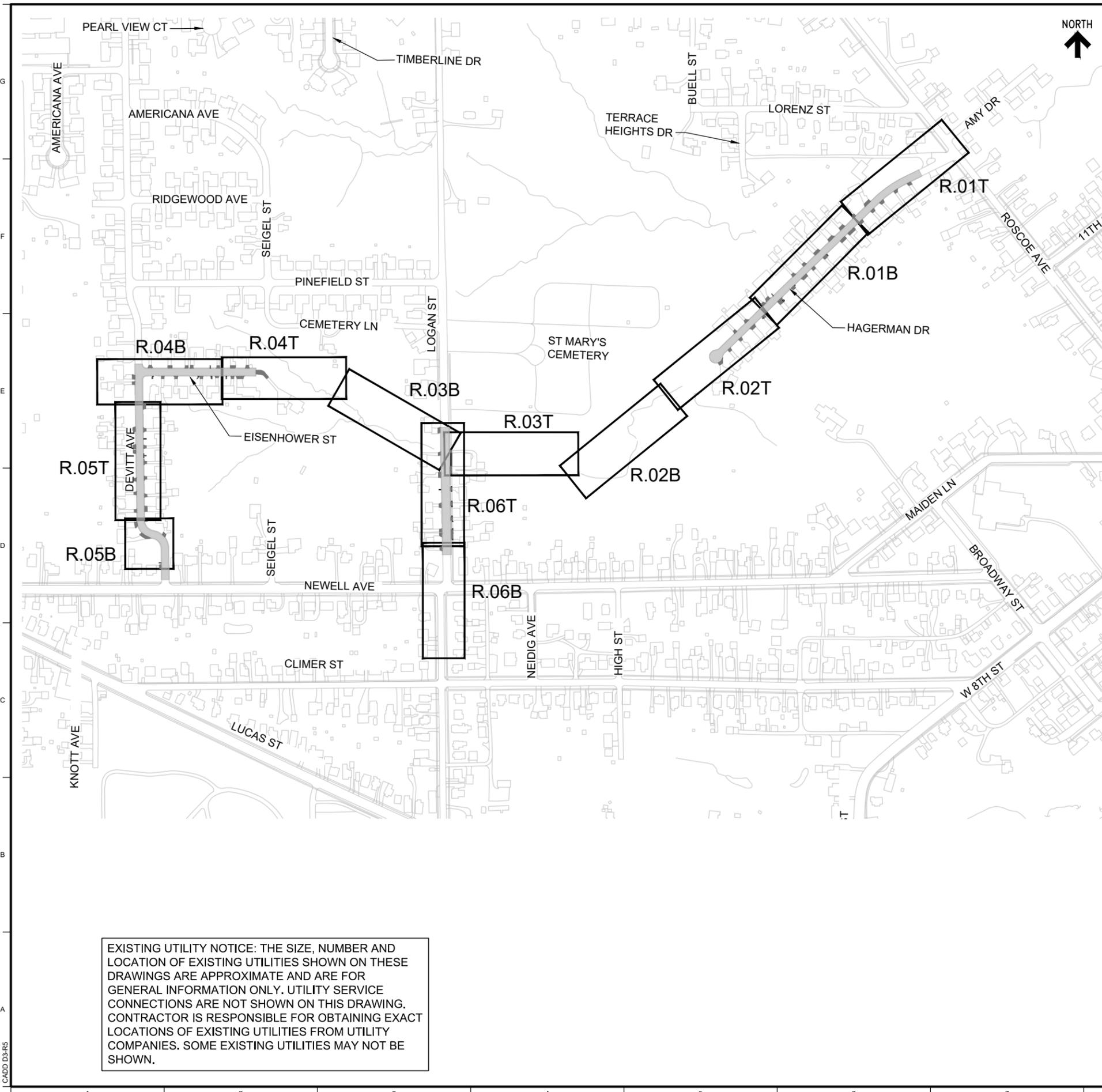
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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**SANITARY SEWER
UWBS REPAIR**

DESIGNED <u>PM JOHNSON</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>KK HEIM</u>	MSA.17
APPROVED <u>PM JOHNSON</u>	0
DATE <u>MARCH 12, 2025</u>	



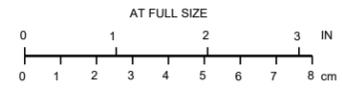


GENERAL NOTES

- ROW LINES INDICATED ON PLANS ARE NOT SURVEYED. INFORMATION WAS OBTAINED FROM ONLINE INFORMATION FROM MUSCATINE AREA GEOGRAPHICAL INFORMATION CONSORTIUM (MAGIC). PROPERTY SURVEY IS REQUIRED TO DETERMINE EXACT LOCATIONS. CONTRACTOR SHALL CONDUCT WORK WITHIN ROW LIMITS UNLESS EASEMENT OR CONSTRUCTION LIMITS ARE SHOWN ON PLANS.
- CONTRACTOR SHALL PRESERVE AND PROTECT TREES TO GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. COORDINATE WITH CITY ON DECISION TO REMOVE ADDITIONAL TREES.
- CONTRACTOR SHALL PROTECT UNDERGROUND LIGHTING CONDUITS AND JUNCTION BOXES. IF DAMAGED, CONTRACTOR SHALL REPAIR ACCORDING TO MUSCATINE POWER AND WATER (MP&W) REQUIREMENTS. CONTRACTOR SHALL CONTACT MP&W IF DAMAGE OCCURS TO LIGHTING CONDUITS AND JUNCTION BOXES FOR REPAIR REQUIREMENTS. CONTRACTOR WILL NOT BE PAID DIRECTLY FOR LIGHTING REPAIR WORK. REPAIR WORK IS CONSIDERED INCIDENTAL TO THE COST OF THE PROJECT.
- EXISTING DOWNSPOUT DRAIN PIPES THAT ARE LOCATED WITHIN THE CURB SECTION SHALL BE DISCONNECTED. CONNECTIONS ARE ONLY ALLOWED IF AUTHORIZED BY CITY. DISCONNECTING RELATED TO DOWNSPOUT DRAIN PIPES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT CONSTRUCTION WORK. NO ADDITIONAL PAYMENT WILL BE PROVIDED TO THE CONTRACTOR FOR THIS WORK. PAYMENT WILL ONLY BE MADE UPON AUTHORIZATION BY THE CITY WHEN CONNECTING EXISTING DRAIN PIPES TO THE NEW CURB USING AUTHORIZED CURB CASTINGS.
- CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING FEATURES ON PRIVATE PROPERTY. ITEMS THAT ARE DAMAGED DUE TO CONSTRUCTION SHALL BE REPLACED/RECONSTRUCTED BY CONTRACTOR AT NO ADDITIONAL COST TO CITY. CONSTRUCTION STAKING OF CONSTRUCTION LIMITS IS THE RESPONSIBILITY OF THE CONTRACTOR. COORDINATES OF CONSTRUCTION LIMITS ARE AVAILABLE WITH CADD FILE.
- HMA MILLINGS AND PCC PAVEMENT REMOVED SHALL BE HAULED TO CITY OF MUSCATINE PUBLIC WORKS FACILITY ON WASHINGTON STREET, MUSCATINE, IA.
- REMOVE AND SALVAGE BRICKS FROM BRICK STREET BASE. DELIVER SALVAGED BRICK TO CITY OF MUSCATINE PUBLIC WORKS FACILITY ON WASHINGTON STREET. LIMESTONE CURB THAT IS REMOVED SHALL BE HANDLED SAME AS BRICK.
- IF NECESSARY, TRIM TREE BRANCHES BACK TO AVOID OVERHEAD CONFLICT WITH CONSTRUCTION MACHINERY TO PRESERVE TREES. CONTRACTOR SHALL COORDINATE WITH CITY.
- TOPOGRAPHIC SURVEY INFORMATION SHOWN ON PLANS HAS BEEN OBTAINED FROM MARTIN & WHITACRE SURVEY (SURVEY COMPLETED BETWEEN 2021 AND 2024). BUILDING OUTLINES SHOWN ARE FROM CITY OF MUSCATINE DATA SOURCE AND MAY NOT REFLECT CURRENT CONDITIONS.
- ANY STREET SIGNS IN THE IMPACTED AREA SHOULD BE SALVAGED AND DELIVERED/STOCKPILED AT THE CITY PUBLIC WORKS STORAGE YARD IMMEDIATELY AFTER REMOVAL. IF SIGNS ARE DAMAGED OR MISSING, CONTRACTOR MAY BE SUBJECT TO FINES AS DETERMINED BY THE CITY.
- PLACE INLET PROTECTION AROUND INTAKES THAT ARE AT A LOCALIZED LOW POINT AND RECEIVE RUNOFF FROM DISTURBED AREAS. PROTECT ALL PROPOSED AND EXISTING INTAKES (ONSITE AND OFFSITE) THAT HAVE POTENTIAL TO CAPTURE SITE RUNOFF. SEE RR SHEETS FOR RECOMMENDED EROSION CONTROL PROTECTION MEASURES.
- SILT FENCE TO BE INSTALLED IN ACCORDANCE WITH THE SWPPP DOCUMENT PROVIDED HEREIN. THIS APPLIES THROUGHOUT THE ENTIRE PROJECT.
- EXISTING PAVEMENT MARKINGS SHALL BE DOCUMENTED BY THE CONTRACTOR PRIOR TO DEMOLITION.
- MAKE A CLEAN, FULL DEPTH SAWCUT AT DEMO LIMITS AND AT PHASE BOUNDARIES.
- REFER TO SANITARY AND STORM SEWER PLAN DRAWINGS FOR PROPOSED SEWERS, MANHOLES, AND INLETS. ABANDONED OR REMOVED PIPES AND MANHOLES ARE HATCHED ON THE M AND MSA SERIES DRAWINGS.
- SIDEWALK REMOVAL LIMITS SHOWN ARE MINIMUM REQUIRED. REMOVE SIDEWALK TO NEAREST JOINT.

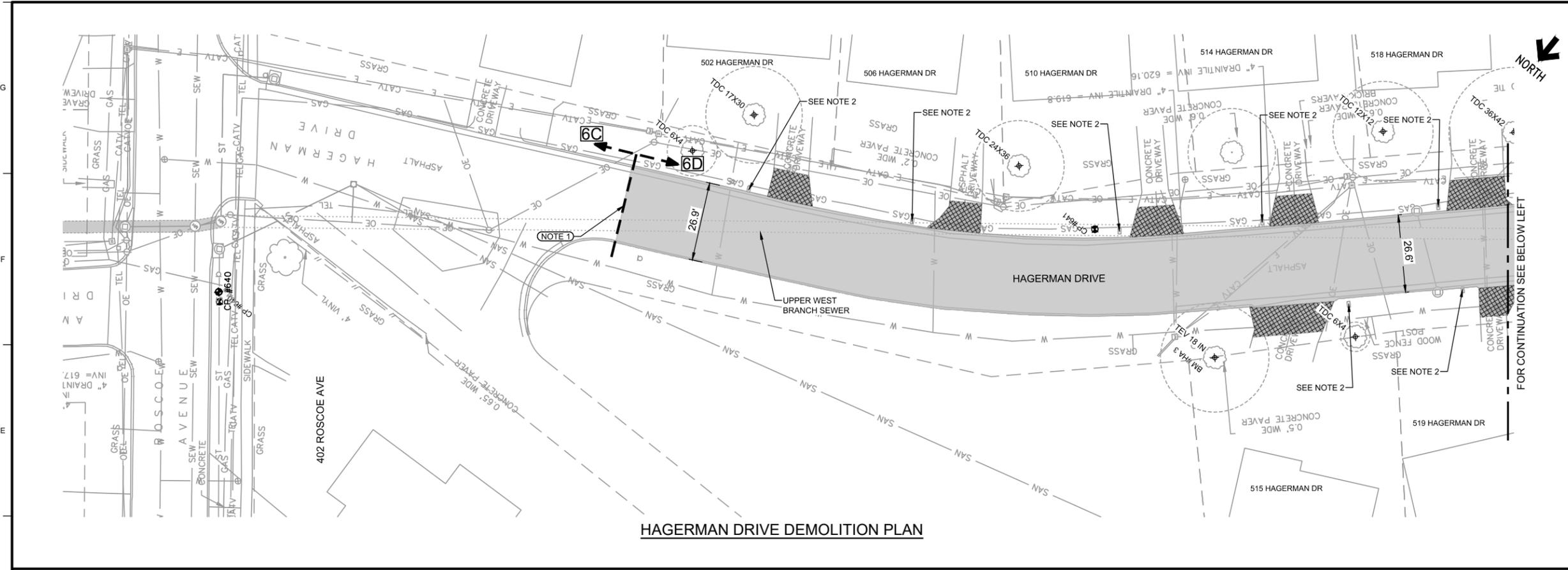


EXISTING UTILITY NOTICE: THE SIZE, NUMBER AND LOCATION OF EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND ARE FOR GENERAL INFORMATION ONLY. UTILITY SERVICE CONNECTIONS ARE NOT SHOWN ON THIS DRAWING. CONTRACTOR IS RESPONSIBLE FOR OBTAINING EXACT LOCATIONS OF EXISTING UTILITIES FROM UTILITY COMPANIES. SOME EXISTING UTILITIES MAY NOT BE SHOWN.

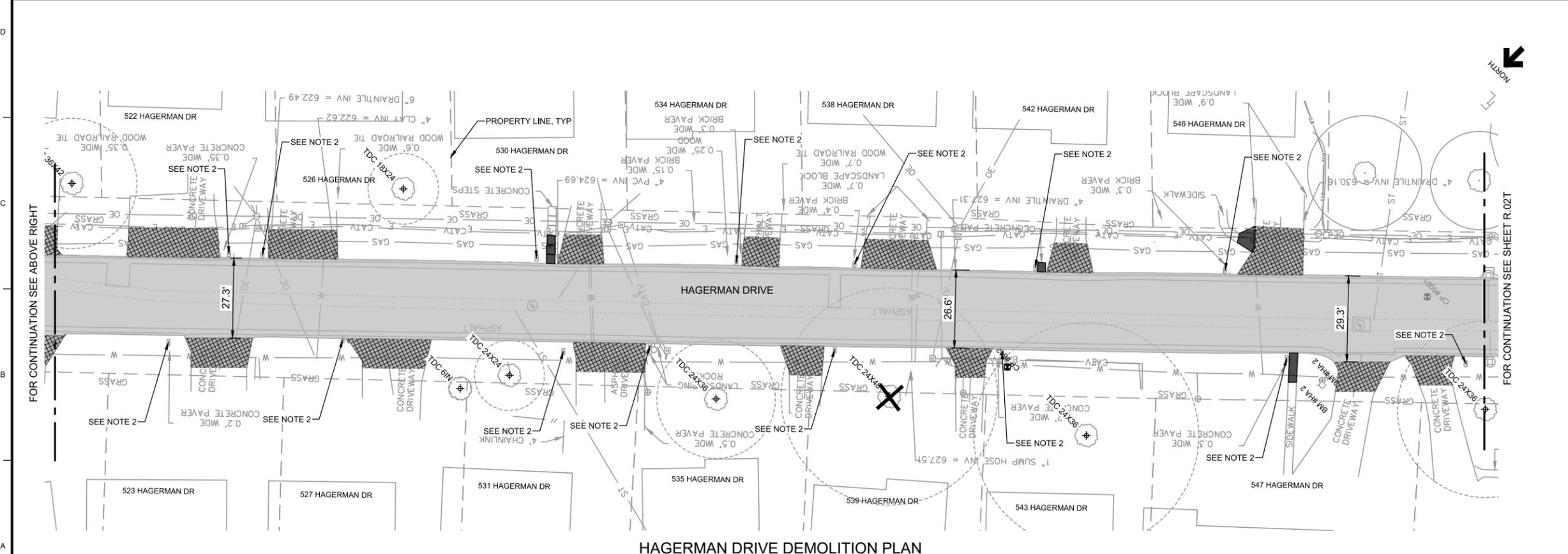


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CITY OF MUSCATINE - PHASE 6D WEST HILL AREA SANITARY AND STORM SEWER SEPARATION MUSCATINE, IOWA					
DEMOLITION OVERALL SITE AND KEY PLAN					
DESIGNED	PM JOHNSON/KK HEIM	SCALE: AS NOTED			
DRAWN	GM REEVES	NO. 17660.60.30		REV.	
CHECKED	ER SCHALLERT				
APPROVED	KK HEIM	R.00		0	
DATE	MARCH 12, 2025				

LOAD D3-RS



HAGERMAN DRIVE DEMOLITION PLAN



HAGERMAN DRIVE DEMOLITION PLAN

NOTES

1. COORDINATE WORK WITH PHASE 6C CONTRACTOR.
2. REMOVE AND REINSTALL MAILBOX. COORDINATE WITH CITY AND PROPERTY OWNER FOR SAFE STORAGE OF MAILBOX DURING CONSTRUCTION.

LEGEND

-  PAVEMENT DEMOLITION
-  SIDEWALK DEMOLITION
-  DRIVEWAY DEMOLITION
-  TREE DEMOLITION
-  SHRUB DEMOLITION
-  REMOVE LANDSCAPING, SAVE AND REPLACE
-  PROTECT TREE, REMOVE IF NECESSARY
-  TREE TRUNK DIAMETER LABEL
- TDC TREE DECIDUOUS
- TEV TREE EVERGREEN

NO.	REVISIONS	DSGN	CHKD	APVD	DATE

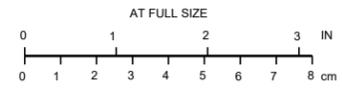


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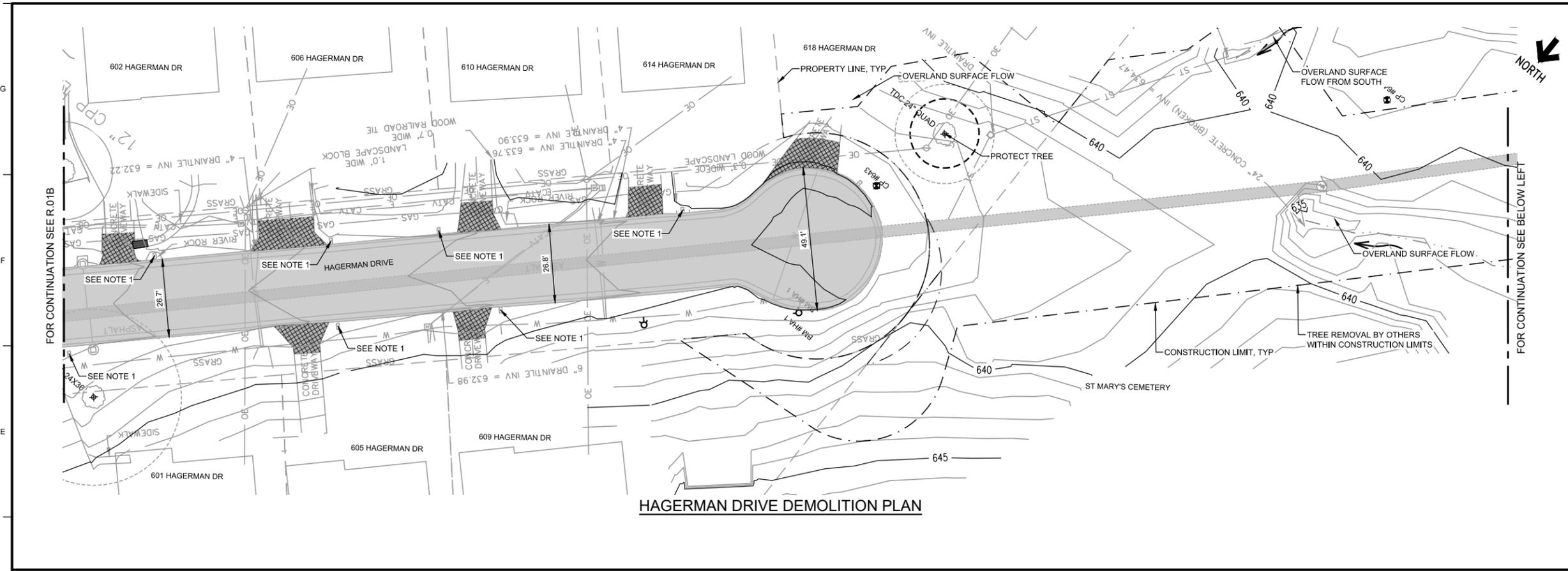
CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

**DEMOLITION PLAN
 HAGERMAN DRIVE**

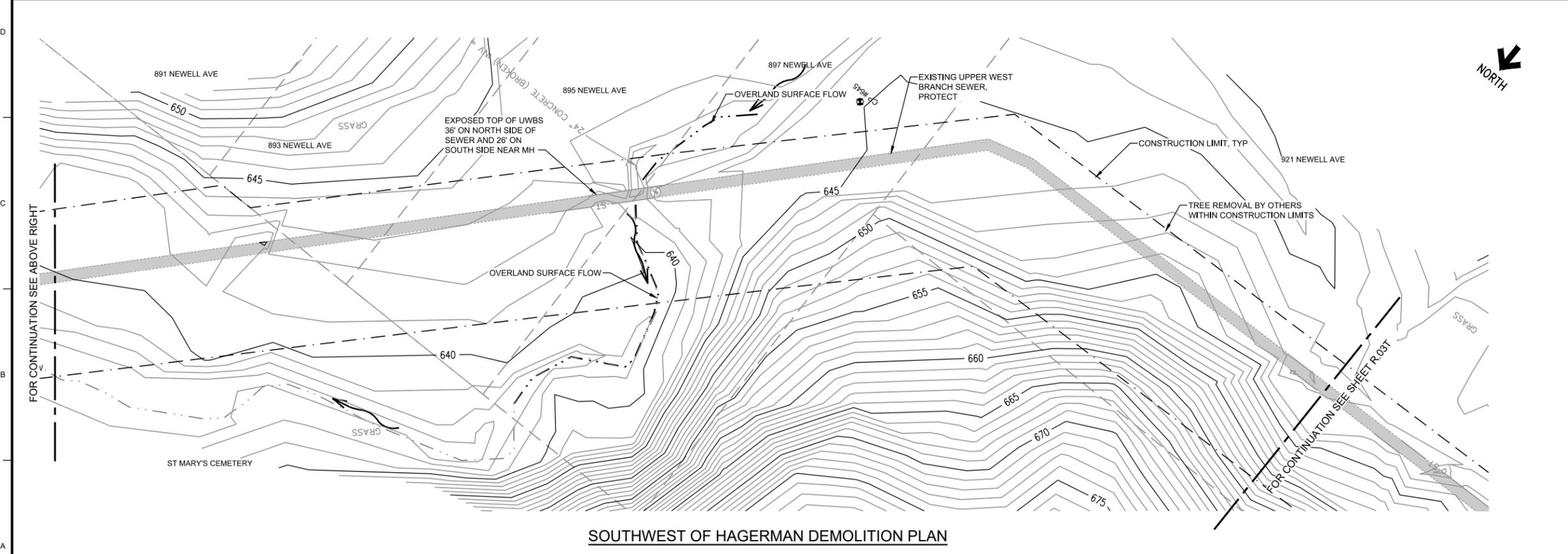
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APPROVED <u>KK HEIM</u>	R.01
APPROVED <u>PM JOHNSON</u>	0
DATE <u>MARCH 12, 2025</u>	



LOAD D3-RS



HAGERMAN DRIVE DEMOLITION PLAN

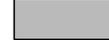
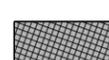


SOUTHWEST OF HAGERMAN DEMOLITION PLAN

NOTES

1. REMOVE AND REINSTALL MAILBOX. COORDINATE WITH CITY AND PROPERTY OWNER FOR SAFE STORAGE OF MAILBOX DURING CONSTRUCTION.

LEGEND

-  PAVEMENT DEMOLITION
-  SIDEWALK DEMOLITION
-  DRIVEWAY DEMOLITION
-  TREE DEMOLITION
-  SHRUB DEMOLITION
-  REMOVE LANDSCAPING, SAVE AND REPLACE
-  PROTECT TREE, REMOVE IF NECESSARY
-  TREE TRUNK DIAMETER LABEL
- TDC TREE DECIDUOUS
- TEV TREE EVERGREEN

NO.	REVISIONS	DSGN	CHKD	APVD	DATE

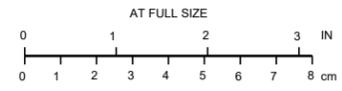


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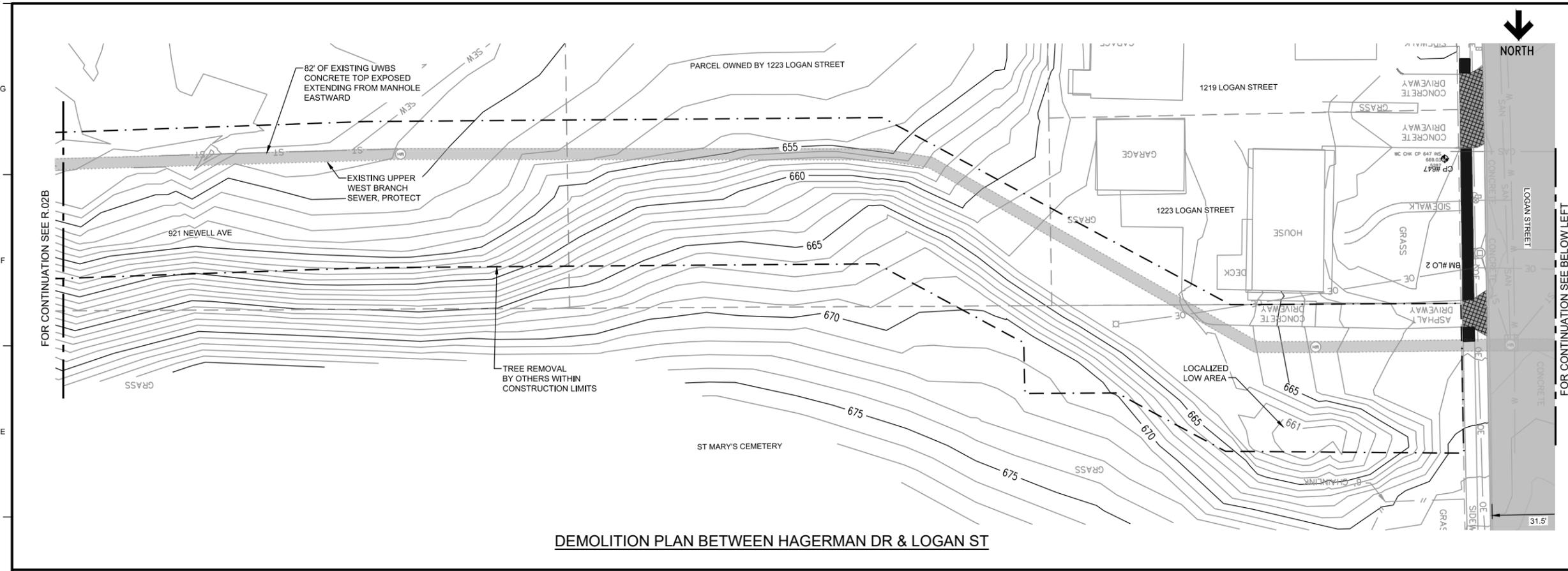
CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

**DEMOLITION PLAN
 HAGERMAN DRIVE**

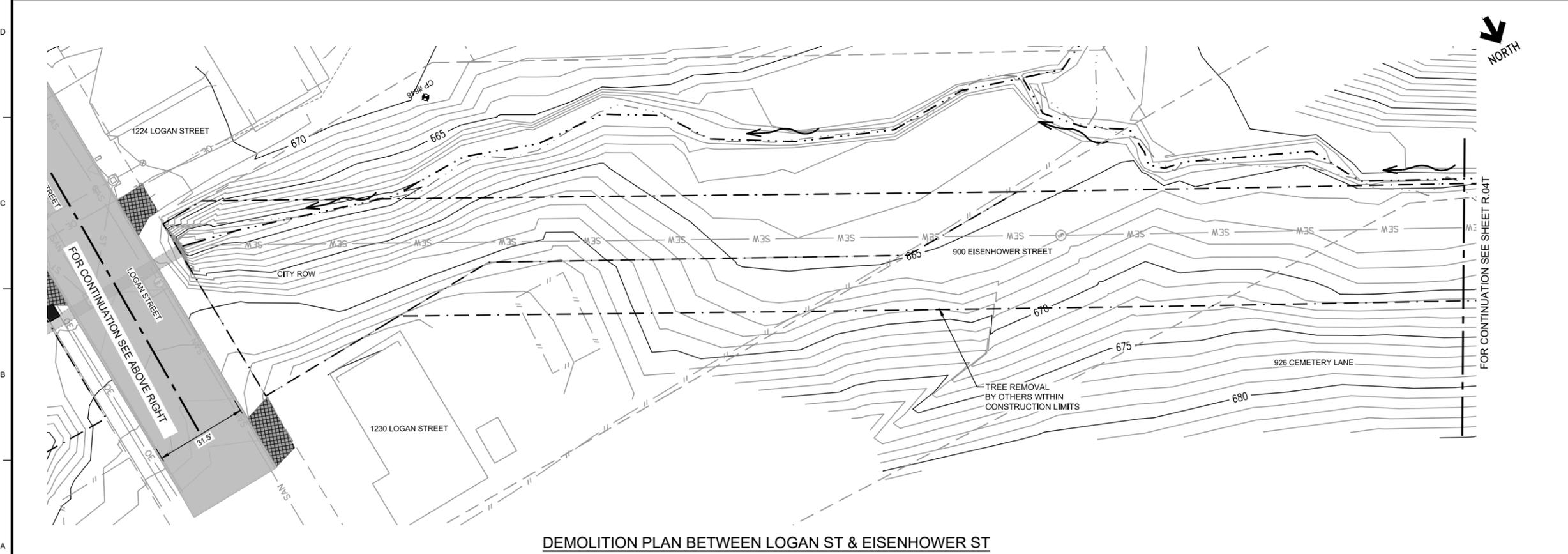
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CHECKED <u>ER SCHALLERT</u>		
APPROVED <u>KK HEIM</u>		
APPROVED <u>PM JOHNSON</u>	R.02	0
DATE <u>MARCH 12, 2025</u>		



CADDD 03-RS



DEMOLITION PLAN BETWEEN HAGERMAN DR & LOGAN ST



DEMOLITION PLAN BETWEEN LOGAN ST & EISENHOWER ST

NOTES

- LEGEND**
-  PAVEMENT DEMOLITION
 -  SIDEWALK DEMOLITION
 -  DRIVEWAY DEMOLITION
 -  TREE DEMOLITION
 -  SHRUB DEMOLITION
 -  REMOVE LANDSCAPING, SAVE AND REPLACE
 -  PROTECT TREE, REMOVE IF NECESSARY
 -  TREE TRUNK DIAMETER LABEL
 - TDC TREE DECIDUOUS
 - TEV TREE EVERGREEN

NO.	REVISIONS	DSGN	CHKD	APVD	DATE

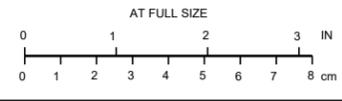


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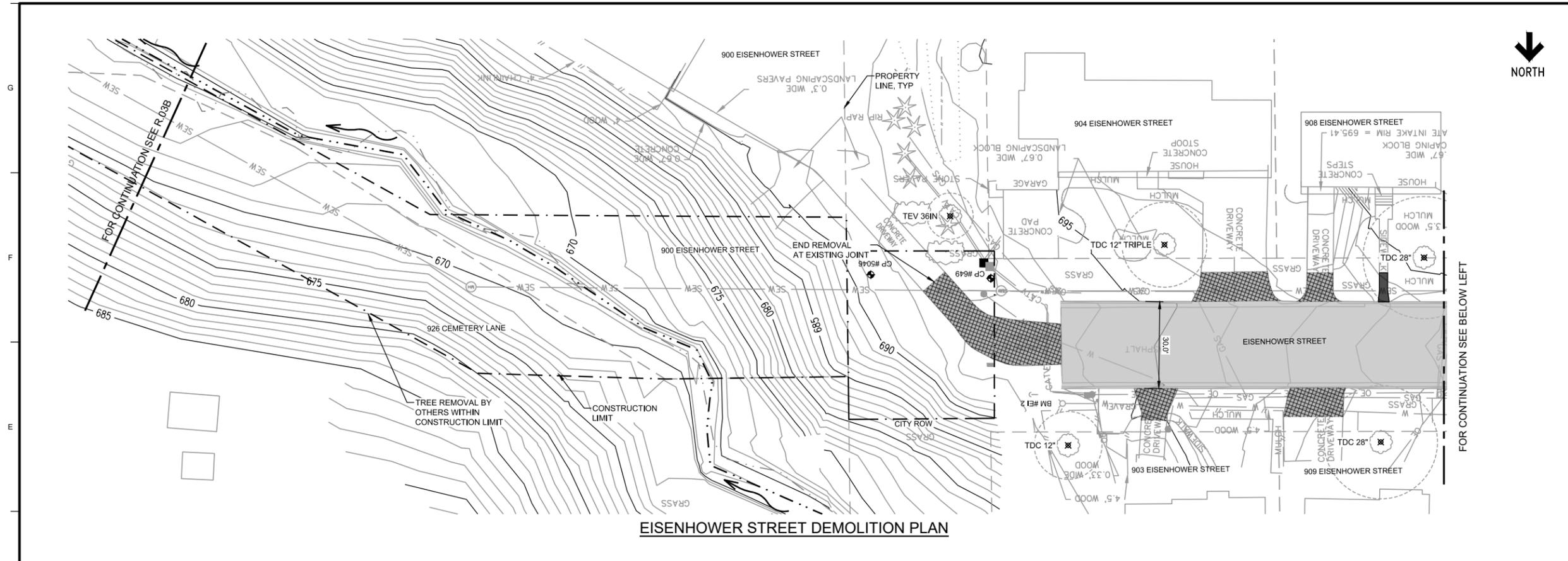
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

DEMOLITION PLAN BETWEEN HAGERMAN DR & EISENHOWER ST

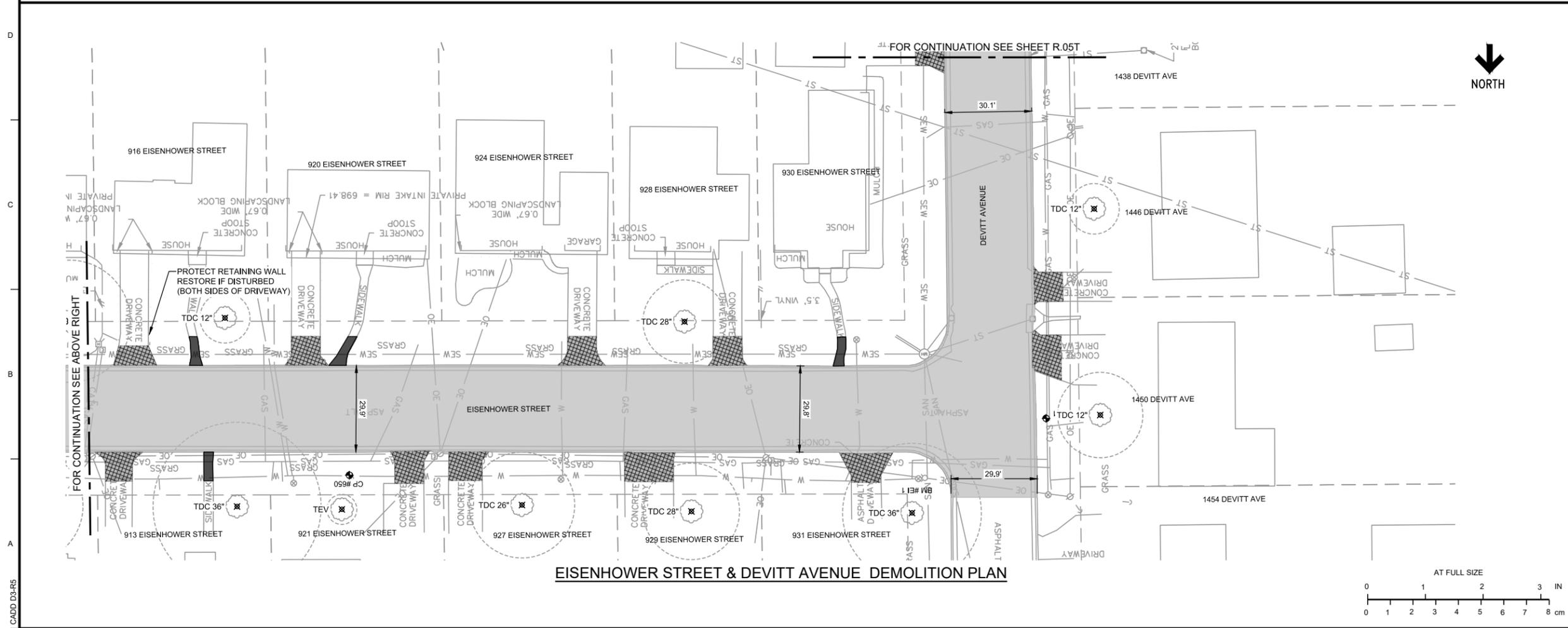
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DRAWN GM REEVES	NO. 17660.60.30
CHECKED ER SCHALLERT	REV.
APPROVED KK HEIM	R.03
APPROVED PM JOHNSON	0
DATE MARCH 12, 2025	



LADD D3-RS



EISENHOWER STREET DEMOLITION PLAN



EISENHOWER STREET & DEVITT AVENUE DEMOLITION PLAN

NOTES

- LEGEND**
-  PAVEMENT DEMOLITION
 -  SIDEWALK DEMOLITION
 -  DRIVEWAY DEMOLITION
 -  TREE DEMOLITION
 -  SHRUB DEMOLITION
 -  REMOVE LANDSCAPING, SAVE AND REPLACE
 -  PROTECT TREE, REMOVE IF NECESSARY
 -  TREE TRUNK DIAMETER LABEL
 - TDC TREE DECIDUOUS
 - TEV TREE EVERGREEN

NO.	REVISIONS	DSGN	CHKD	APVD	DATE

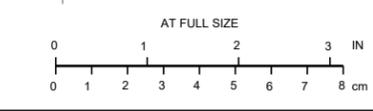


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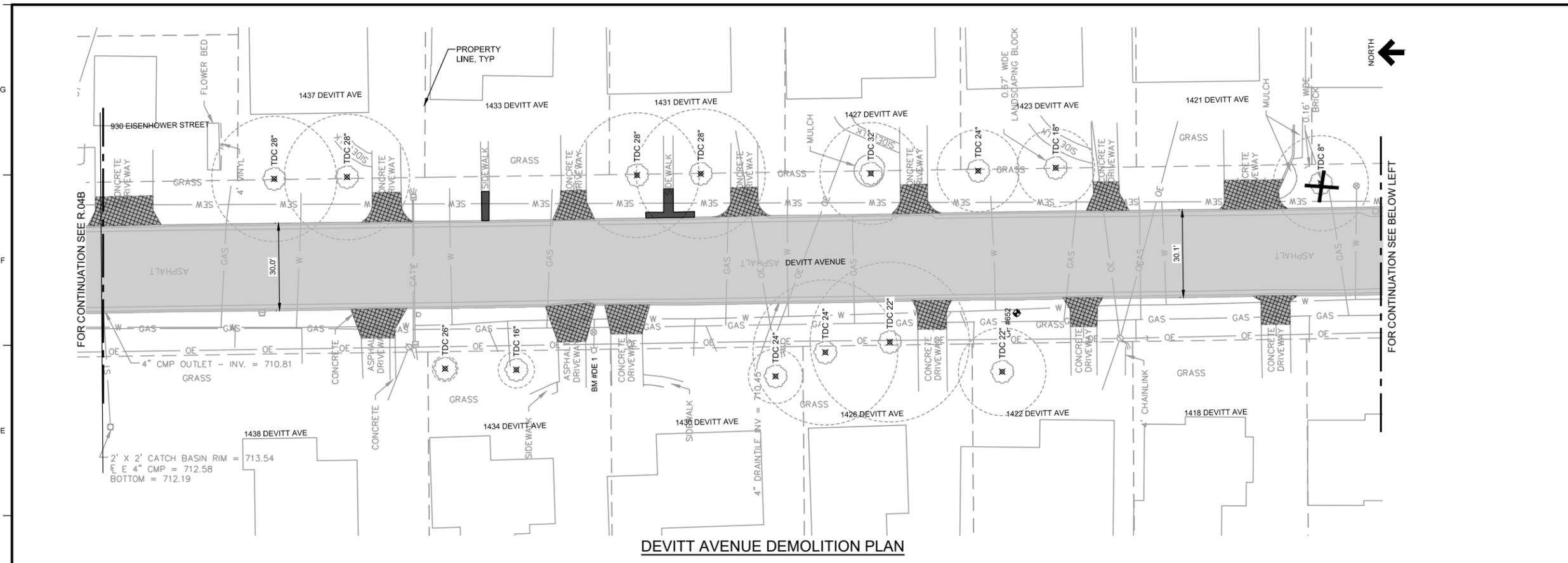
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

DEMOLITION PLAN
EISENHOWER ST & DEVITT AVE

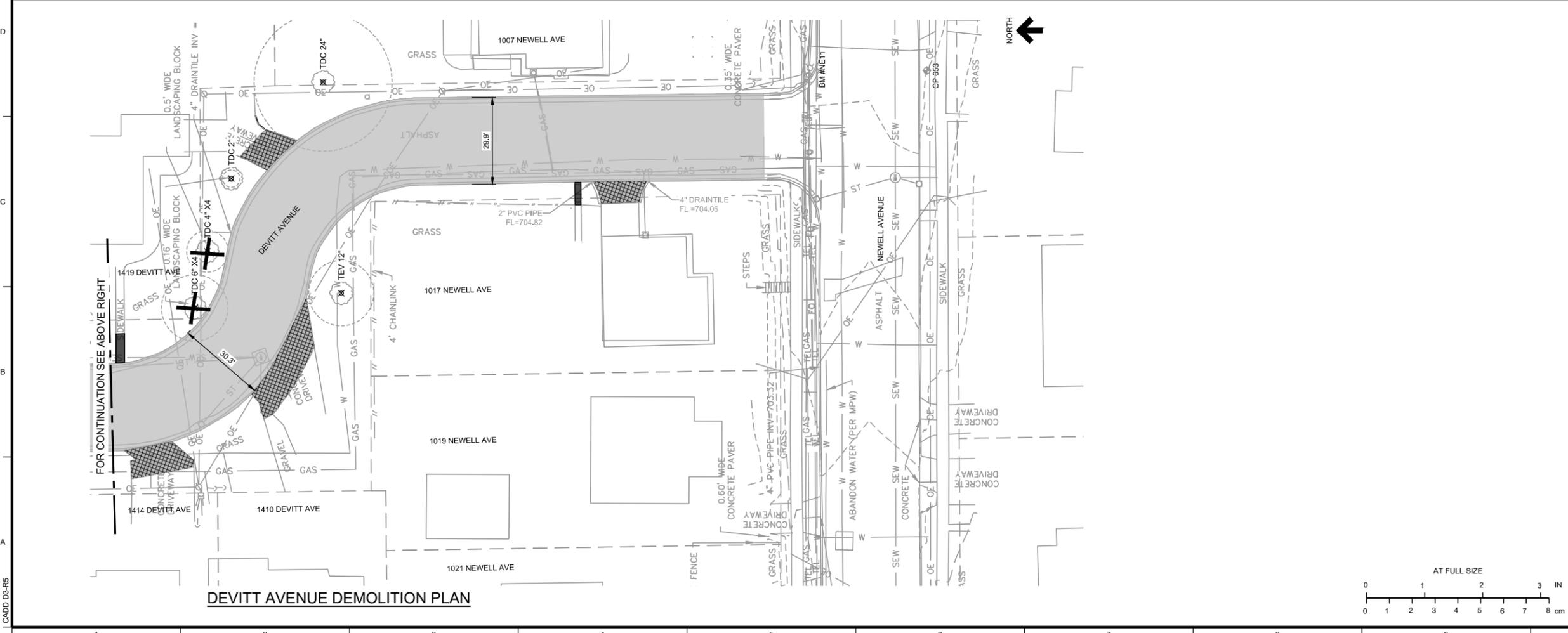
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CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>KK HEIM</u>	R.04
APPROVED <u>PM JOHNSON</u>	0
DATE <u>MARCH 12, 2025</u>	



LADD D3-RS



DEVIIT AVENUE DEMOLITION PLAN



DEVIIT AVENUE DEMOLITION PLAN

NOTES

- LEGEND**
- PAVEMENT DEMOLITION
 - SIDEWALK DEMOLITION
 - DRIVEWAY DEMOLITION
 - TREE DEMOLITION
 - SHRUB DEMOLITION
 - REMOVE LANDSCAPING, SAVE AND REPLACE
 - PROTECT TREE, REMOVE IF NECESSARY
 - TREE TRUNK DIAMETER LABEL
 - TDC TREE DECIDUOUS
 - TEV TREE EVERGREEN

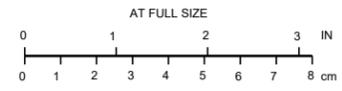
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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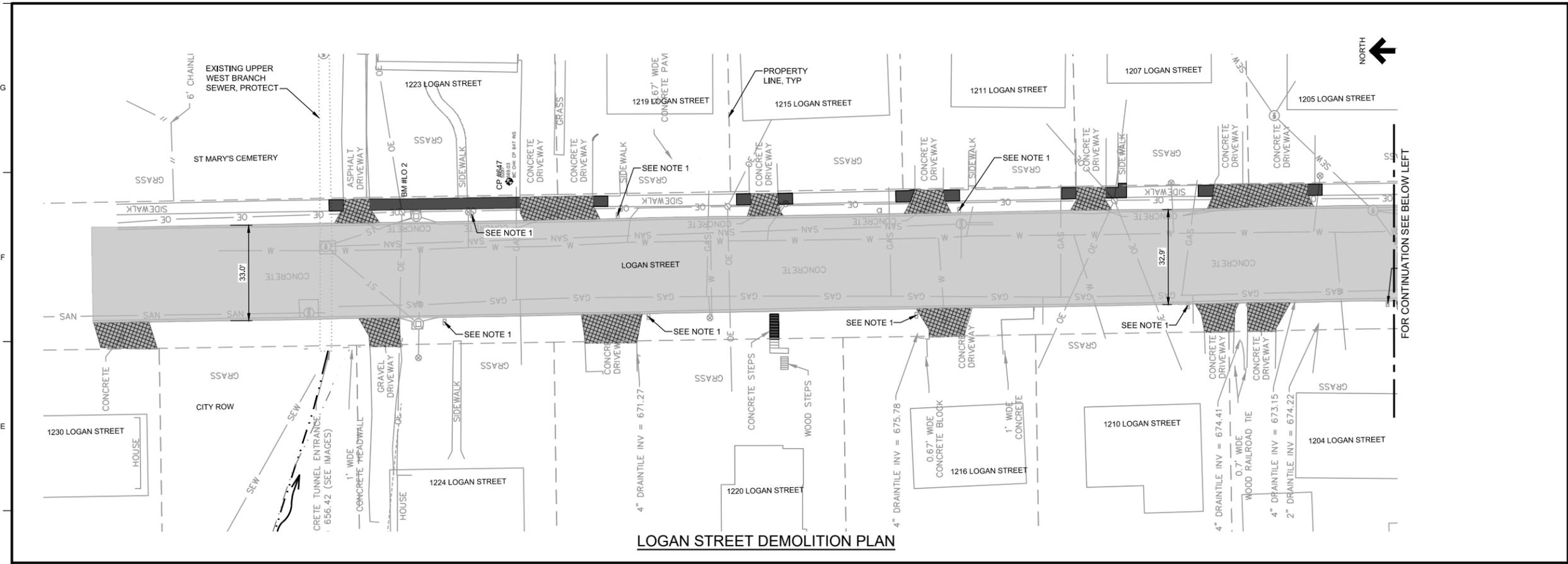
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 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

DEMOLITION PLAN - DEVIIT AVENUE

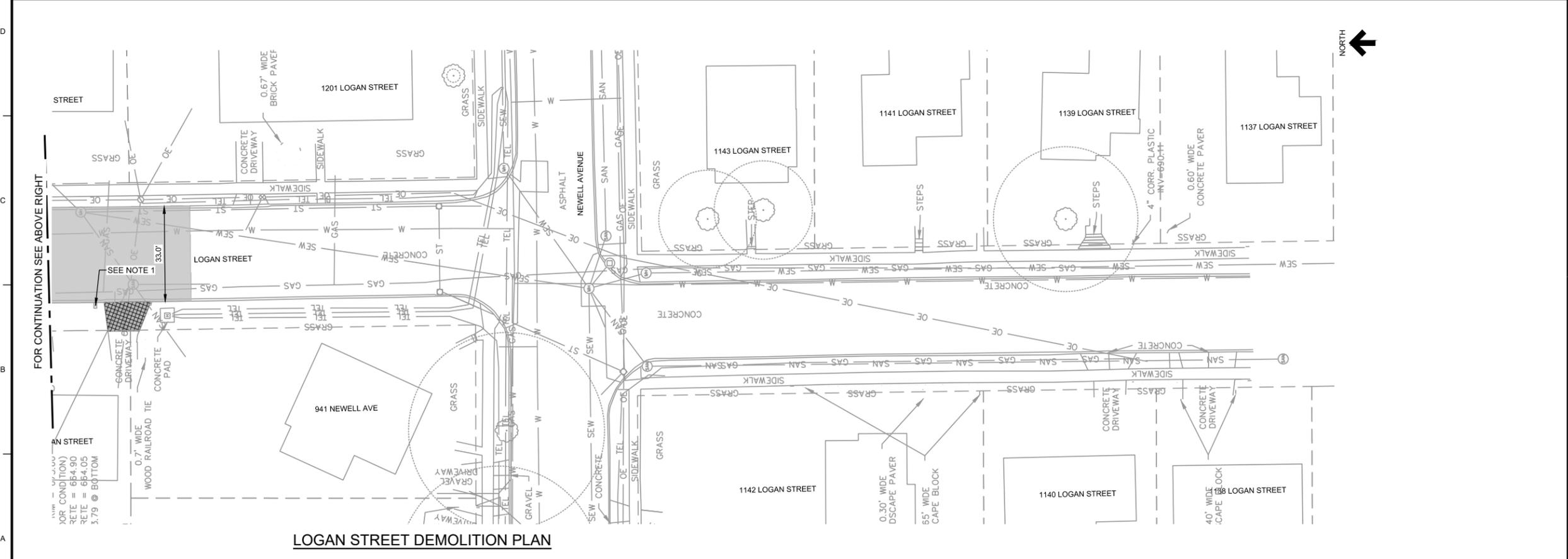
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CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>KK HEIM</u>	R.05
APPROVED <u>PM JOHNSON</u>	0
DATE <u>MARCH 12, 2025</u>	



CA00 D3-RS



LOGAN STREET DEMOLITION PLAN



LOGAN STREET DEMOLITION PLAN

NOTES

1. REMOVE AND REINSTALL MAILBOX. COORDINATE WITH CITY AND PROPERTY OWNER FOR SAFE STORAGE OF MAILBOX DURING CONSTRUCTION.

LEGEND

-  PAVEMENT DEMOLITION
-  SIDEWALK DEMOLITION
-  DRIVEWAY DEMOLITION
-  TREE DEMOLITION
-  SHRUB DEMOLITION
-  REMOVE LANDSCAPING, SAVE AND REPLACE
-  PROTECT TREE, REMOVE IF NECESSARY
-  TREE TRUNK DIAMETER LABEL
- TDC TREE DECIDUOUS
- TEV TREE EVERGREEN

NO.	REVISIONS	DSGN	CHKD	APVD	DATE

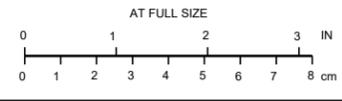


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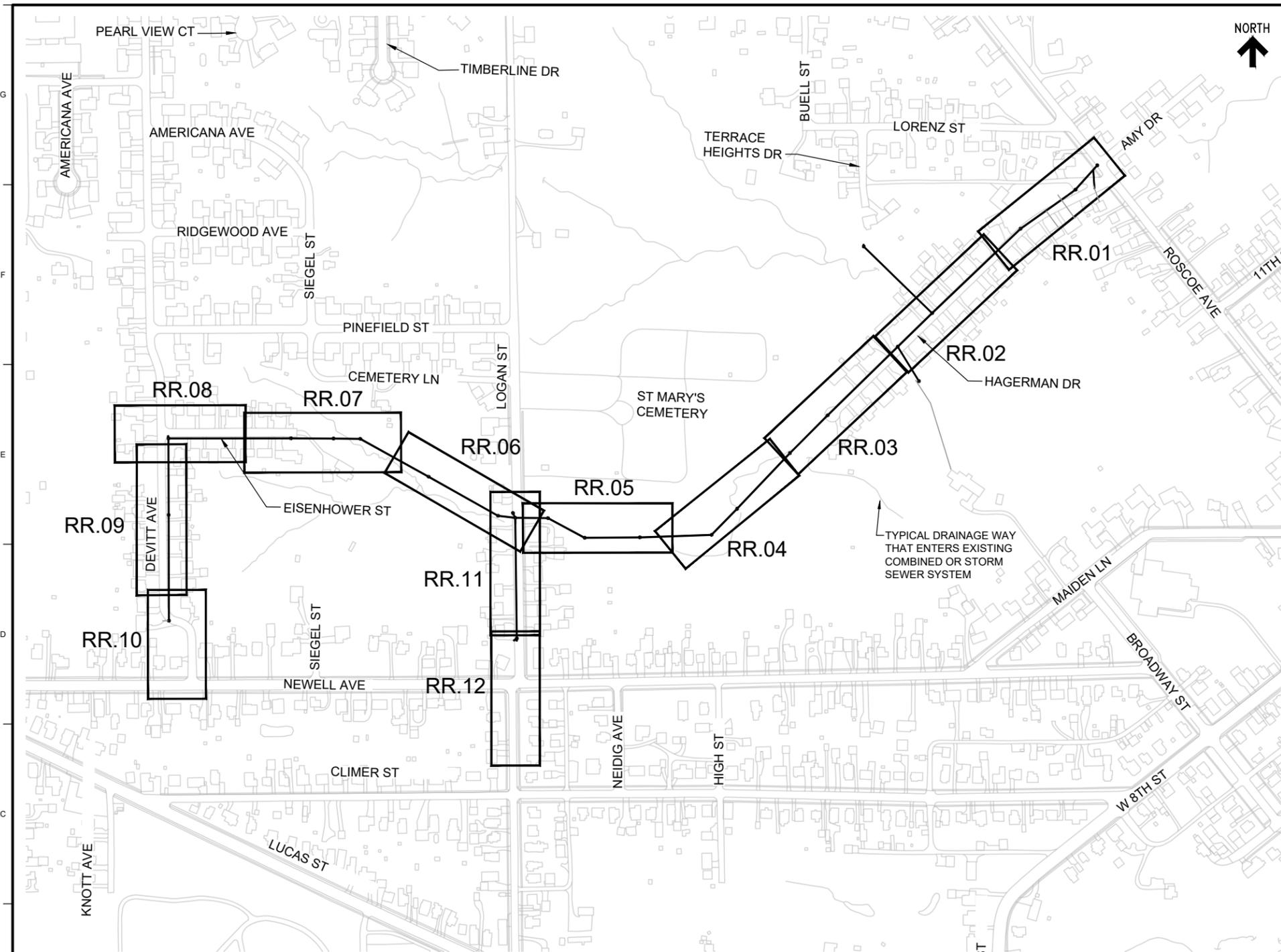
CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

DEMOLITION PLAN - LOGAN STREET

DESIGNED PM JOHNSON	SCALE: 1" = 20'
DRAWN GM REEVES	NO. 17660.60.30
CHECKED ER SCHALLERT	REV.
APPROVED KK HEIM	R.06
APPROVED PM JOHNSON	0
DATE MARCH 12, 2025	



LADD D3-RS



GENERAL NOTES

1. KEEP ALL HAUL ROUTES FREE FROM SEDIMENT ACCUMULATION. INSPECT ROUTINELY AND CLEAN AS NEEDED
2. CONTRACTOR IS RESPONSIBLE FOR CONTINUALLY MAINTAINING SITE MAP (PLAN) OF PROJECT SITE REFLECTING CURRENT EROSION AND SEDIMENT CONTROL MEASURES IMPLEMENTED.
3. SEE SHEET CE.01 FOR STORM WATER POLLUTION PREVENTION PLAN (SWPPP). SEE ESTIMATE REFERENCE NOTES AND SUDAS SECTION 9040 FOR REQUIREMENTS.

EROSION CONTROL LEGEND

- PROTECTION OF PROPOSED INLET
- PROTECTION OF EXISTING INLET
- DRAINAGE FLOW DIRECTION

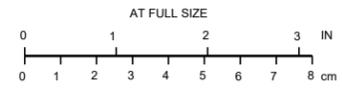
RESTORATION LEGEND

- 7" PCC PAVEMENT REPLACEMENT
- SIDEWALK REPLACEMENT
- DRIVEWAY AND ALLEY REPLACEMENT
- SEEDING
- DETECTABLE WARNING SURFACE

DEMOLITION LEGEND

- TREE DEMOLITION
- SHRUB DEMOLITION
- REMOVE, SAVE AND REPLACE
- PROTECT, REMOVE IF NECESSARY

EXISTING UTILITY NOTICE: THE SIZE, NUMBER AND LOCATION OF EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND ARE FOR GENERAL INFORMATION ONLY. UTILITY SERVICE CONNECTIONS ARE NOT SHOWN ON THIS DRAWING. CONTRACTOR IS RESPONSIBLE FOR OBTAINING EXACT LOCATIONS OF EXISTING UTILITIES FROM UTILITY COMPANIES. SOME EXISTING UTILITIES MAY NOT BE SHOWN.



NO.	REVISIONS	DSGN	CHKD	APVD	DATE

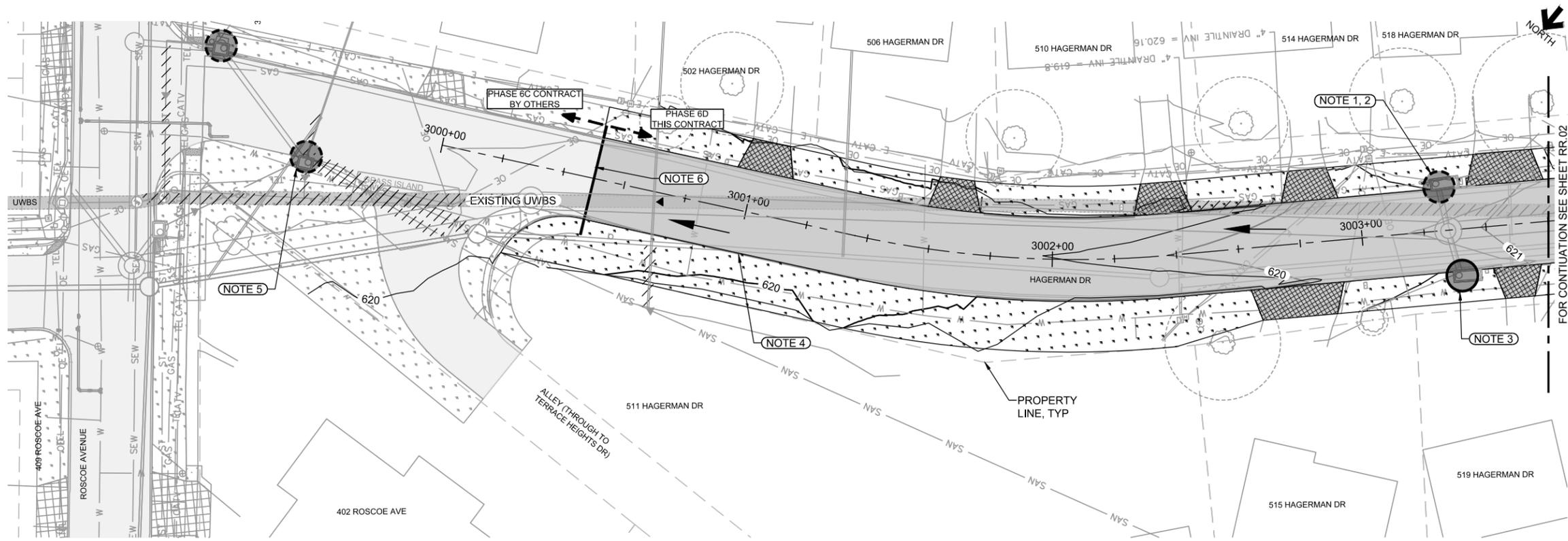
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www.stanleyconsultants.com

CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

OVERALL EROSION CONTROL & KEY PLAN

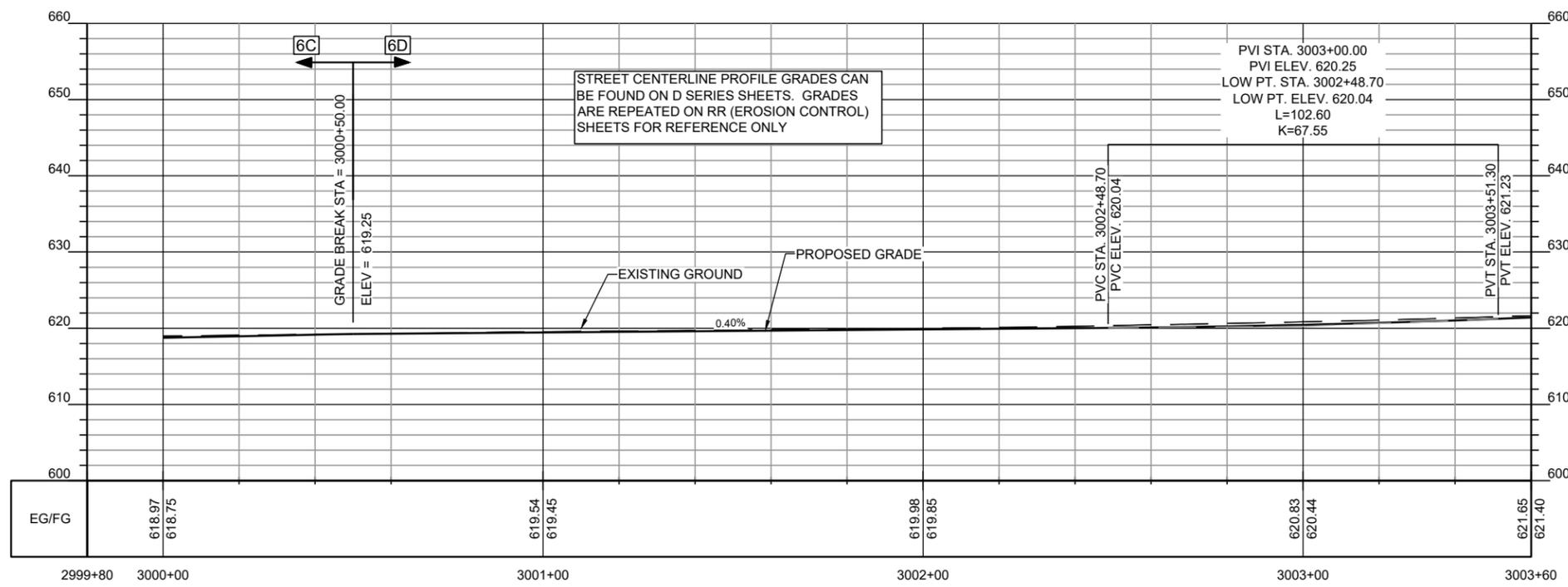
DESIGNED <u>KK HEIM</u>	SCALE: AS NOTED
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	RR.00
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	

LOAD D3-RS



NOTES

1. PROTECT EXISTING AND PROPOSED INLETS AND STORM SEWERS FOR DURATION OF CONSTRUCTION. ADJUST EROSION PROTECTION METHODS WITH CHANGES TO WORK STAGE.
2. PROTECT ALL EXISTING INLETS AND EXISTING COMBINED AND STORM SEWERS FROM SEDIMENT DURING CONSTRUCTION OPERATIONS BEFORE NEW INLETS ARE PLACED.
3. PROTECT ALL PROPOSED INLETS AND STORM SEWERS FROM SEDIMENT DURING CONSTRUCTION UNTIL SOIL IS STABILIZED AND SITE IS CLEANED.
4. PREVENT TOPSOIL FROM ENTERING STREET WITH INSTALLATION OF SILT FENCE, WATTLES, FILTER SOCKS OR OTHER EROSION PROTECTION METHOD BEHIND CURB, NOT SHOWN.
5. PROTECT INLETS DOWNSTREAM OF THE PROJECT AREA ON HAGERMAN AND ROSCOE AS NEEDED.
6. PREVENT TRACKING MUD ONTO NEW PAVEMENT. INSTALL STABILIZED CONSTRUCTION EXIT OR EXTRA TEMPORARY AGGREGATE SURFACING AT PROJECT STARTING POINT. ADJUST AS PAVEMENT IS PLACED.

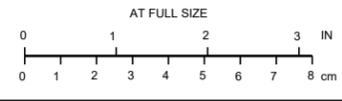


NO.	REVISIONS	DSGN	CHKD	APVD	DATE

CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

EROSION CONTROL PLAN - SHEET 1

DESIGNED <u>KK HEIM</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	RR.01
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	



CAADD D3-RS

NOTES

1. PROTECT EXISTING AND PROPOSED INLETS AND STORM SEWERS FOR DURATION OF CONSTRUCTION. ADJUST EROSION PROTECTION METHODS WITH CHANGES TO WORK STAGE.
2. PROTECT ALL PROPOSED INLETS AND STORM SEWERS FROM SEDIMENT DURING CONSTRUCTION UNTIL SOIL IS STABILIZED AND SITE IS CLEANED, TYP.
3. PREVENT TOPSOIL FROM ENTERING STREET WITH INSTALLATION OF SILT FENCE, WATTLES, FILTER SOCKS OR OTHER EROSION PROTECTION METHOD BEHIND THE CURB, NOT SHOWN.
4. PREVENT TRACKING MUD ONTO NEW PAVEMENT. INSTALL STABILIZED CONSTRUCTION EXIT OR EXTRA TEMPORARY AGGREGATE SURFACING FOR WORK ON 539 HAGERMAN DR PARCEL.
5. PROTECT ANY SLOPES DISTURBED ON 539 HAGERMAN PROPERTY WITH EROSION CONTROL BLANKETS ACCORDING TO FIGURE 9040.103. SEE SHEET MSA. 15 FOR CONTOURS ON 539 PROPERTY.

NO.	REVISIONS	DSGN	CHKD	APVD	DATE

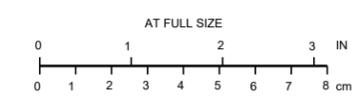
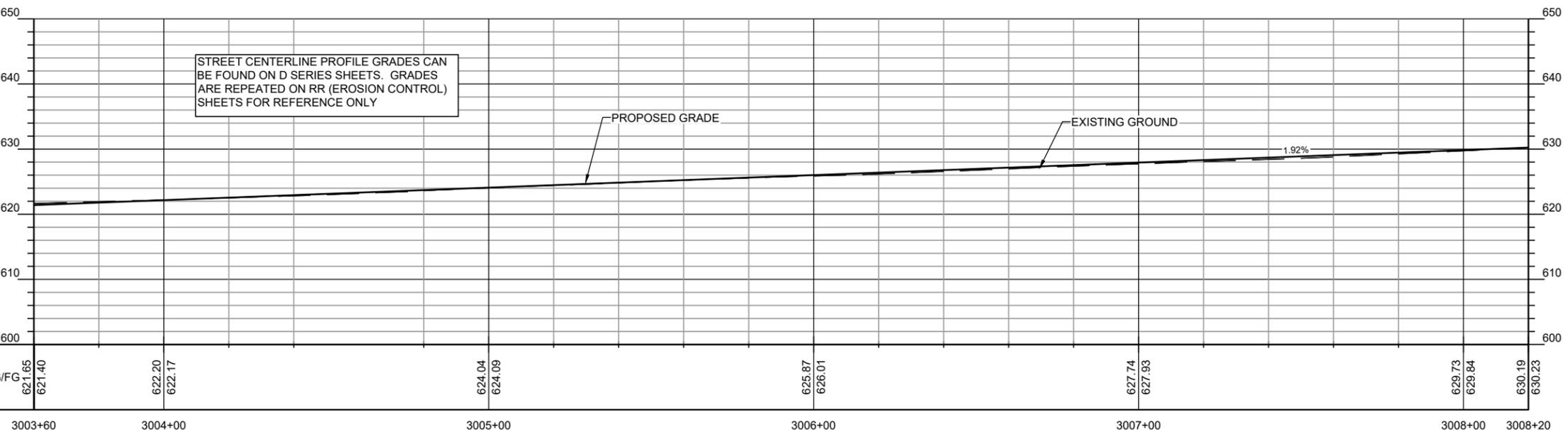
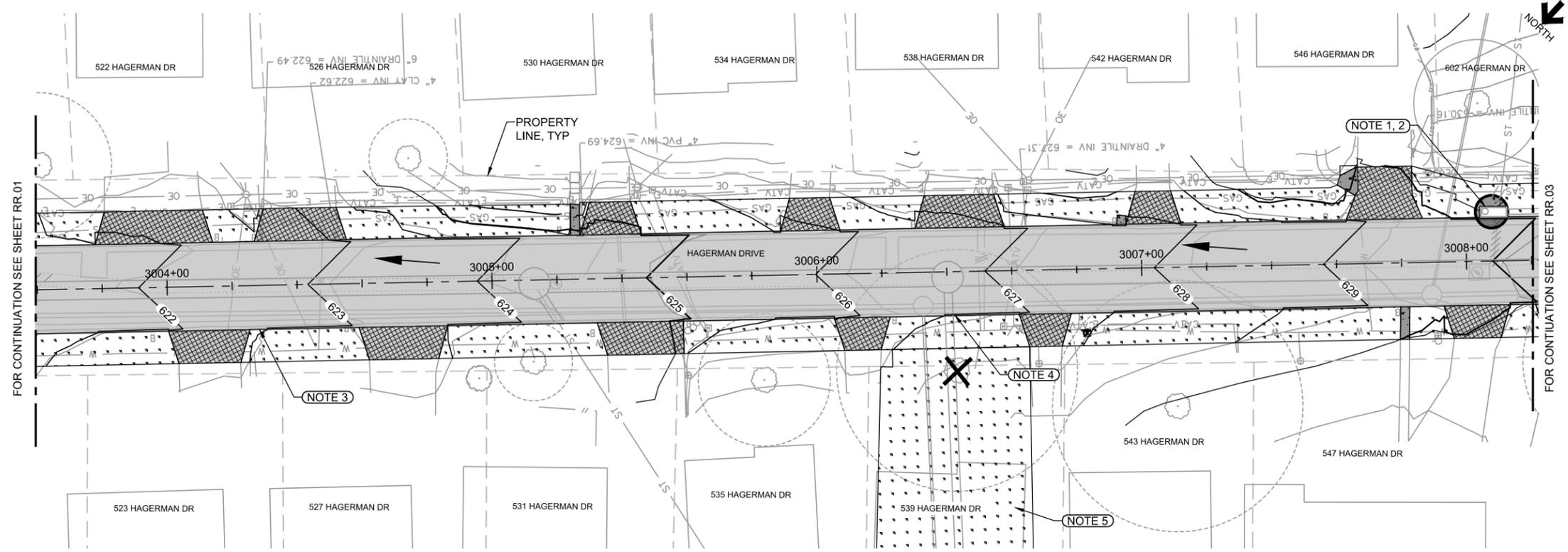


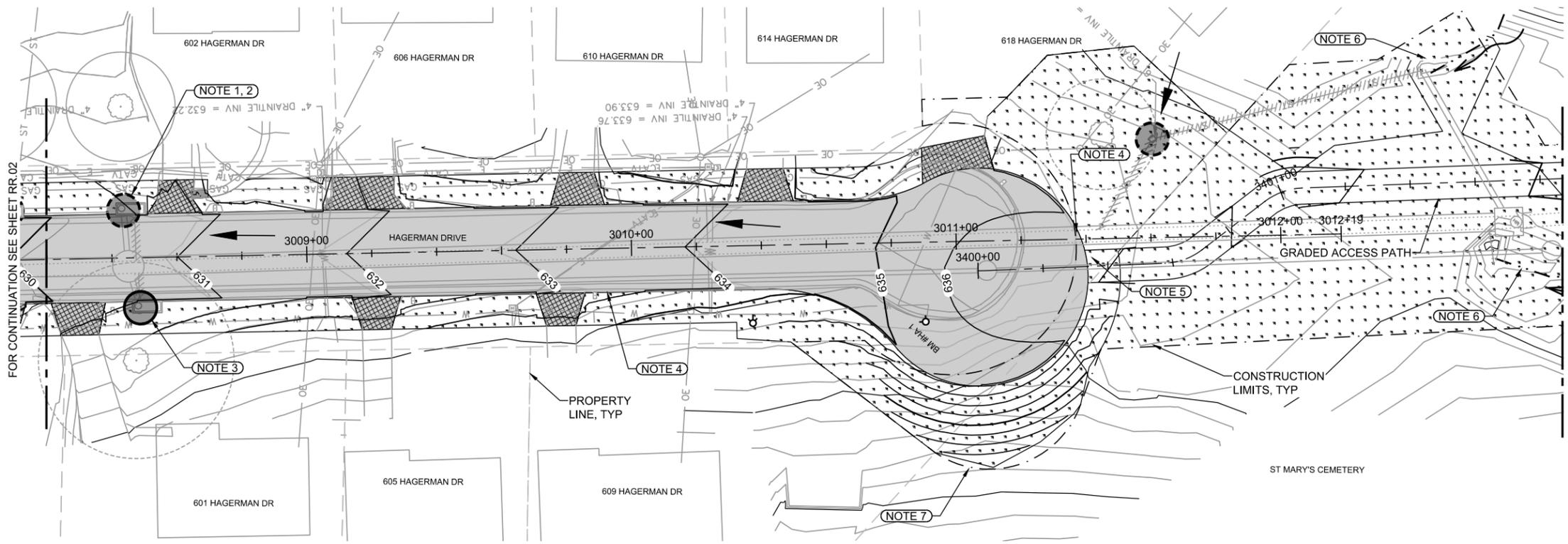
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CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

EROSION CONTROL PLAN - SHEET 2

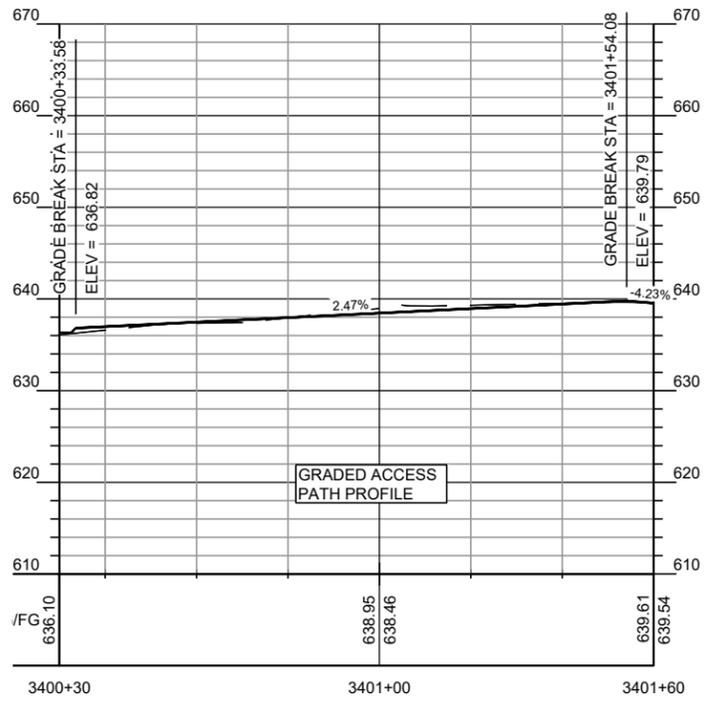
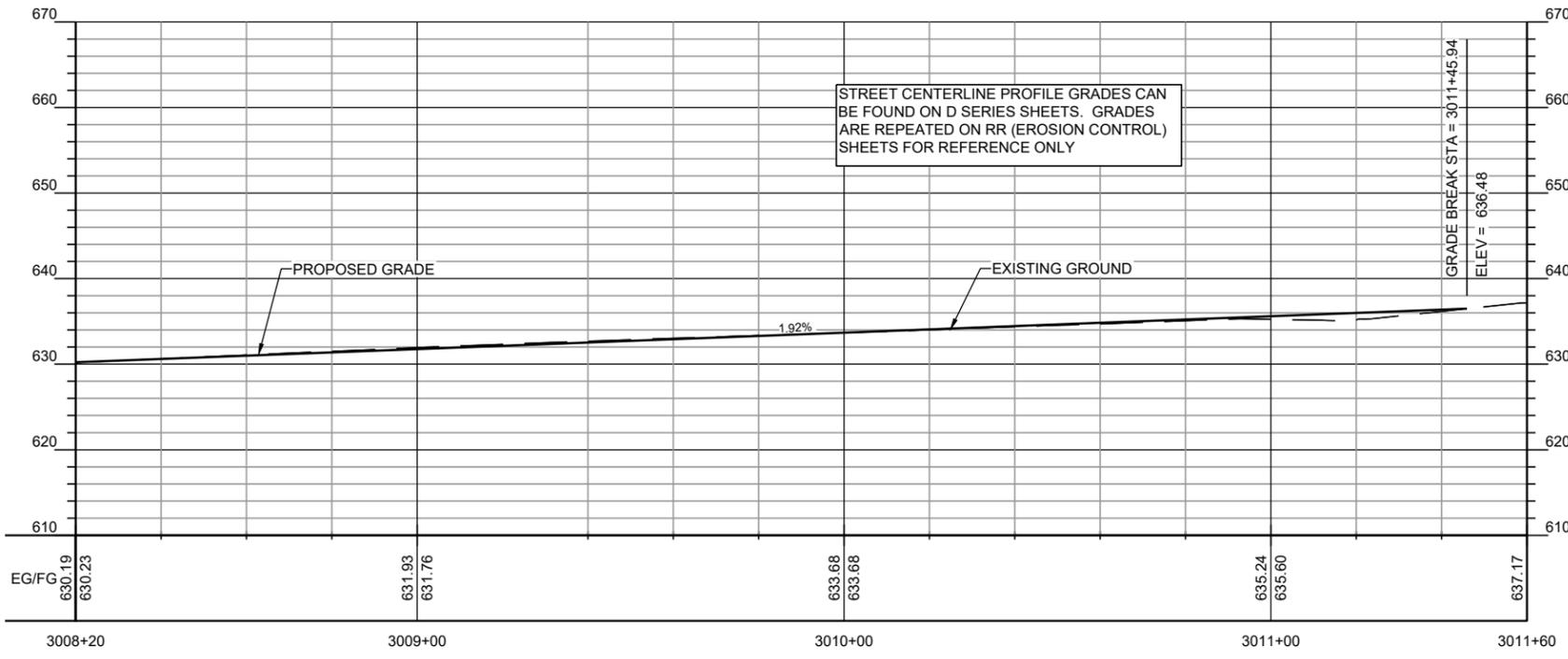
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CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	RR.02
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	





NOTES

1. PROTECT EXISTING AND PROPOSED INLETS AND STORM SEWERS FOR DURATION OF CONSTRUCTION. ADJUST EROSION PROTECTION METHODS WITH CHANGES TO WORK STAGE.
2. PROTECT ALL EXISTING INLETS AND EXISTING COMBINED AND STORM SEWERS FROM SEDIMENT DURING CONSTRUCTION OPERATIONS BEFORE NEW INLETS ARE PLACED, TYP.
3. PREVENT ALL PROPOSED INLETS AND STORM SEWERS FROM SEDIMENT DURING CONSTRUCTION UNTIL SOIL IS STABILIZED AND SITE IS CLEANED, TYP.
4. PREVENT TOPSOIL FROM ENTERING STREET WITH INSTALLATION OF SILT FENCE, WATTLES, FILTER SOCKS OR OTHER EROSION PROTECTION METHOD BEHIND THE CURB, NOT SHOWN.
5. PROVIDE EROSION CONTROLS TO PREVENT SEDIMENT FROM ENTERING STREET. PROVIDE STABILIZED CONSTRUCTION EXIT. SEE SUDAS DETAIL 9040.120.
6. EXISTING DRAINAGE PATH ENTERS STORM SEWER SYSTEM. PROTECT OPEN INTAKE PIPES. INSTALL EROSION CONTROL TO PROTECT DISTURBED AREA UPSTREAM OF INTAKE POINT.
7. INSTALL ROLLED EROSION CONTROL PRODUCT ON SLOPES. SEE SUDAS DETAIL 9040.103.



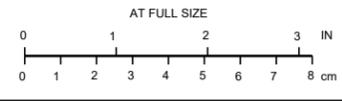
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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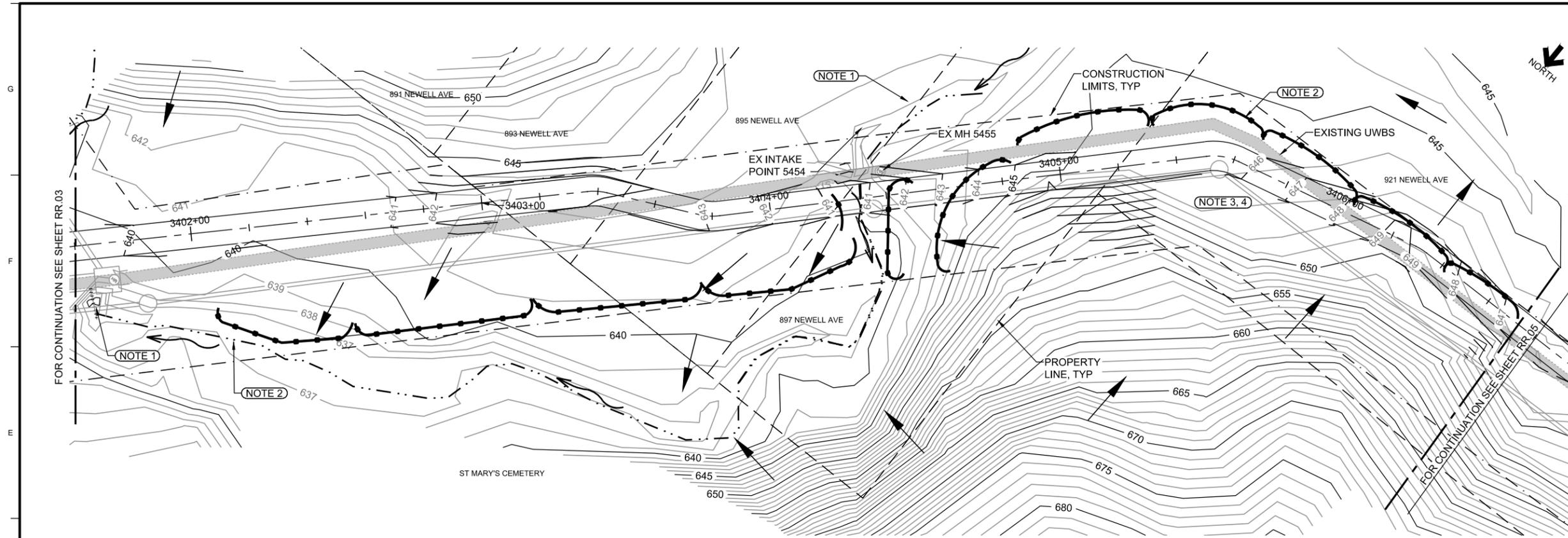
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

EROSION CONTROL PLAN - SHEET 3

DESIGNED	KK HEIM	SCALE:	1" = 20'
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	JM BRADY	RR.03	0
APPROVED	KK HEIM	DATE	MARCH 12, 2025

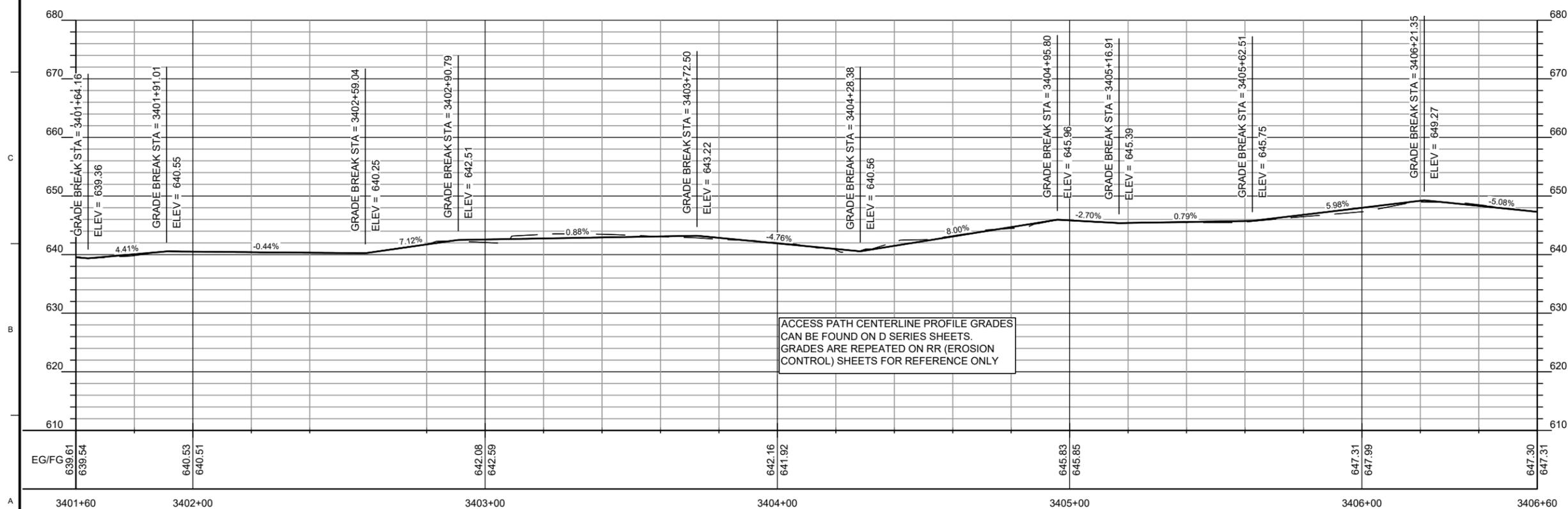


CADD D3-RS



NOTES

1. EXISTING DRAINAGE PATH ENTERS STORM SEWER SYSTEM. PROTECT OPEN INTAKE PIPES. INSTALL EROSION CONTROL TO PROTECT DISTURBED AREA UPSTREAM OF INTAKE POINT.
2. INSTALL SILT FENCE OR OTHER EROSION PROTECTION MEASURE ALONG CONSTRUCTION LIMIT TO MINIMIZE SEDIMENT FROM WASHING INTO DRAINAGE WAY.
3. SEED EXTENT OF CONSTRUCTION LIMIT ACCORDING TO D SHEET.
4. INSTALL ROLLED EROSION CONTROL PRODUCTS ON SLOPES. SEE SUDAS DETAIL 9040.103.



ACCESS PATH CENTERLINE PROFILE GRADES CAN BE FOUND ON D SERIES SHEETS. GRADES ARE REPEATED ON RR (EROSION CONTROL) SHEETS FOR REFERENCE ONLY

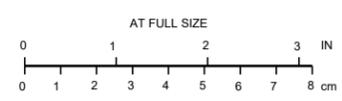
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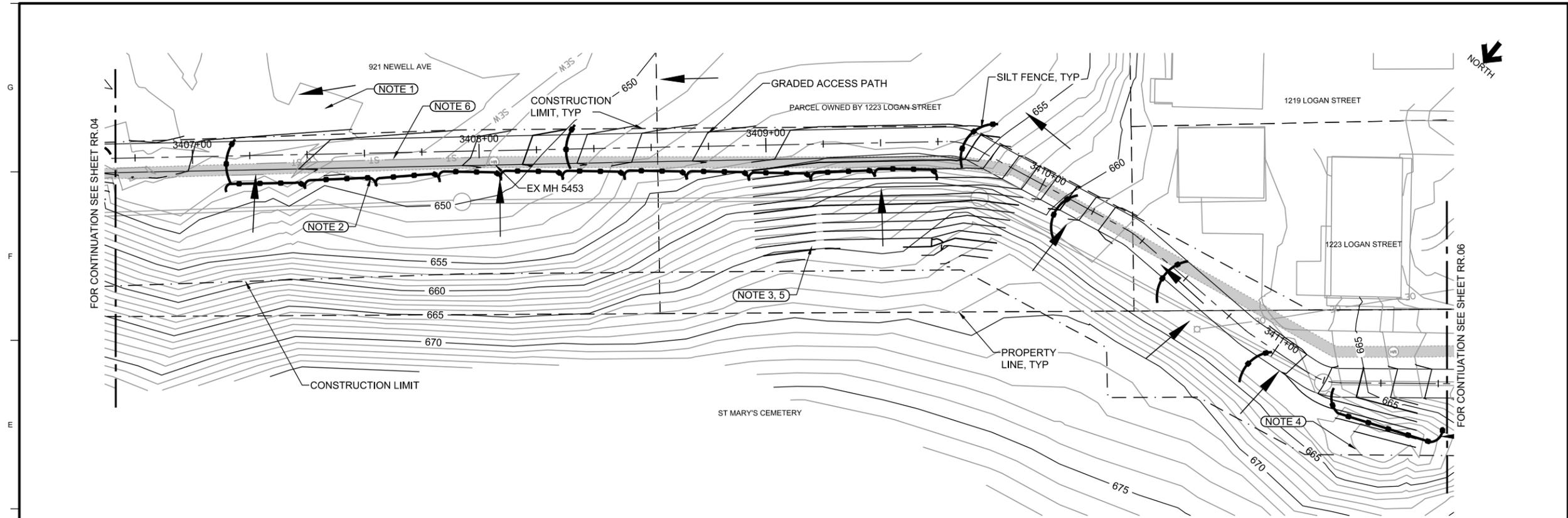
CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

EROSION CONTROL PLAN - SHEET 4

DESIGNED <u>KK HEIM</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	RR.04
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	

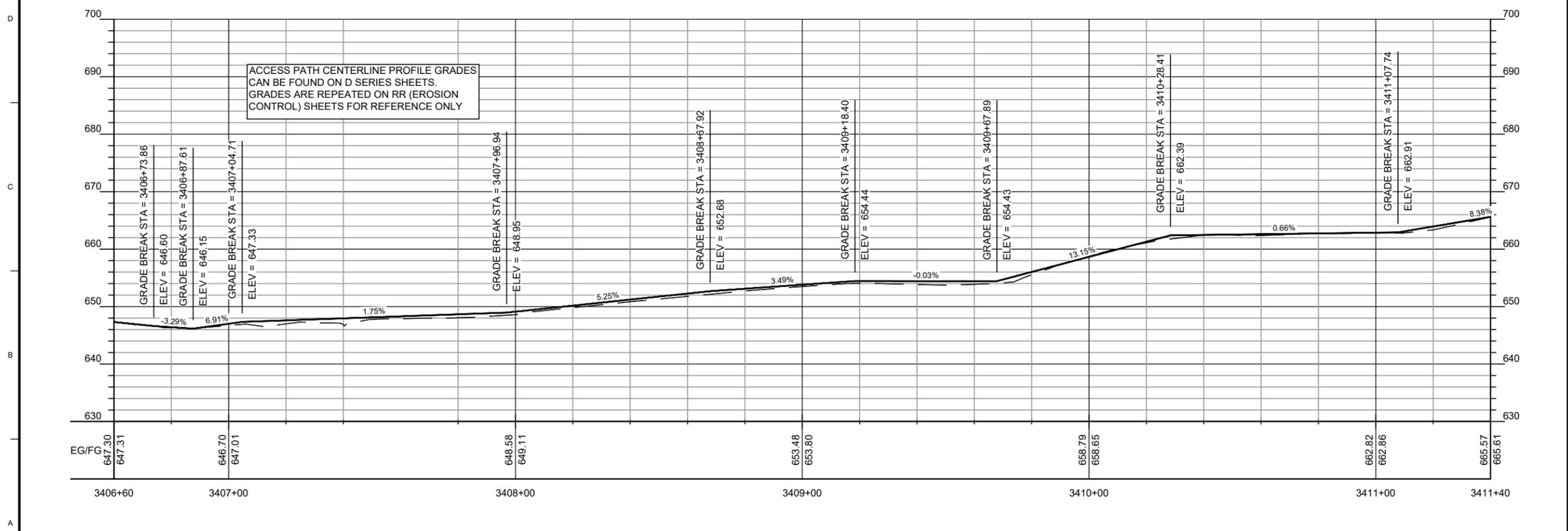


CA00 D3-RS



NOTES

1. PROTECT EXISTING DRAINAGEWAYS FROM EROSION FOR DURATION OF CONSTRUCTION. ADJUST EROSION PROTECTION METHODS WITH CHANGES TO WORK STAGE.
2. INSTALL SILT FENCE OR OTHER EROSION PROTECTION MEASURE DOWNSTREAM OF TRENCH DISTURBANCE TO MINIMIZE SEDIMENT FROM WASHING DOWNSTREAM.
3. SEED EXTENT OF CONSTRUCTION LIMIT ACCORDING TO D SHEET. PROVIDE TEMPORARY SEEDING IF PERMANENT SEEDING CAN'T BE INSTALLED IN SEEDING WINDOW.
4. PROTECT EXISTING LOW AREA FROM SEDIMENT ACCUMULATION.
5. INSTALL ROLLED EROSION CONTROL PRODUCTS ON SLOPES. SEE SUDAS DETAIL 9040.103.
6. PROTECT TOP OF EXPOSED UWBS.



NO.	REVISIONS	DSGN	CHKD	APVD	DATE

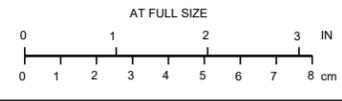
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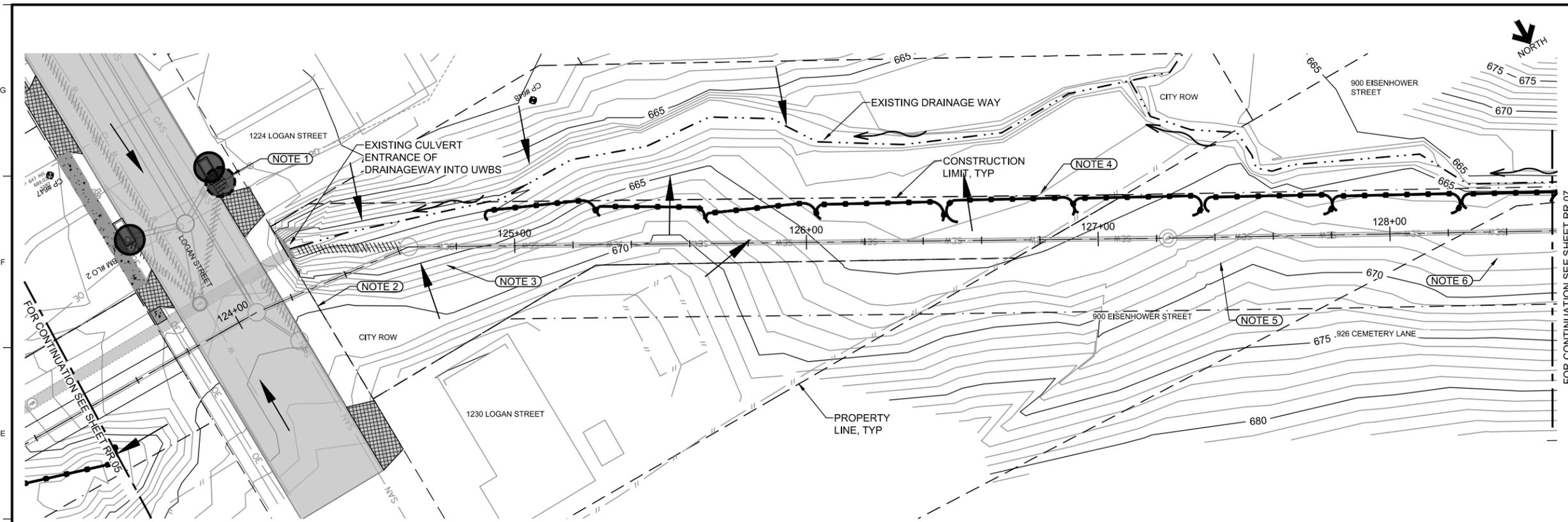
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

EROSION CONTROL PLAN - SHEET 5

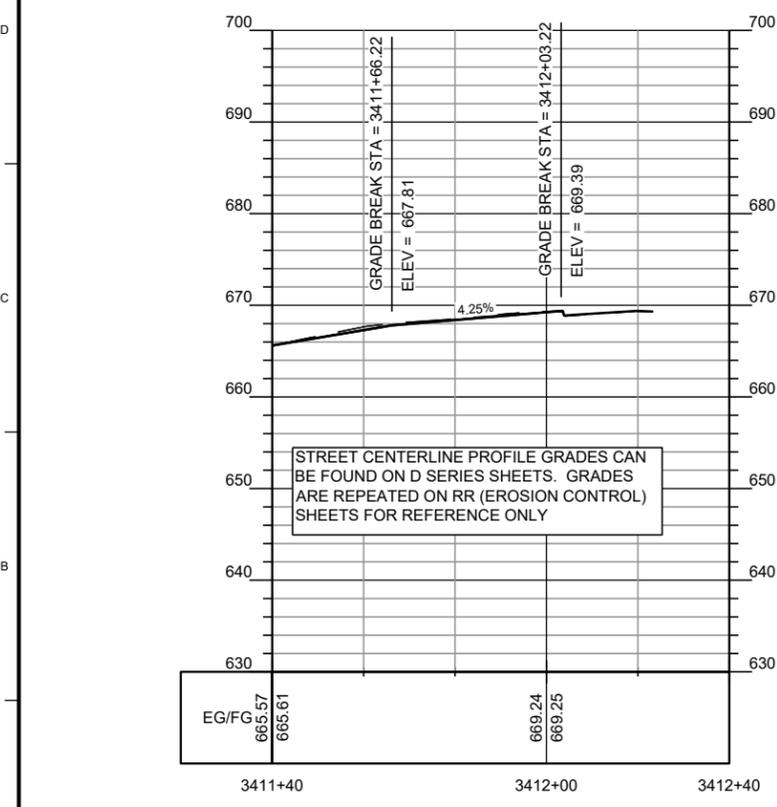
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CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	RR.05
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	



CA00 D3-RS



- ### NOTES
1. PROTECT EXISTING AND PROPOSED INLETS AND STORM SEWERS FOR DURATION OF CONSTRUCTION. ADJUST EROSION PROTECTION METHODS WITH CHANGES TO WORK STAGE.
 2. INSTALL STABILIZED CONSTRUCTION EXIT FOR EQUIPMENT ACCESS. SEE SUDAS FIGURE 9040.120
 3. STABILIZE SLOPES FOR EROSION CONTROL AND STABILIZATION AS NEEDED THROUGH THE DURATION OF CONSTRUCTION. INSTALL EROSION CONTROL BLANKETS, RIPRAP, AND/OR EROSION STONE AS NEEDED TO PRESERVE BANK.
 4. INSTALL SILT FENCE OR OTHER EROSION PROTECTION MEASURE DOWNSTREAM OF TRENCH DISTURBANCE TO MINIMIZE SEDIMENT FROM WASHING INTO DRAINAGE WAY.
 5. SEED EXTENT OF CONSTRUCTION LIMIT ACCORDING TO D SHEET. PROVIDE TEMPORARY SEEDING IF PERMANENT SEEDING CAN'T BE INSTALLED IN SEEDING WINDOW.
 6. MINIMIZE DISTURBANCE TO SLOPES. INSTALL ROLLED EROSION CONTROL PRODUCT ON SLOPES. SEE SUDAS DETAIL 9040.103.



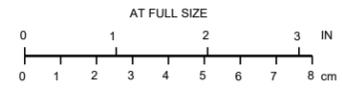
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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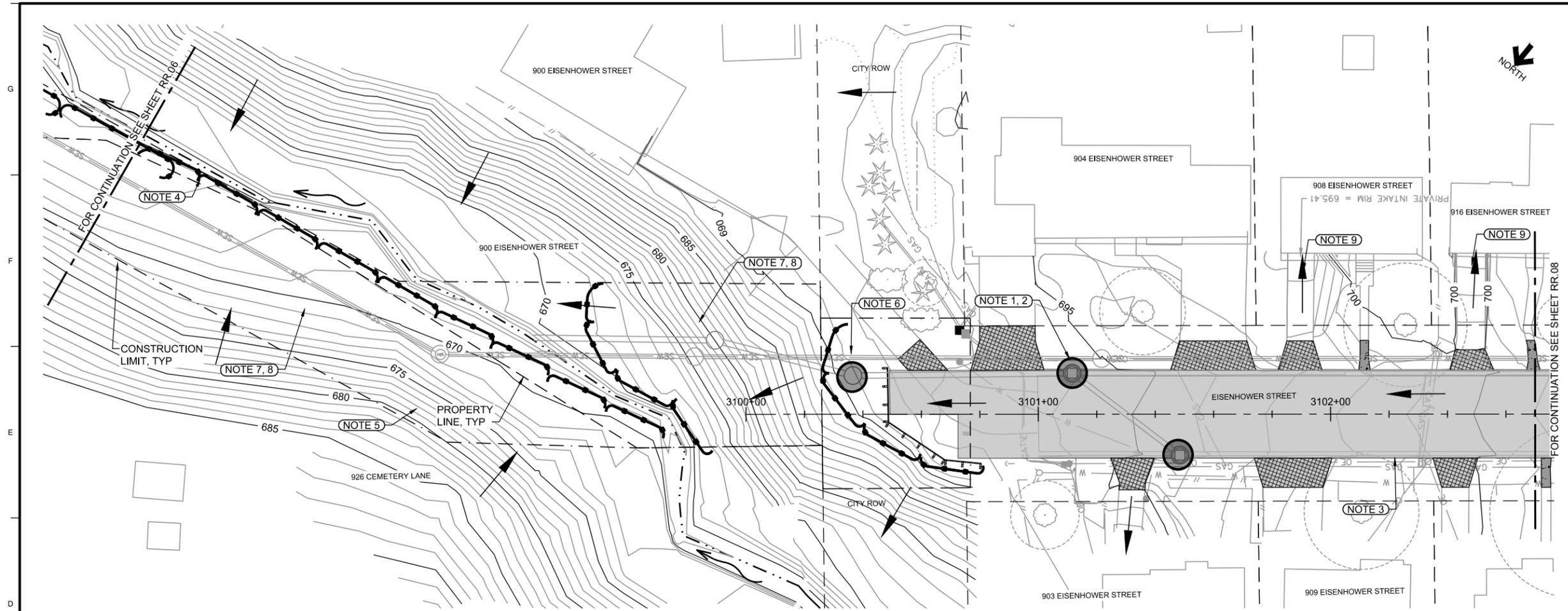
CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

EROSION CONTROL PLAN - SHEET 6

DESIGNED	KK HEIM	SCALE:	1" = 20'
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	JM BRADY	RR.06	0
DATE	MARCH 12, 2025		

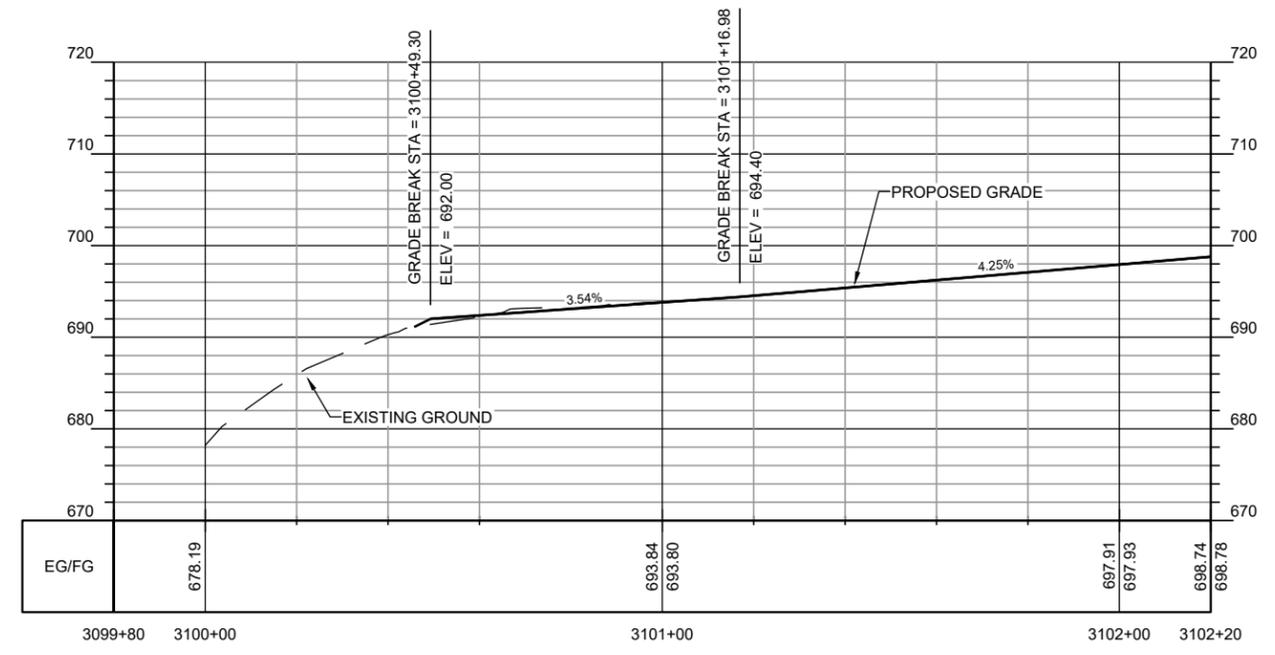


LADD D3-RS

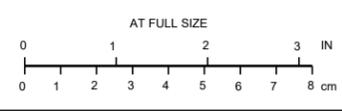


NOTES

1. PROTECT EXISTING AND PROPOSED INLETS AND STORM SEWERS FOR DURATION OF CONSTRUCTION. ADJUST EROSION PROTECTION METHODS WITH CHANGES TO WORK STAGE.
2. PROTECT ALL PROPOSED INLETS AND STORM SEWERS FROM SEDIMENT DURING CONSTRUCTION UNTIL SOIL IS STABILIZED AND SITE IS CLEANED, TYP.
3. PREVENT TOPSOIL FROM ENTERING STREET WITH INSTALLATION OF SILT FENCE, WATTLES, FILTER SOCKS OR OTHER EROSION PROTECTION METHOD BEHIND THE CURB, NOT SHOWN.
4. INSTALL SILT FENCE OR OTHER EROSION PROTECTION TO MINIMIZE SEDIMENT FROM WASHING INTO DRAINAGE WAY ALONG CONSTRUCTION LIMIT.
5. SEED, FERTILIZE, AND MULCH EXTENT OF CONSTRUCTION LIMIT ACCORDING TO D SHEET. PROVIDE TEMPORARY SEEDING OR MULCH IF PERMANENT SEEDING CAN'T BE INSTALLED IN SEEDING WINDOW.
6. INSTALL STABILIZED CONSTRUCTION EXIT FOR EQUIPMENT ACCESS. SEE SUDAS FIGURE 9040.120.
7. STABILIZE SLOPES FOR EROSION CONTROL AND STABILIZATION AS NEEDED THROUGH THE DURATION OF CONSTRUCTION. USE ROLLED EROSION CONTROL PRODUCT ON SLOPES AS NEEDED. SEE SUDAS DETAIL 9040.103
8. MINIMIZE DISTURBANCE TO MAINTAIN STABLE SLOPES AND MINIMIZE EROSION.
9. PREVENT SEDIMENT FILLED CONSTRUCTION RUNOFF FROM FLOWING INTO DRIVEWAYS TOWARD GARAGES WHICH SIT LOWER THAN ROAD. PROTECT FROM EROSION.



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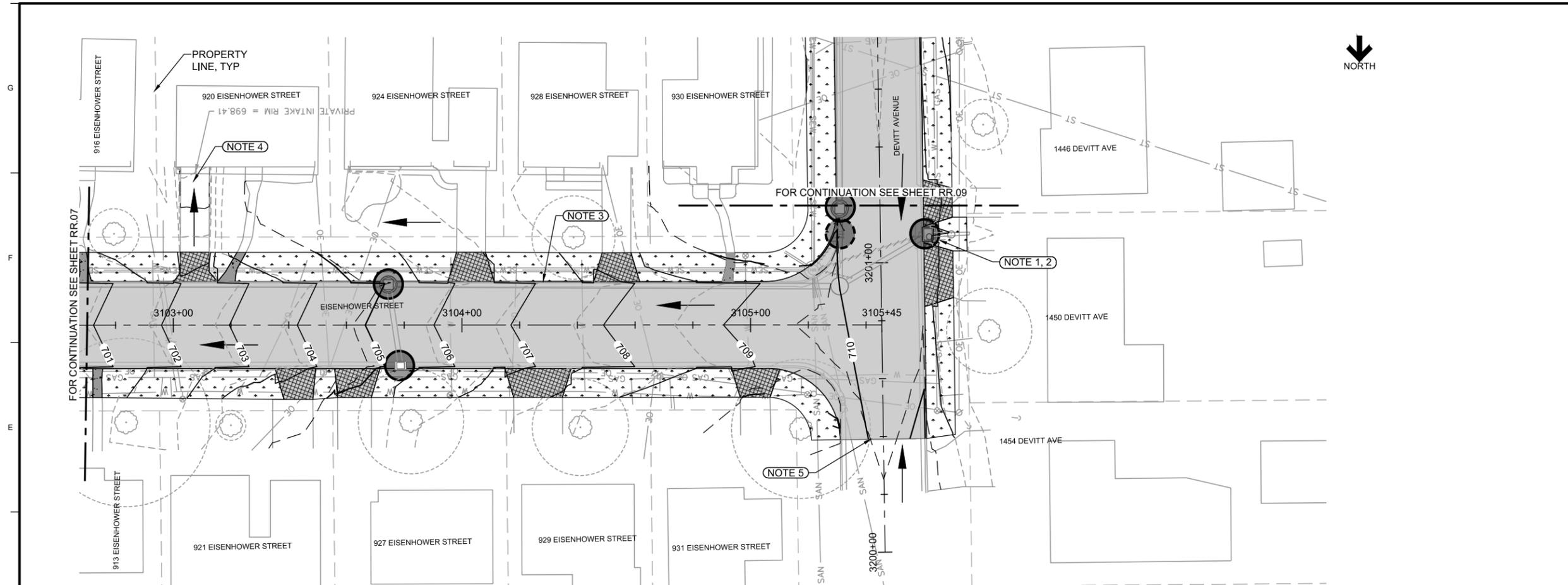
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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

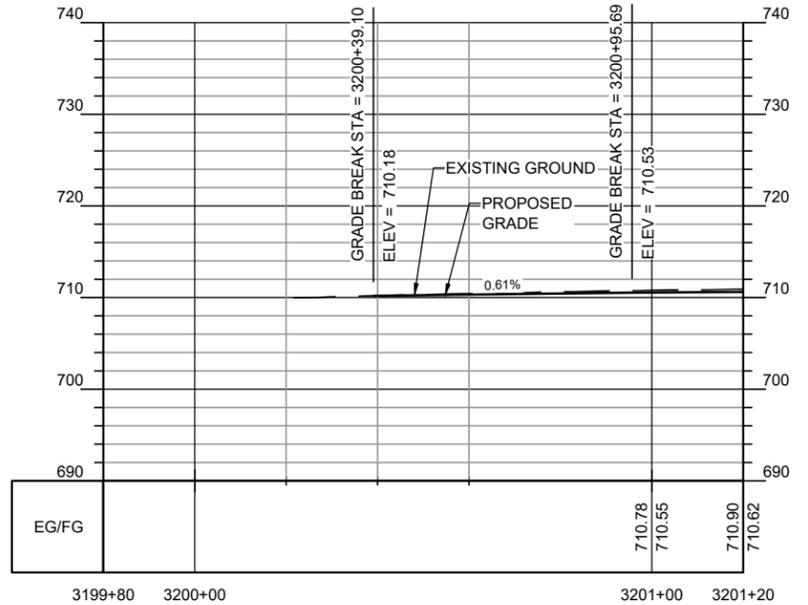
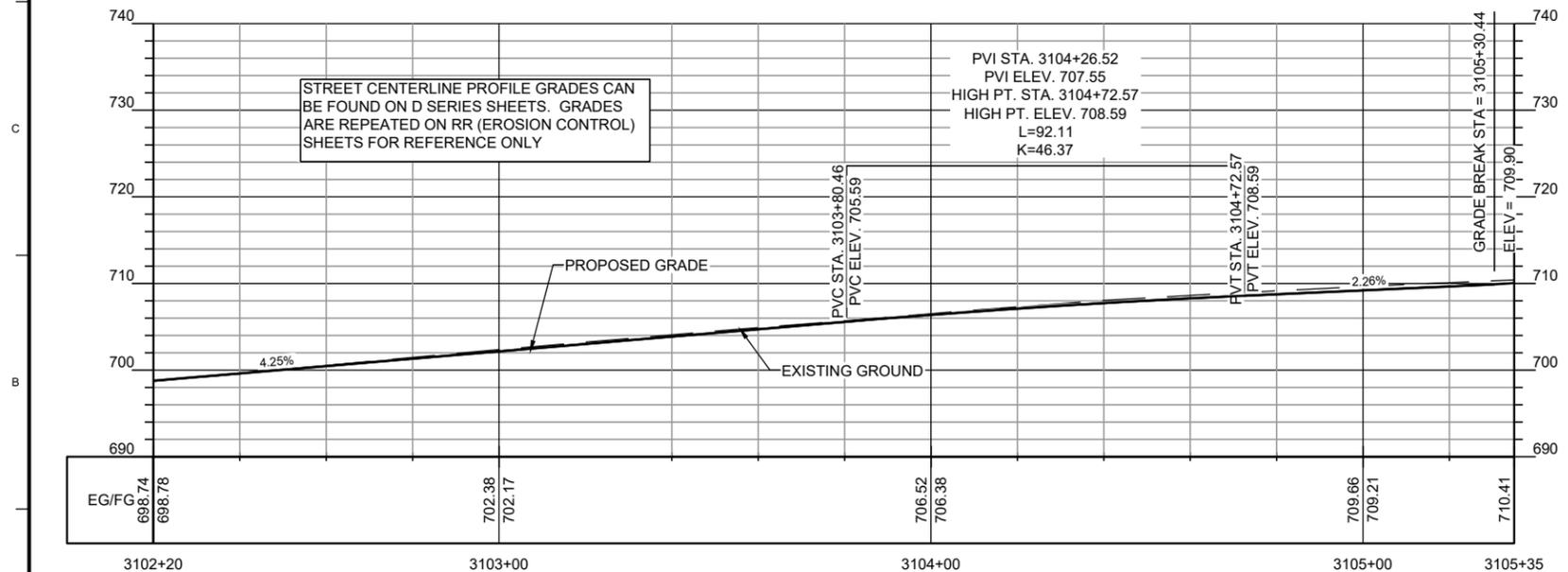
EROSION CONTROL PLAN - SHEET 7

DESIGNED <u>KK HEIM</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	RR.07
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	

LADD D3-RS

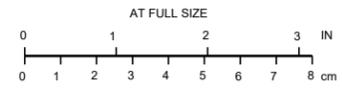


- ### NOTES
1. PROTECT EXISTING AND PROPOSED INLETS AND STORM SEWERS FOR DURATION OF CONSTRUCTION. ADJUST EROSION PROTECTION METHODS WITH CHANGES TO WORK STAGE.
 2. PROTECT ALL PROPOSED INLETS AND STORM SEWERS FROM SEDIMENT DURING CONSTRUCTION UNTIL SOIL IS STABILIZED AND SITE IS CLEANED, TYP.
 3. PREVENT TOPSOIL FROM ENTERING STREET WITH INSTALLATION OF SILT FENCE, WATTLES, FILTER SOCKS OR OTHER EROSION PROTECTION METHOD BEHIND THE CURB, NOT SHOWN.
 4. PREVENT SEDIMENT FILLED CONSTRUCTION RUNOFF FROM FLOWING INTO DRIVEWAYS TOWARD GARAGES WHICH SIT LOWER THAN ROAD. PROTECT SITE FROM EROSION.
 5. INSTALL STABILIZED CONSTRUCTION EXIT TO CONTROL TRACKING SEDIMENT ONTO STREETS. SEE SUDAS FIGURE 9040.120.



EISENHOWER ST

DEVITT AVENUE



NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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MUSCATINE, IOWA

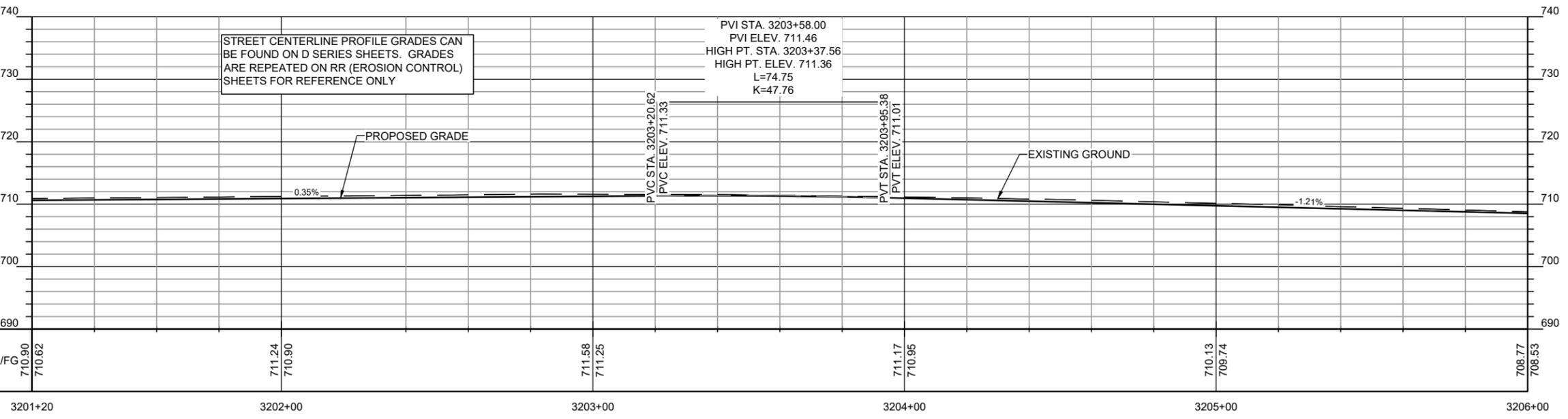
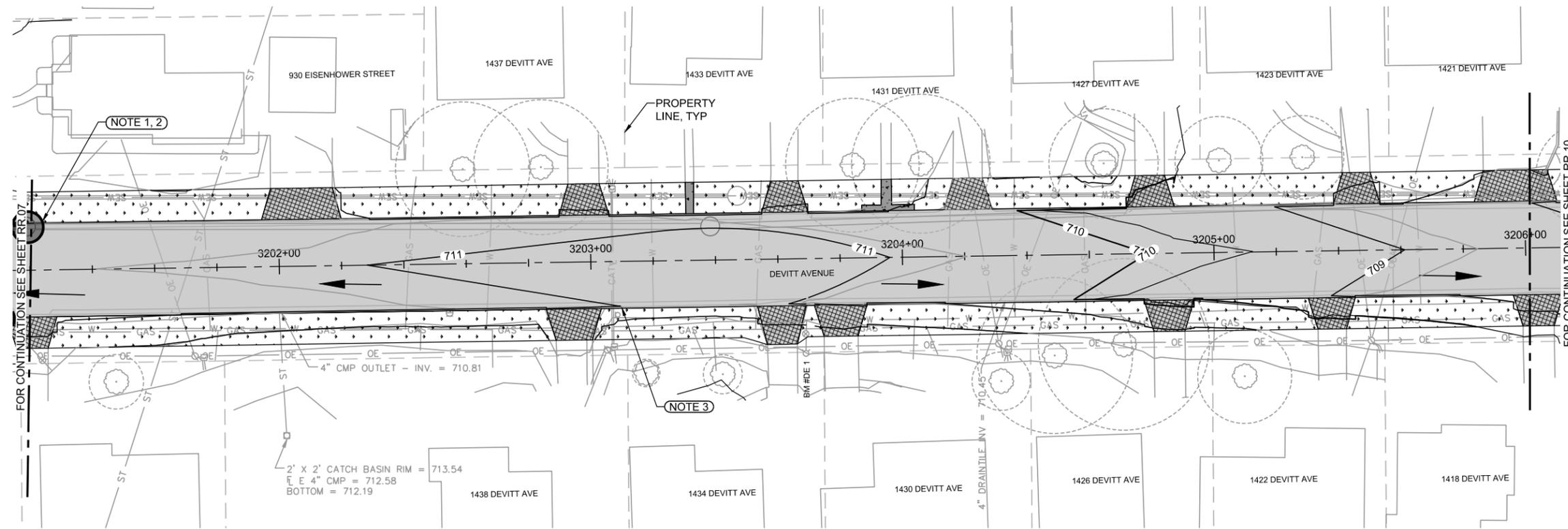
EROSION CONTROL PLAN - SHEET 8

DESIGNED KK HEIM	SCALE: 1" = 20'
DRAWN GM REEVES	NO. 17660.60.30
CHECKED ER SCHALLERT	REV.
APPROVED JM BRADY	RR.08
APPROVED KK HEIM	0
DATE MARCH 12, 2025	

NOTES

1. PROTECT EXISTING AND PROPOSED INLETS AND STORM SEWERS FOR DURATION OF CONSTRUCTION. ADJUST EROSION PROTECTION METHODS WITH CHANGES TO WORK STAGE.
2. PROTECT ALL PROPOSED INLETS AND STORM SEWERS FROM SEDIMENT DURING CONSTRUCTION UNTIL SOIL IS STABILIZED AND SITE IS CLEANED, TYP.
3. PREVENT TOPSOIL FROM ENTERING STREET WITH INSTALLATION OF SILT FENCE, WATTLES, FILTER SOCKS OR OTHER EROSION PROTECTION METHOD BEHIND THE CURB, NOT SHOWN.

NORTH



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NO.	REVISIONS	DSGN	CHKD	APVD	DATE

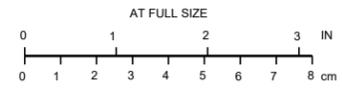


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CITY OF MUSCATINE - PHASE 6D
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MUSCATINE, IOWA

EROSION CONTROL PLAN - SHEET 9

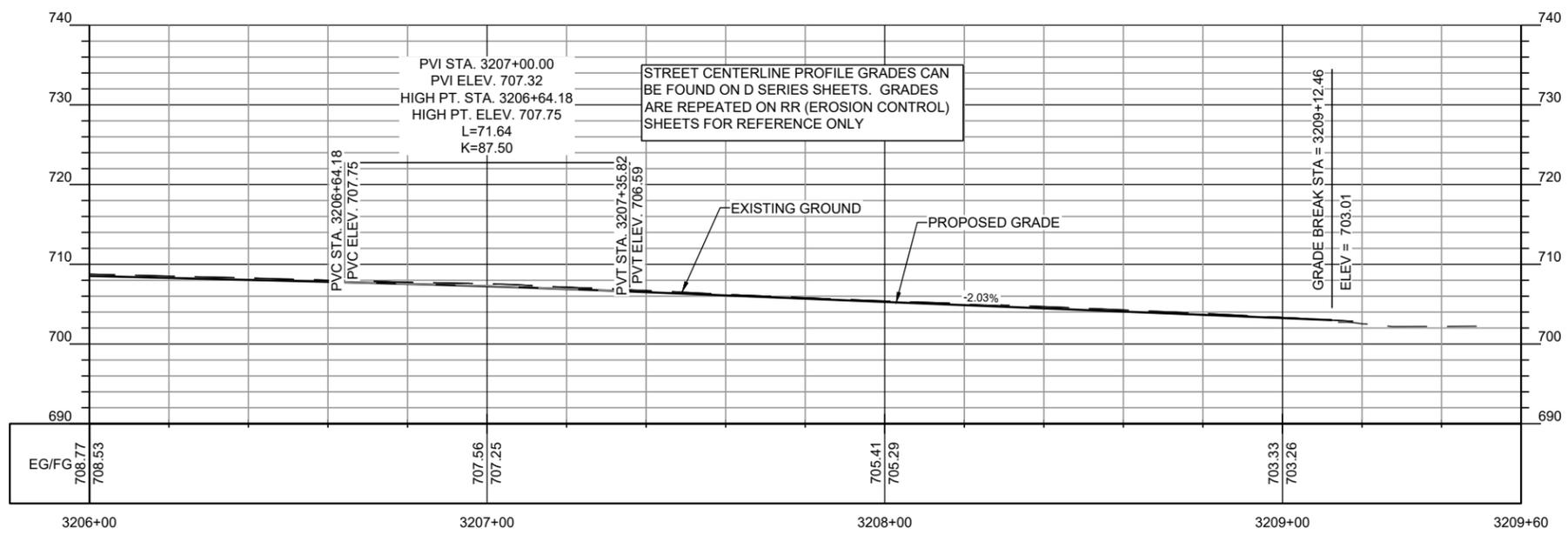
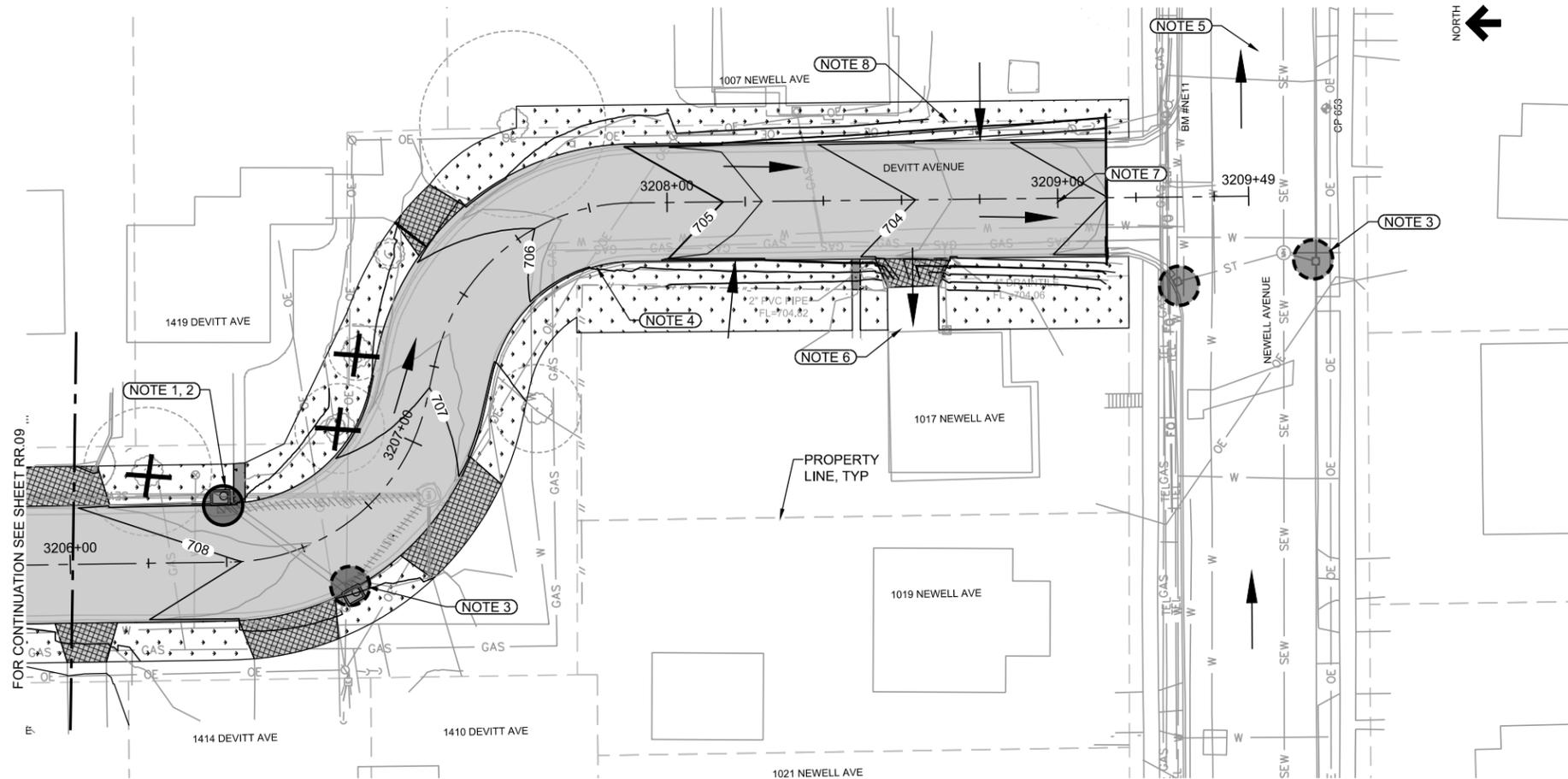
DESIGNED	KK HEIM	SCALE:	1" = 20'
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	JM BRADY	RR.09	0
DATE	MARCH 12, 2025		



LOAD D3-RS

NOTES

1. PROTECT EXISTING AND PROPOSED INLETS AND STORM SEWERS FOR DURATION OF CONSTRUCTION. ADJUST EROSION PROTECTION METHODS WITH CHANGES TO WORK STAGE.
2. PROTECT ALL PROPOSED INLETS AND STORM SEWERS FROM SEDIMENT DURING CONSTRUCTION UNTIL SOIL IS STABILIZED AND SITE IS CLEANED, TYP.
3. PROTECT ALL EXISTING INLETS AND EXISTING COMBINED AND STORM SEWERS FROM SEDIMENT DURING CONSTRUCTION OPERATIONS BEFORE NEW INLETS ARE PLACED, TYP.
4. PREVENT TOPSOIL FROM ENTERING STREET WITH INSTALLATION OF SILT FENCE, WATTLES, FILTER SOCKS OR OTHER EROSION PROTECTION METHOD BEHIND THE CURB, NOT SHOWN.
5. PROTECT INLETS FURTHER DOWNSTREAM ON NEWELL AVENUE IF NECESSARY.
6. PREVENT CONSTRUCTION RUNOFF AND SEDIMENT FROM ACCUMULATING ON DRIVEWAY WHICH SLOPES TOWARD GARAGE.
7. INSTALL STABILIZED CONSTRUCTION EXIT TO CONTROL TRACKING SEDIMENT INTO STREETS. SEE SUDAS FIGURE 9040.120.
8. USE ROLLED EROSION CONTROL PRODUCT ON SLOPES AS NEEDED. SEE SUDAS DETAIL 9040.103.



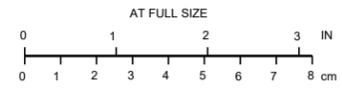
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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EROSION CONTROL PLAN - SHEET 10

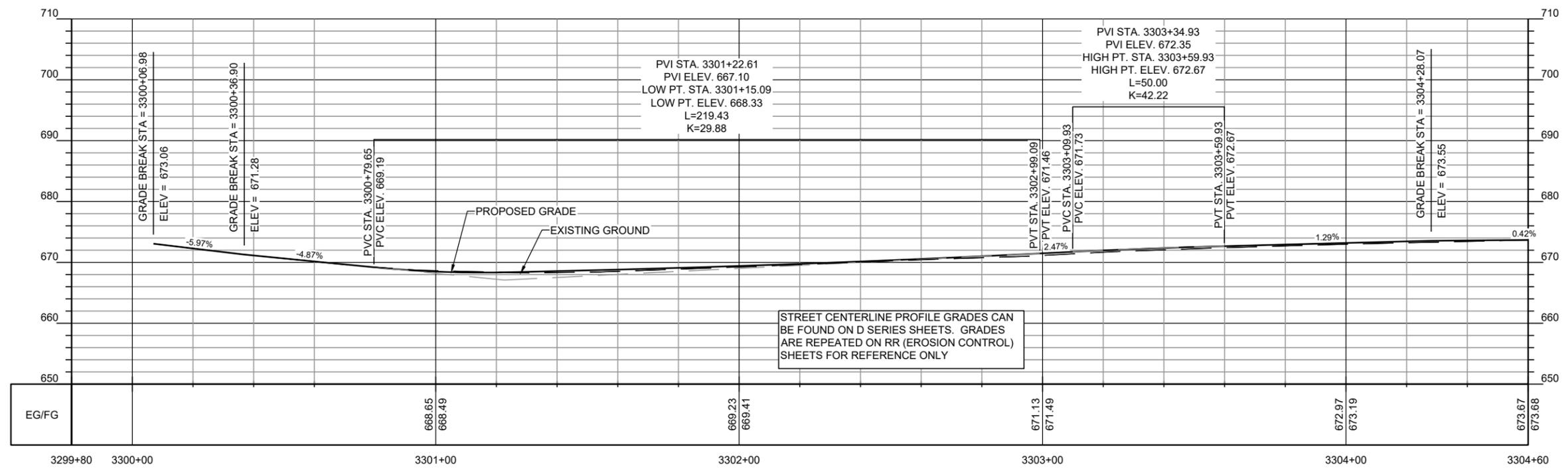
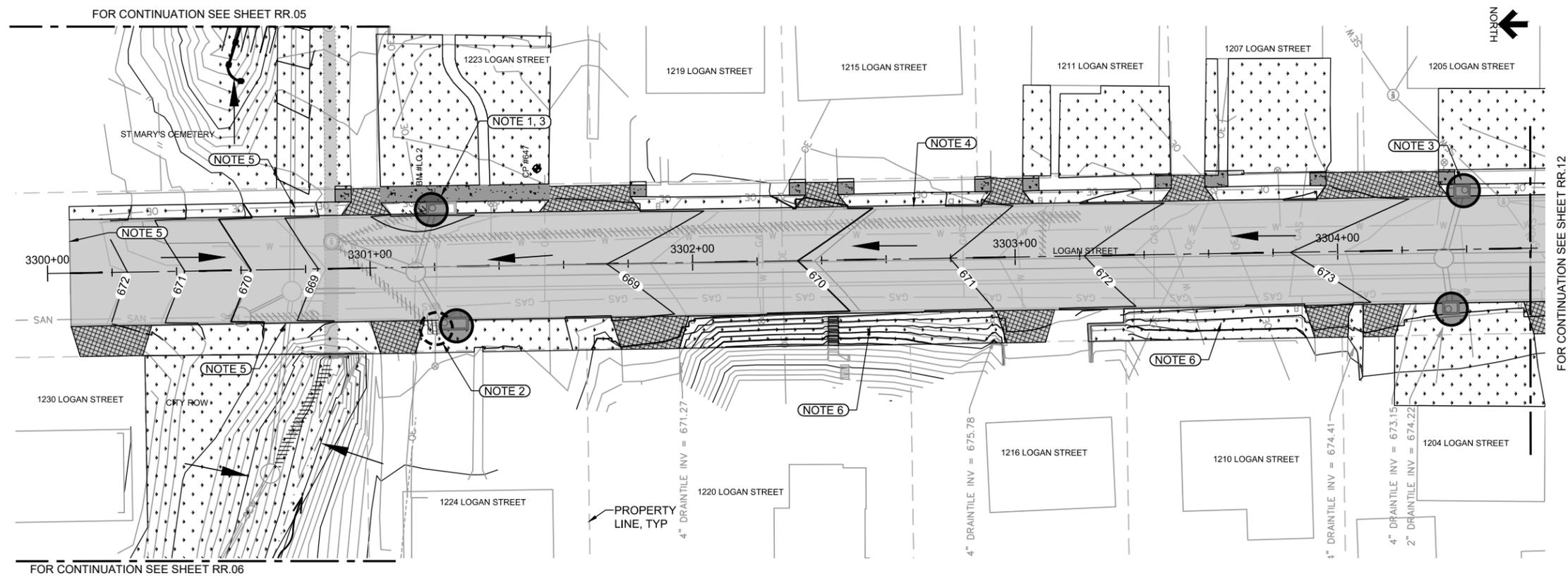
DESIGNED: KK HEIM	SCALE: 1" = 20'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: JM BRADY	RR.10
APPROVED: KK HEIM	0
DATE: MARCH 12, 2025	



LADD D3-RS

NOTES

1. PROTECT EXISTING AND PROPOSED INLETS AND STORM SEWERS FOR DURATION OF CONSTRUCTION. ADJUST EROSION PROTECTION METHODS WITH CHANGES TO WORK STAGE.
2. PROTECT ALL EXISTING INLETS AND EXISTING SEWERS FROM SEDIMENT DURING CONSTRUCTION OPERATIONS BEFORE NEW INLETS ARE PLACED, TYP.
3. PROTECT ALL PROPOSED INLETS AND STORM SEWERS FROM SEDIMENT DURING CONSTRUCTION UNTIL SOIL IS STABILIZED AND SITE IS CLEANED.
4. PREVENT TOPSOIL FROM ENTERING STREET WITH INSTALLATION OF SILT FENCE, WATTLES, FILTER SOCKS OR OTHER EROSION PROTECTION METHOD BEHIND CURB, NOT SHOWN.
5. INSTALL STABILIZED CONSTRUCTION EXIT TO CONTROL TRACKING SEDIMENT INTO STREETS. SEE SUDAS FIGURE 9040.120.
6. INSTALL ROLLED EROSION CONTROL PRODUCT ON SLOPES. SEE SUDAS DETAIL 9040.103.



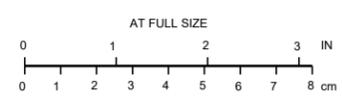
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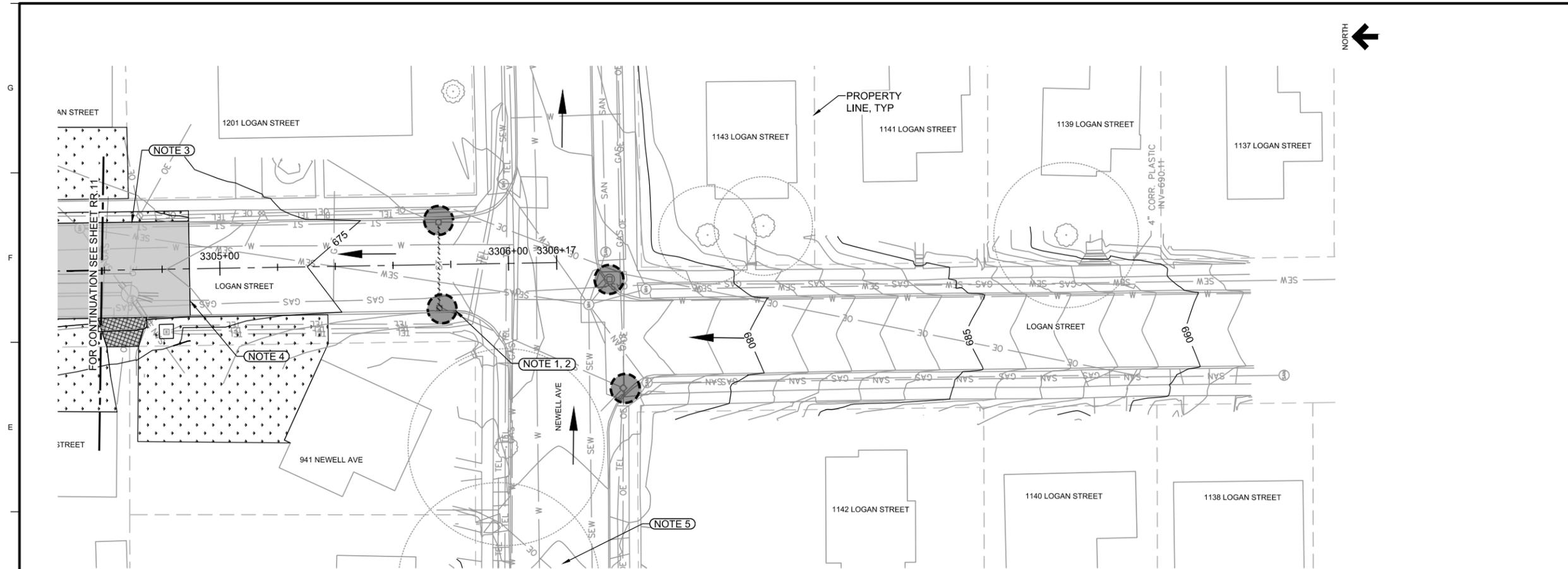
CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

EROSION CONTROL PLAN - SHEET 11

DESIGNED: KK HEIM	SCALE: 1" = 20'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: JM BRADY	RR.11
APPROVED: KK HEIM	0
DATE: MARCH 12, 2025	

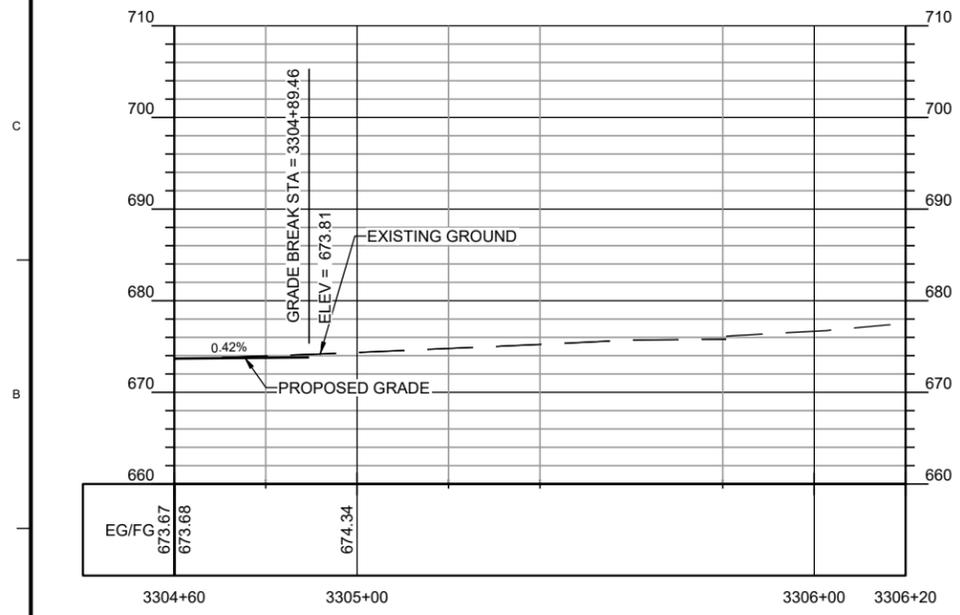


LOAD D3-RS



NOTES

1. PROTECT EXISTING AND PROPOSED INLETS AND STORM SEWERS FOR DURATION OF CONSTRUCTION. ADJUST EROSION PROTECTION METHODS WITH CHANGES TO WORK STAGE.
2. PROTECT ALL EXISTING INLETS AND EXISTING COMBINED AND STORM SEWERS FROM SEDIMENT DURING CONSTRUCTION OPERATIONS BEFORE NEW INLETS ARE PLACED, TYP.
3. PREVENT TOPSOIL FROM ENTERING STREET WITH INSTALLATION OF SILT FENCE, WATTLES, FILTER SOCKS OR OTHER EROSION PROTECTION METHOD BEHIND THE CURB, NOT SHOWN.
4. INSTALL STABILIZED CONSTRUCTION EXIT TO CONTROL TRACKING SEDIMENT INTO STREETS. SEE SUDAS DETAIL 9040.120.
5. NEWELL AVENUE SLOPES FROM DEWITT TO LOGAN. INLET PROTECTION MAY BE NEEDED AT LOGAN INTERSECTION TO PROTECT FROM SEDIMENT WASHING INTO INTERSECTION.



STREET CENTERLINE PROFILE GRADES CAN BE FOUND ON D SERIES SHEETS. GRADES ARE REPEATED ON RR (EROSION CONTROL) SHEETS FOR REFERENCE ONLY

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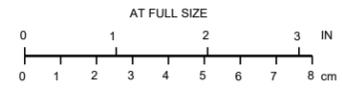


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 MUSCATINE, IOWA

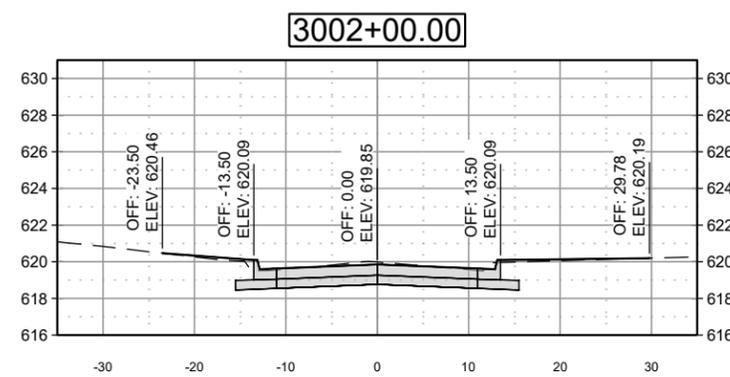
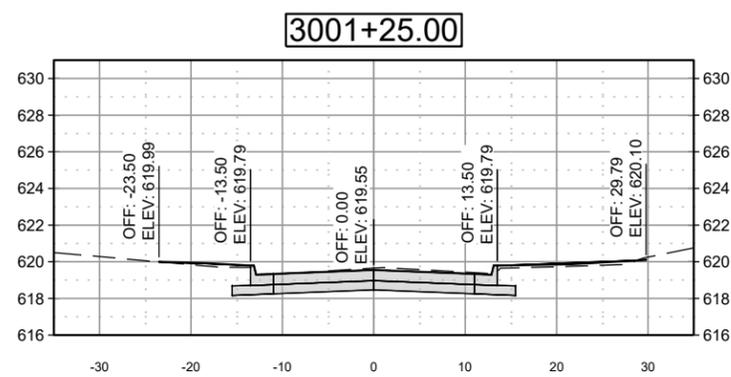
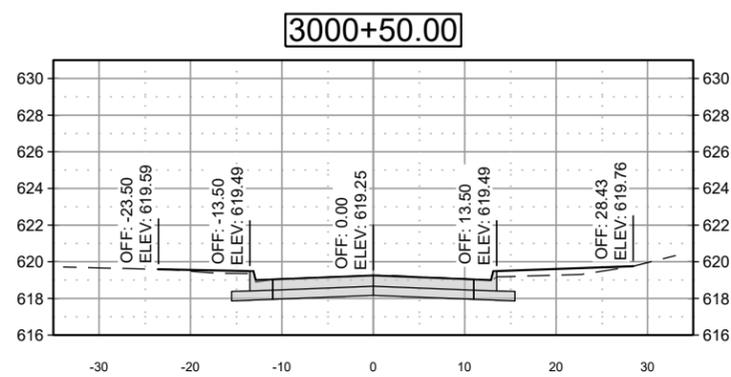
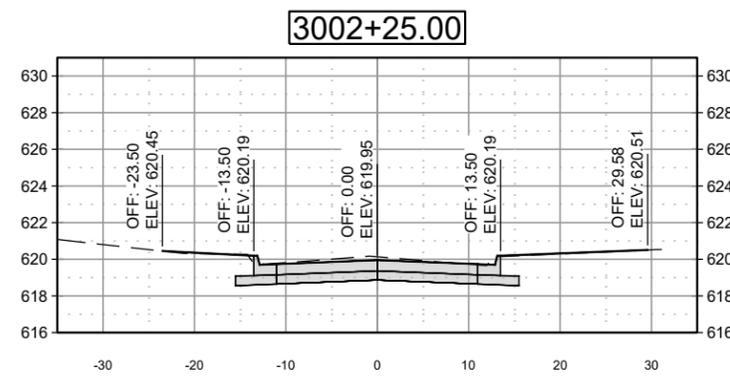
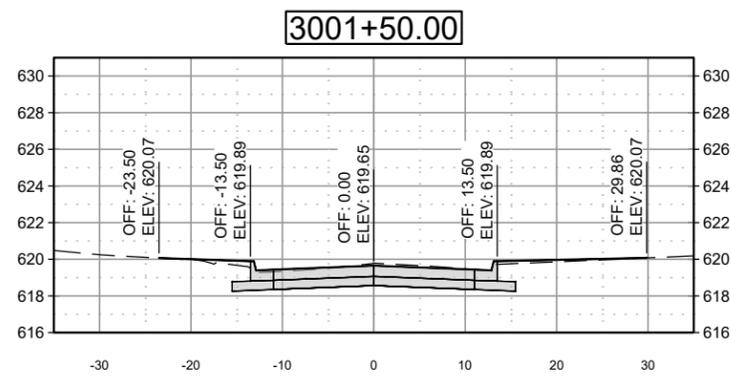
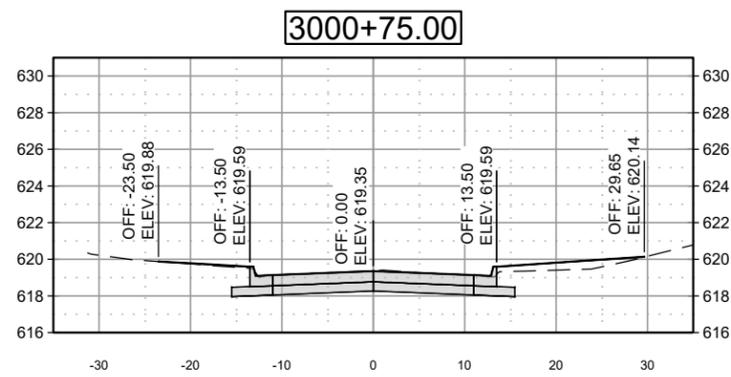
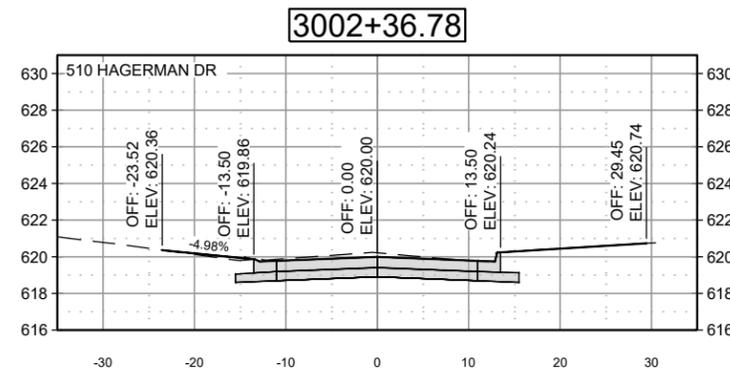
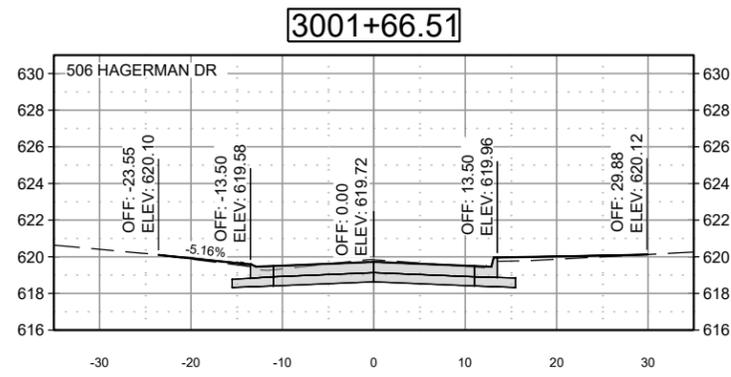
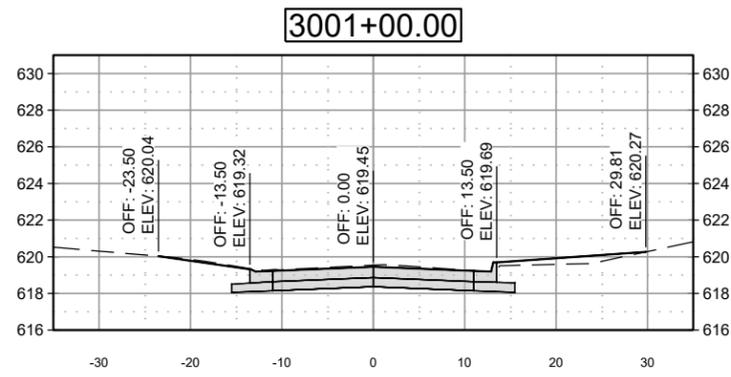
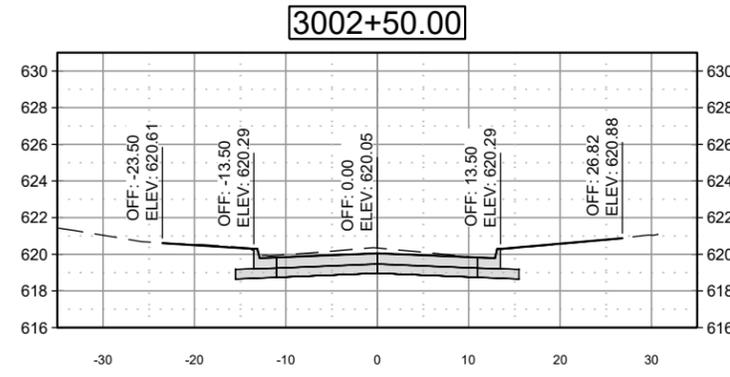
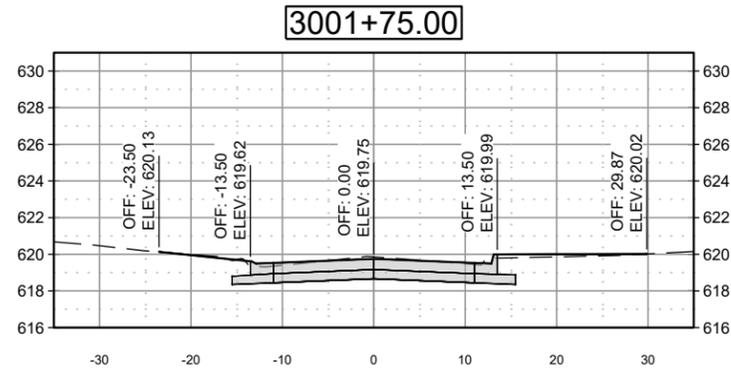
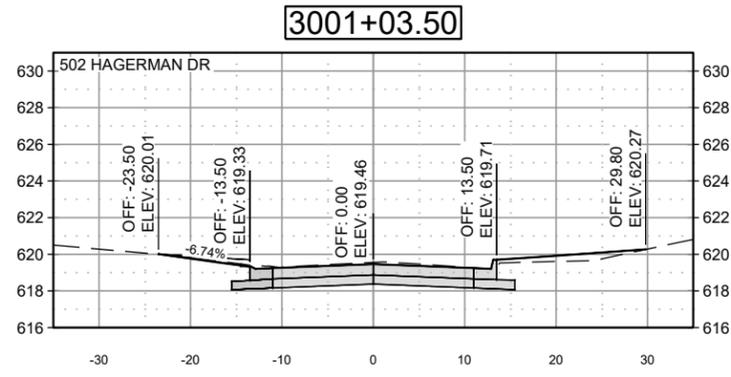
EROSION CONTROL PLAN - SHEET 12

DESIGNED <u>KK HEIM</u>	SCALE: 1" = 20'
DRAWN <u>GM REEVES</u>	NO. 17660.60.30
CHECKED <u>ER SCHALLERT</u>	REV.
APPROVED <u>JM BRADY</u>	RR.12
APPROVED <u>KK HEIM</u>	0
DATE <u>MARCH 12, 2025</u>	



LADD D3-RS

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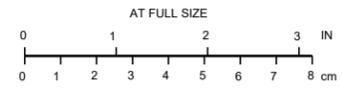


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MUSCATINE, IOWA

**PAVEMENT CROSS SECTIONS
HAGERMAN DRIVE - SHEET 1**

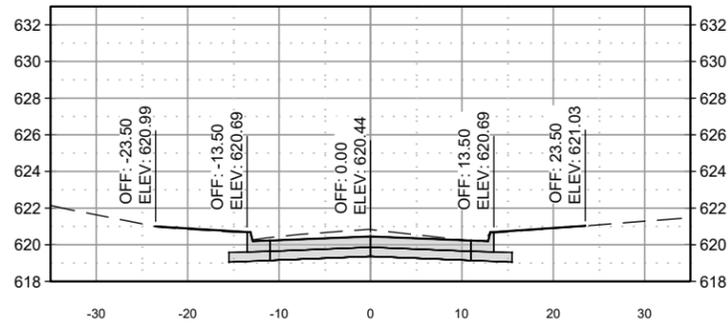
DESIGNED	PM JOHNSON	SCALE:	1" = 10'
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	KK HEIM		
APPROVED	PM JOHNSON		
DATE	MARCH 12, 2025		



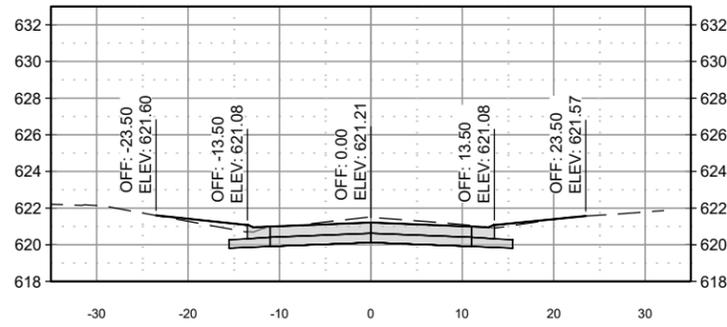
LADD D3-RS

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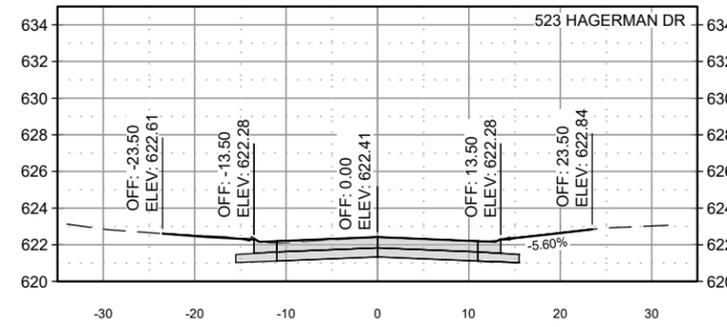
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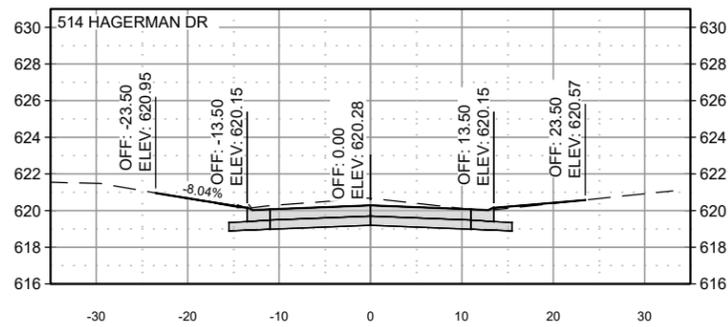
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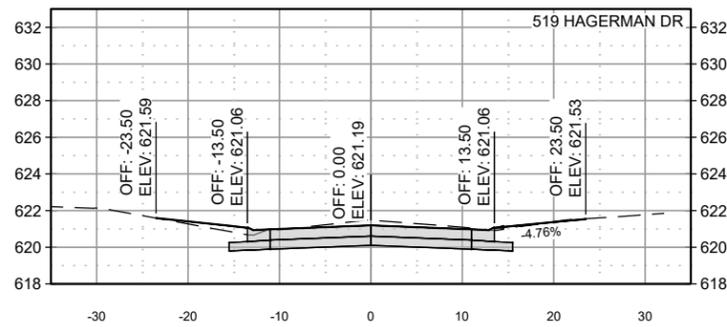
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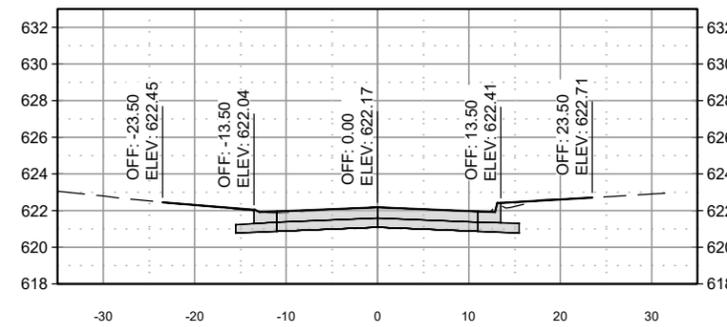
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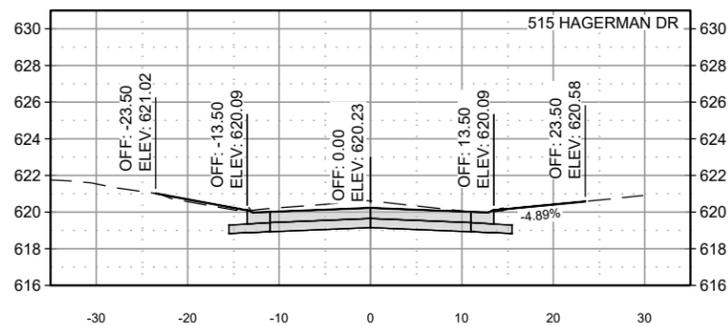
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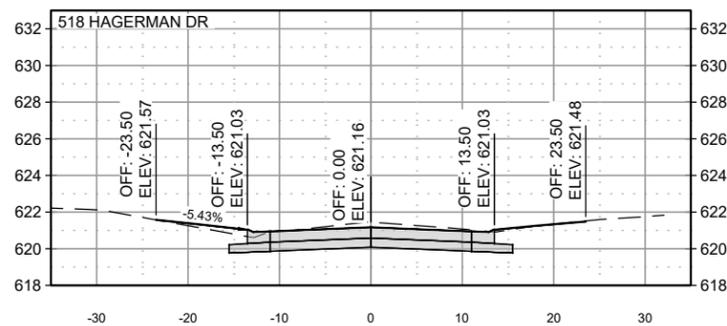
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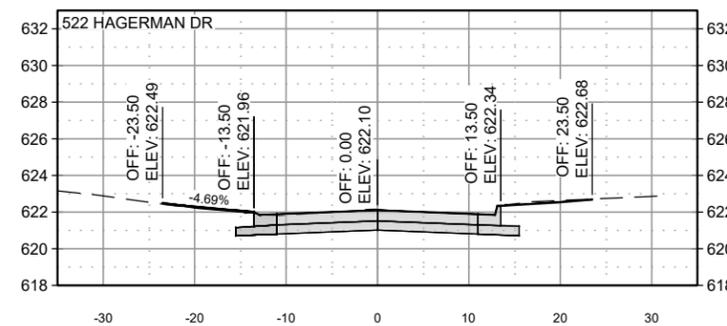
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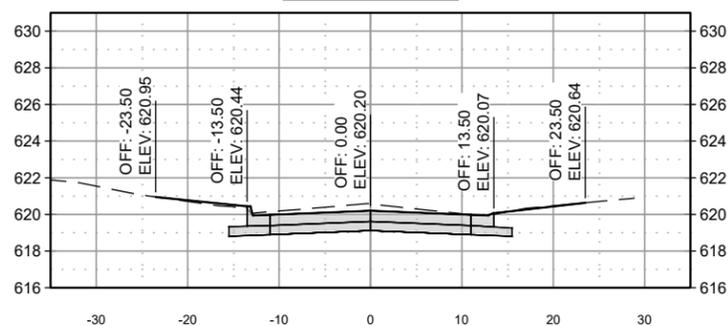
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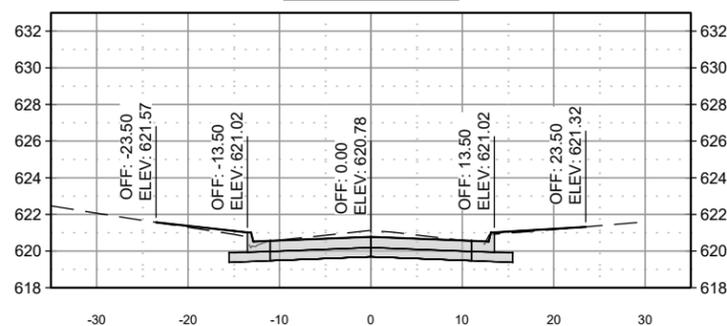
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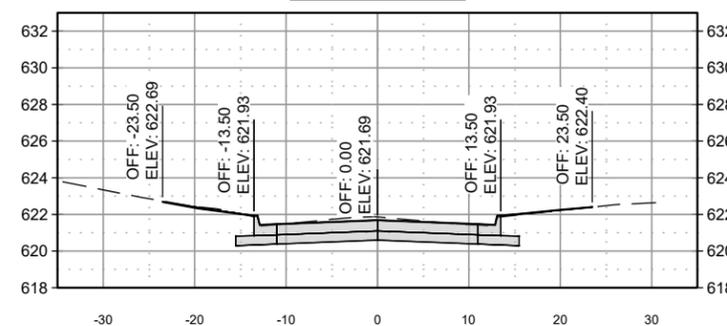
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3003+25.00



3003+75.00



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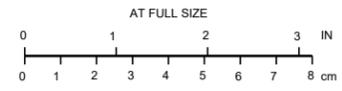


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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**PAVEMENT CROSS SECTIONS
HAGERMAN DRIVE - SHEET 2**

DESIGNED: PM JOHNSON	SCALE: 1" = 20'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: KK HEIM	W.02
APPROVED: PM JOHNSON	0
DATE: MARCH 12, 2025	

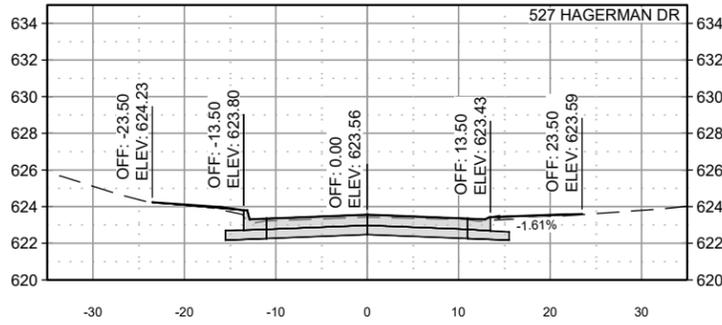


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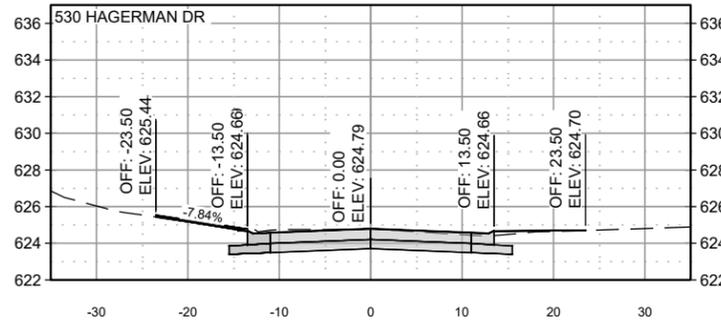
LA00 D3-RS

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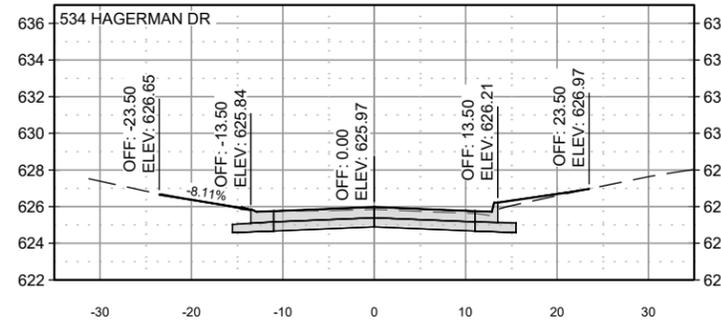
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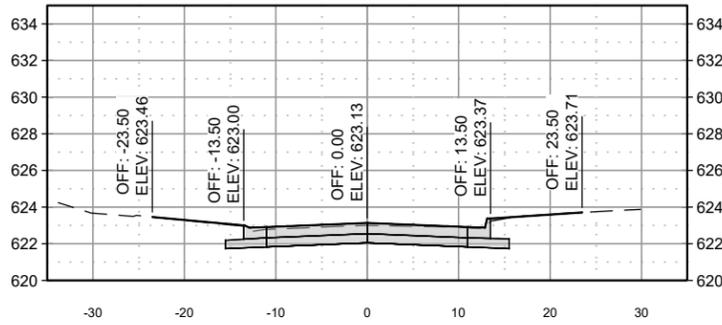
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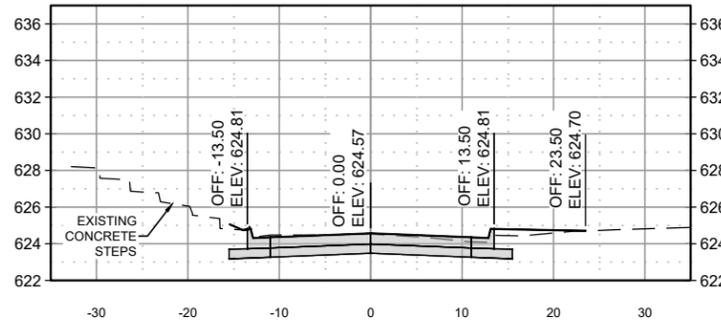
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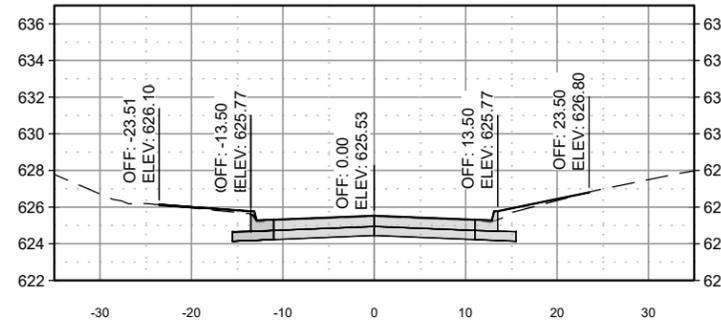
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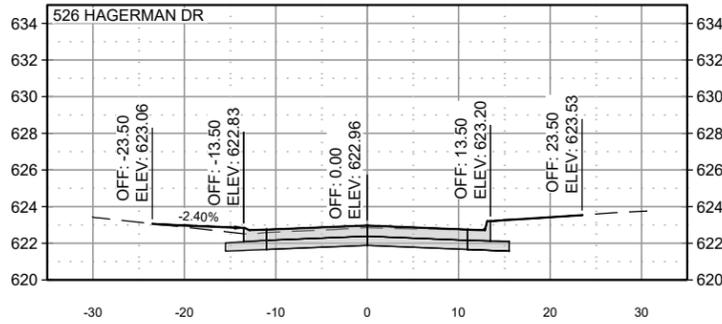
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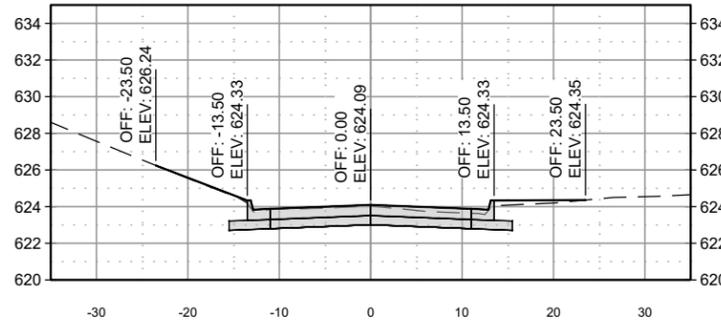
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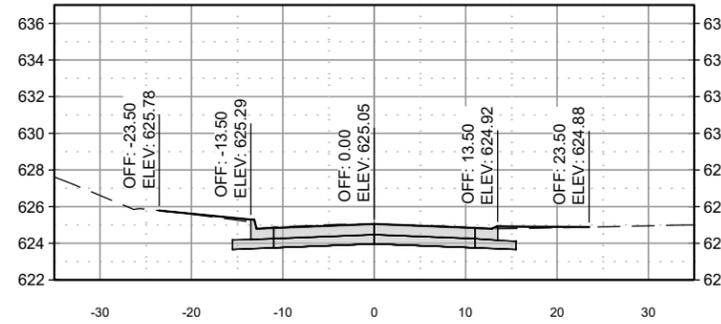
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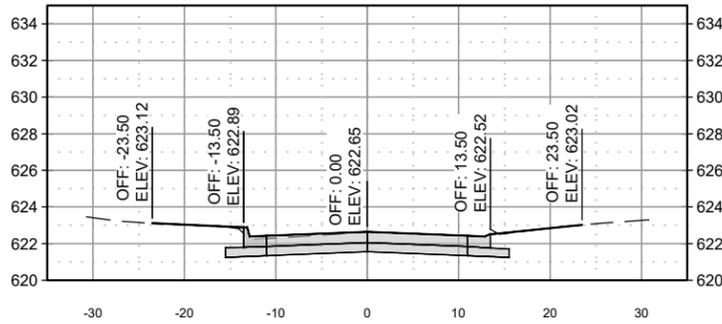
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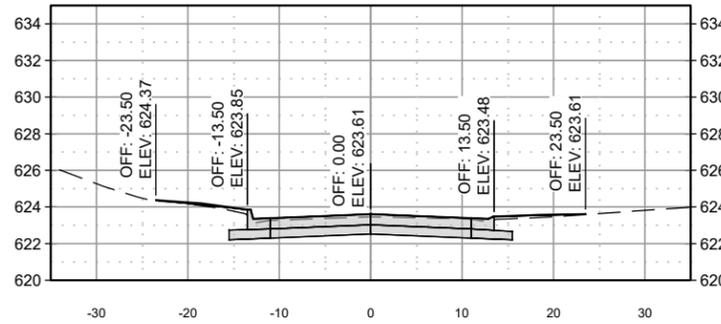
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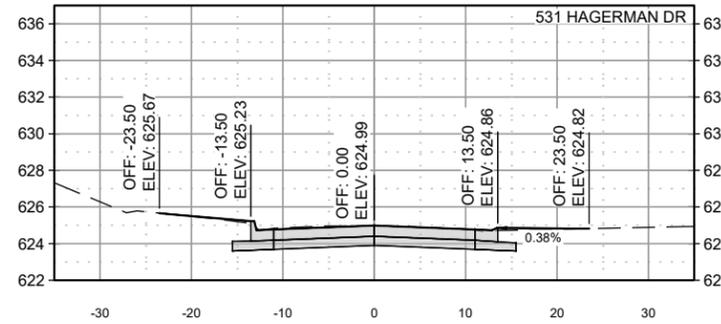
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3004+75.00



3005+46.89



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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**PAVEMENT CROSS SECTIONS
HAGERMAN DRIVE - SHEET 3**

DESIGNED	PM JOHNSON	SCALE:	1" = 20'
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	KK HEIM		
APPROVED	PM JOHNSON		
DATE	MARCH 12, 2025		

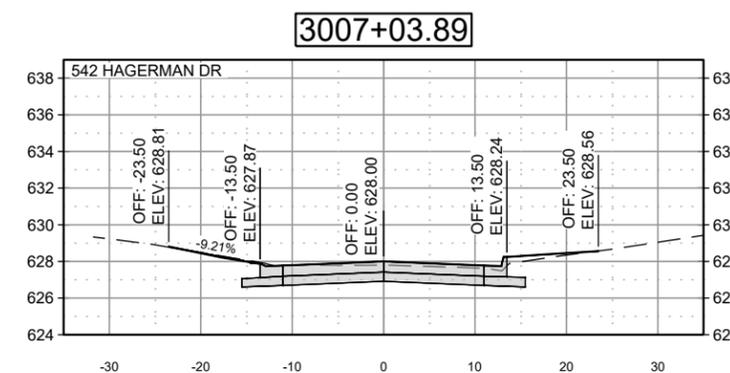
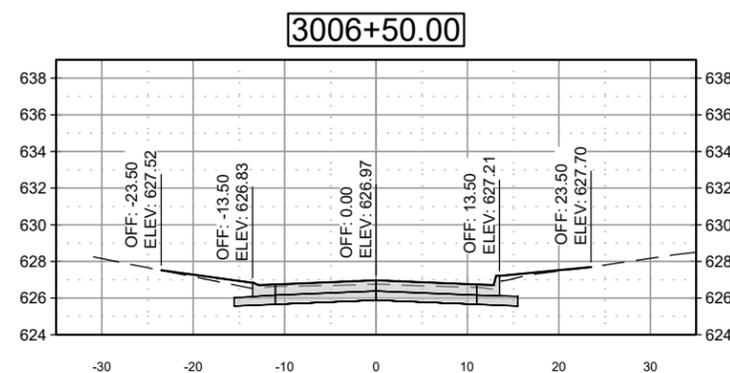
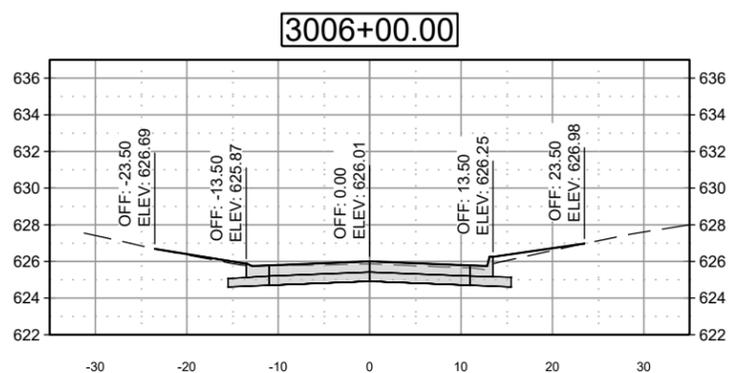
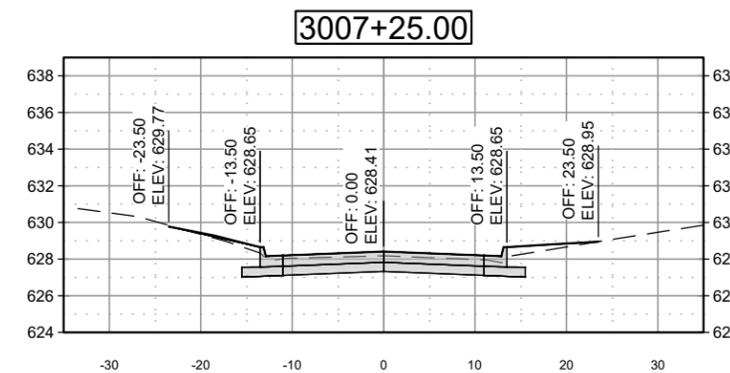
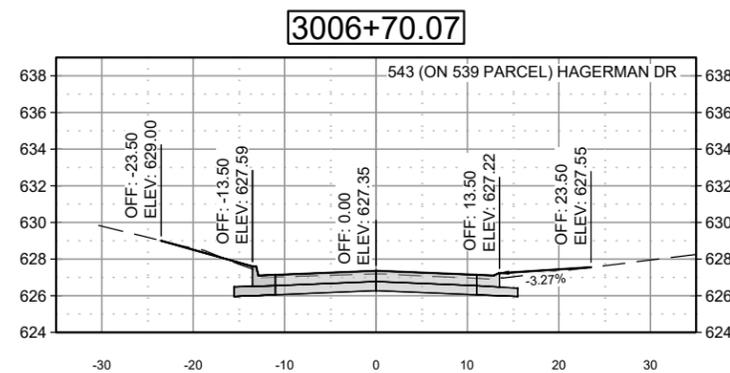
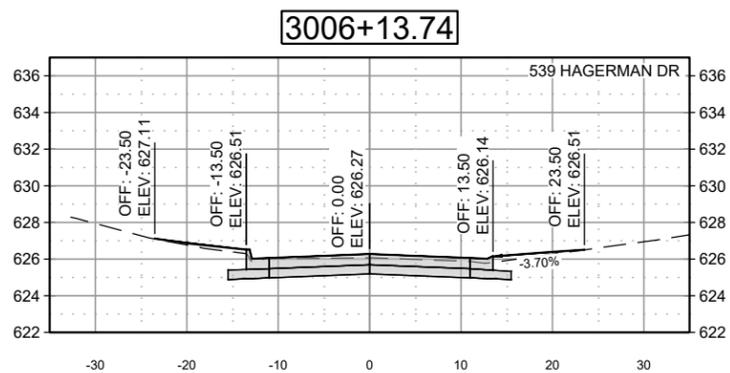
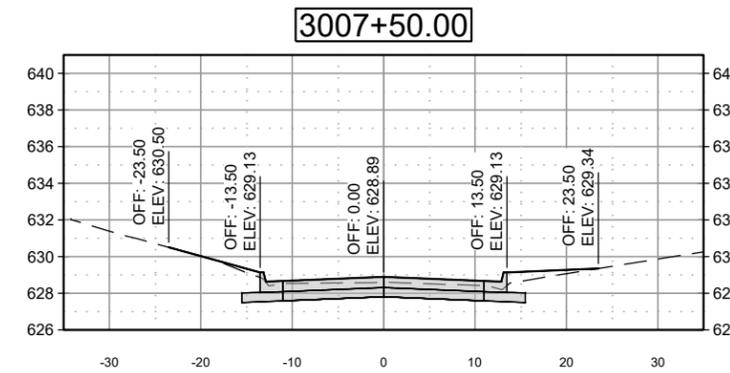
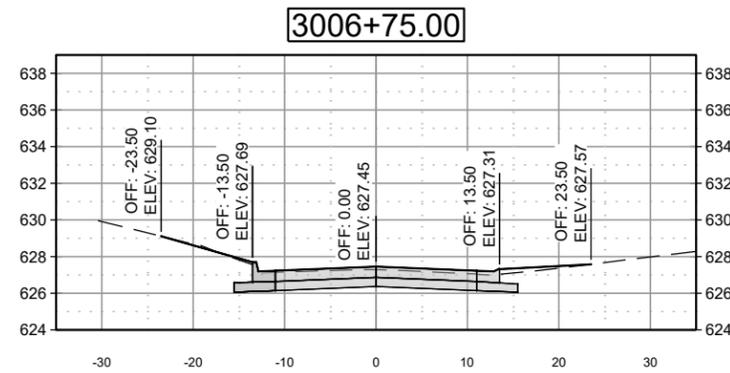
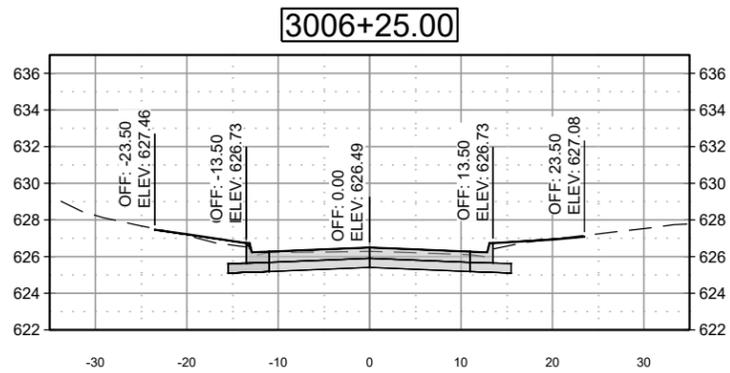
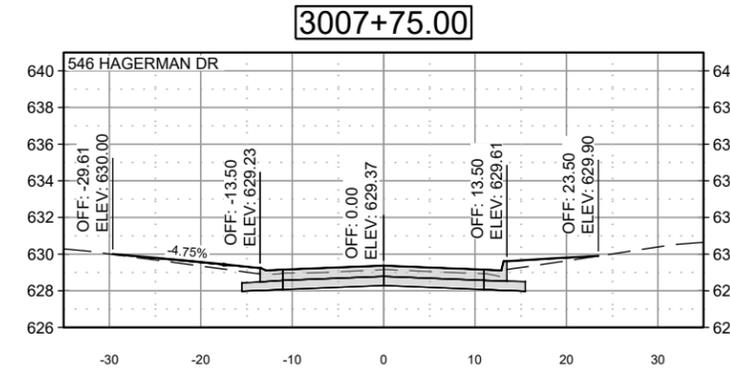
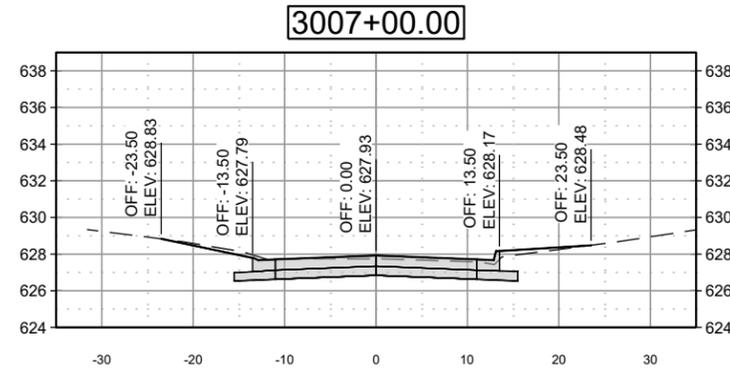
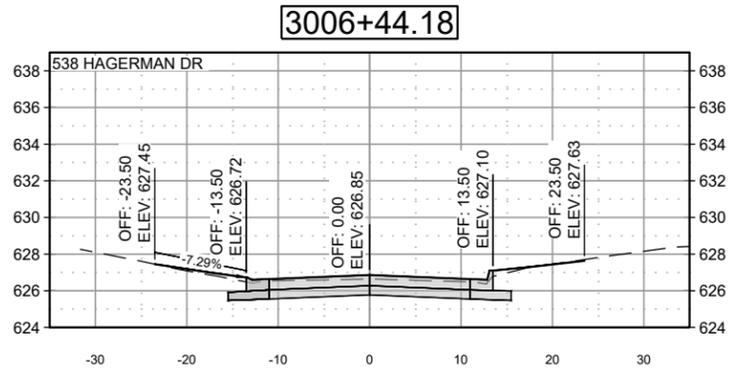


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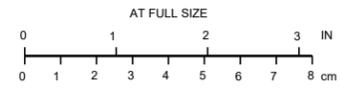
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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**PAVEMENT CROSS SECTIONS
HAGERMAN DRIVE - SHEET 4**

DESIGNED	PM JOHNSON	SCALE:	1" = 20'
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	KK HEIM		
APPROVED	PM JOHNSON		
DATE	MARCH 12, 2025		

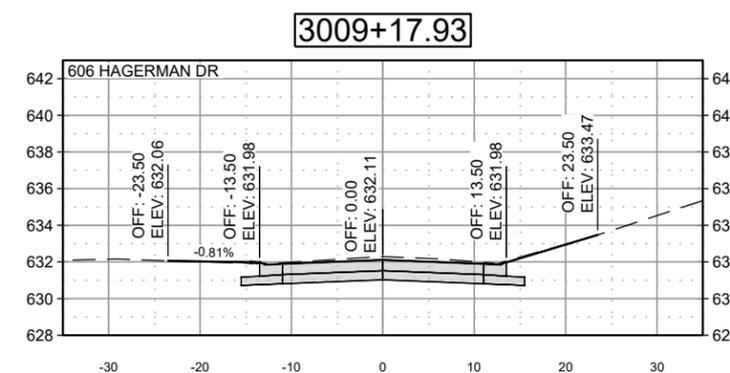
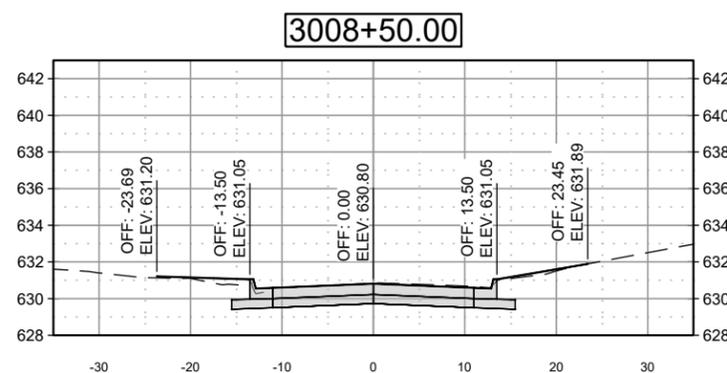
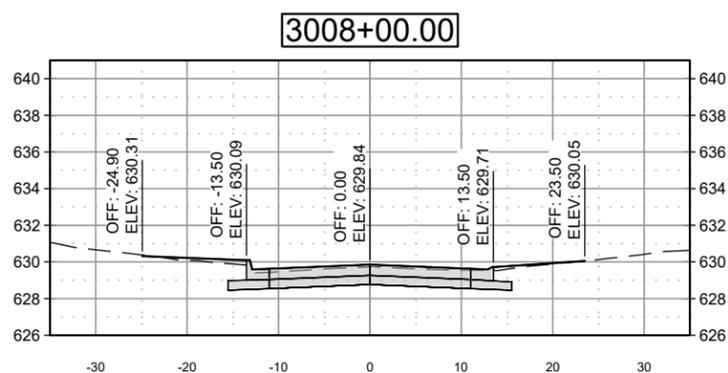
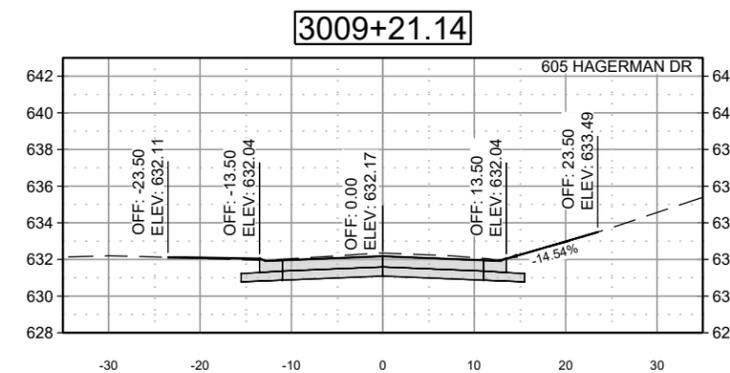
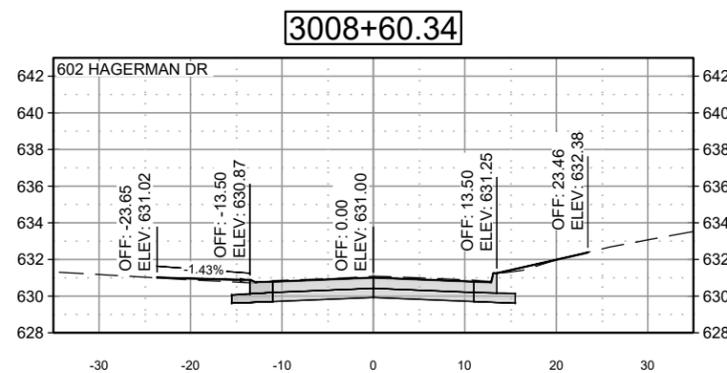
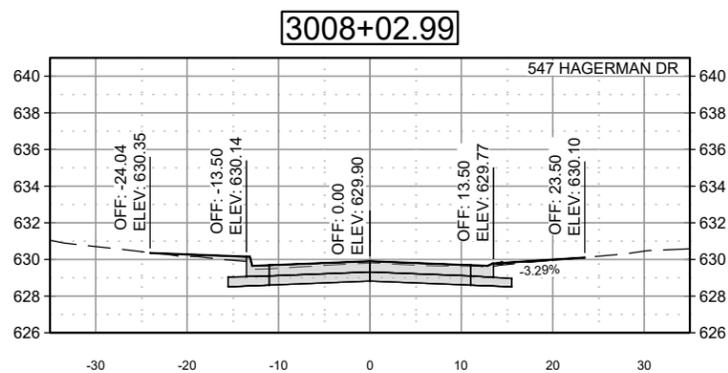
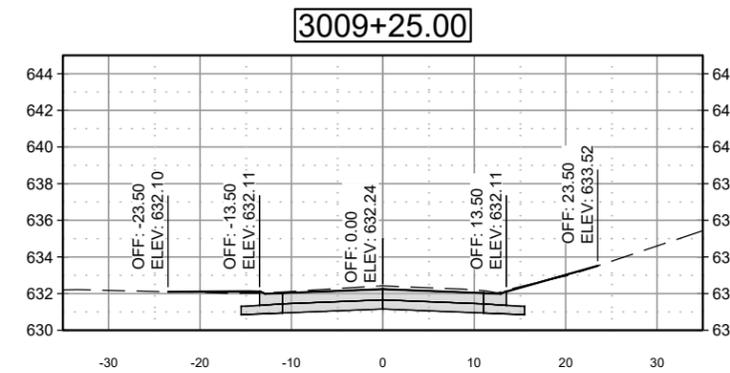
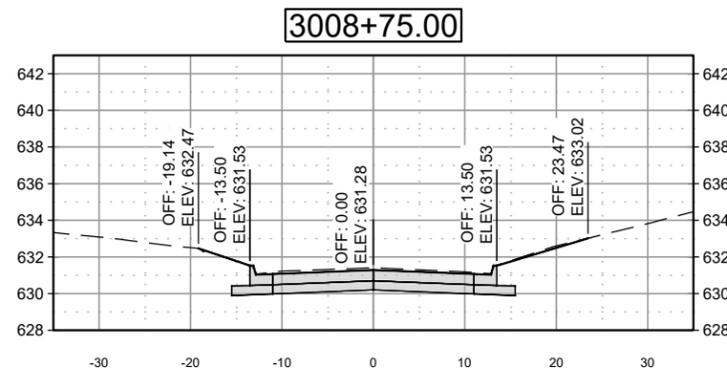
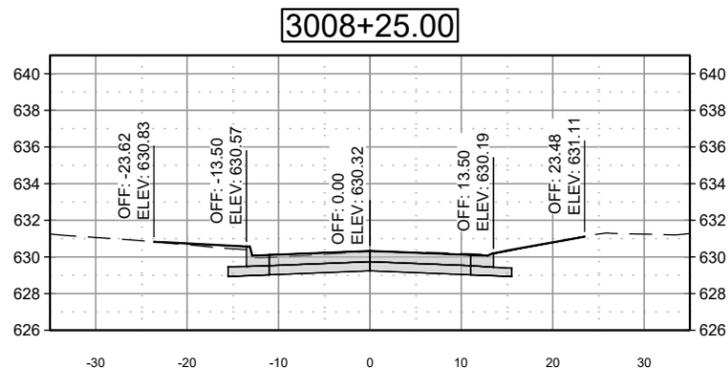
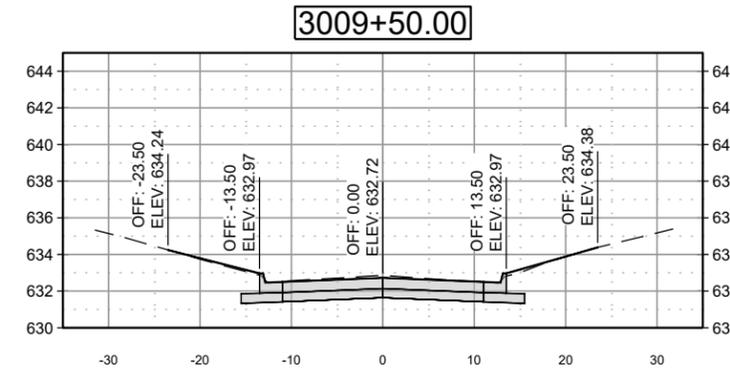
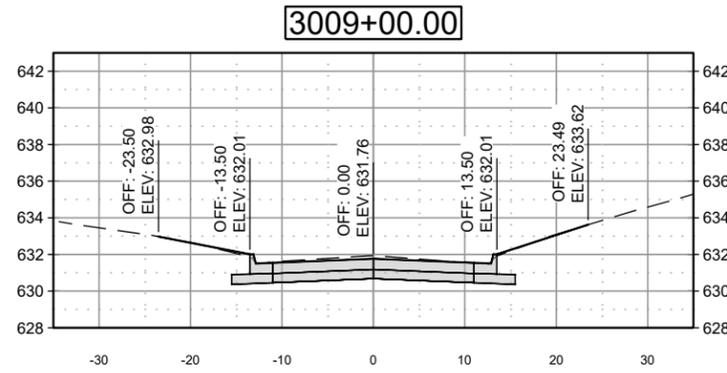
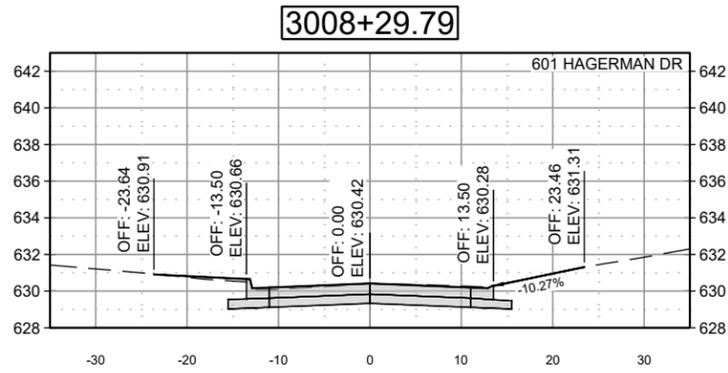
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NO.	REVISIONS	DSGN	CHKD	APVD	DATE

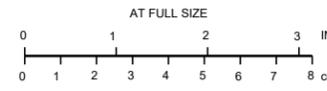


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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

PAVEMENT CROSS SECTIONS
HAGERMAN DRIVE - SHEET 5

DESIGNED	PM JOHNSON	SCALE:	1" = 20'
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	KK HEIM		
APPROVED	PM JOHNSON		
DATE	MARCH 12, 2025		

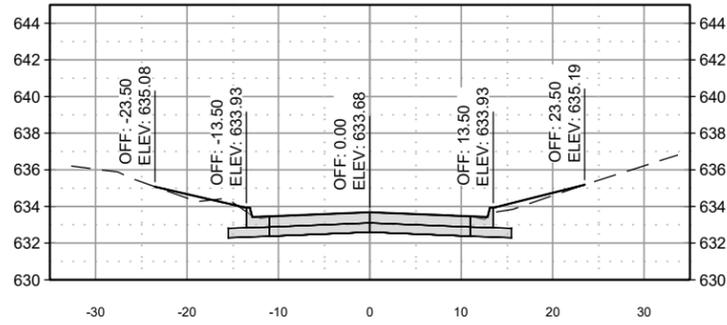


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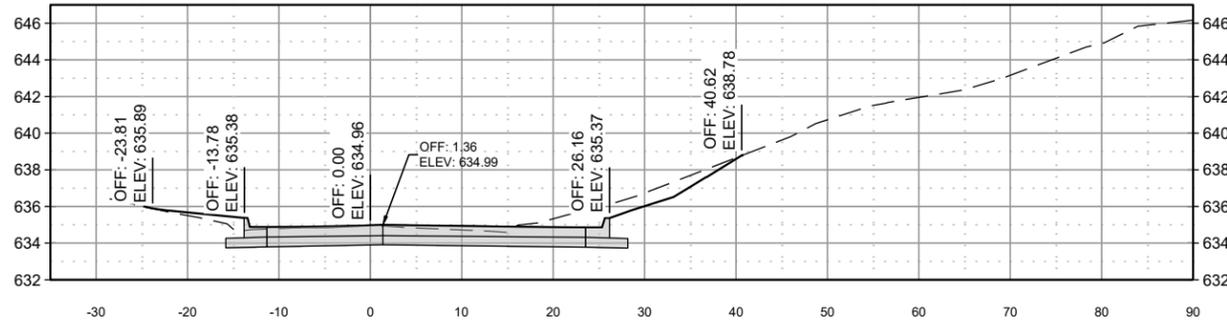
CA00 D3-RS

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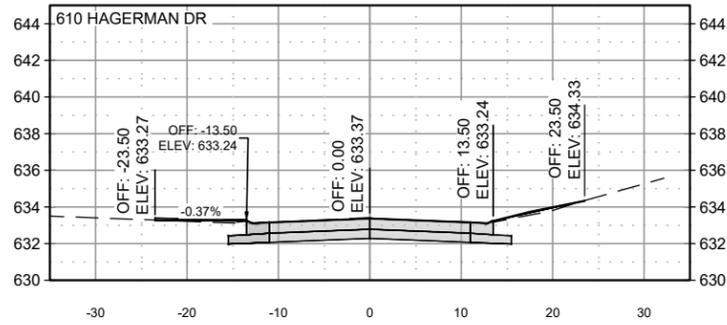
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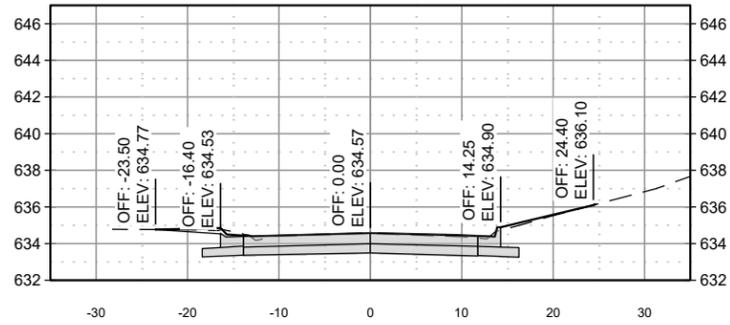
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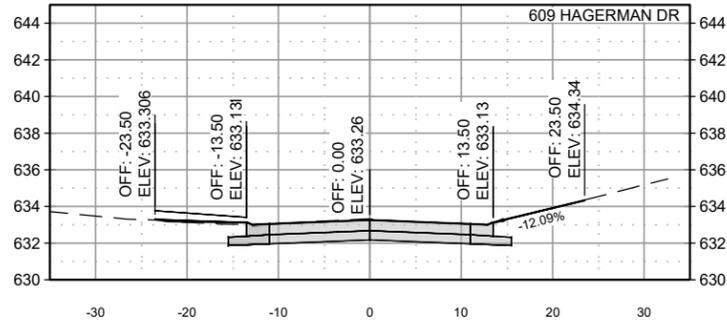
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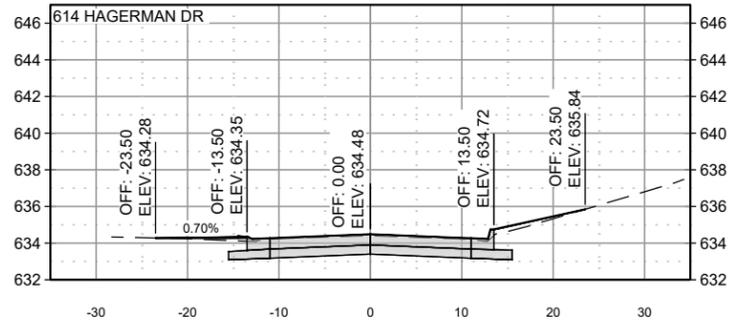
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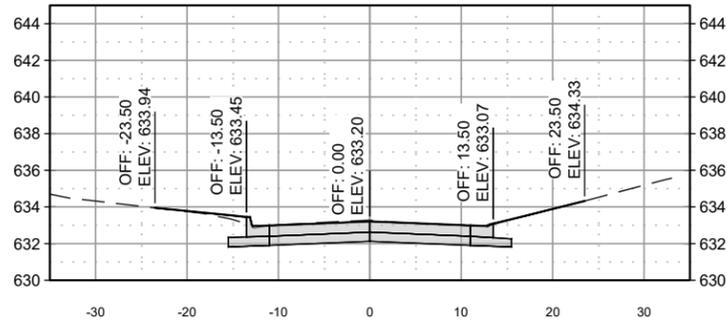
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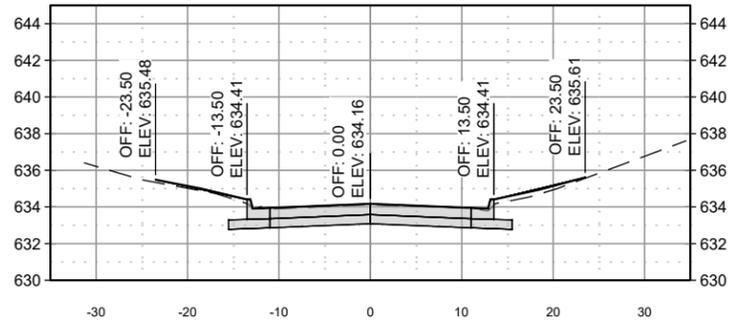
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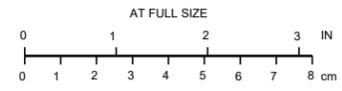
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

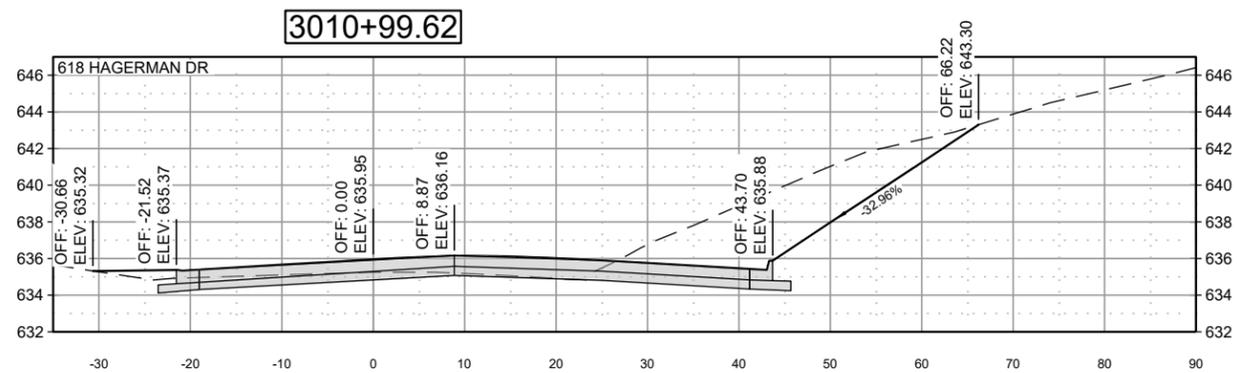
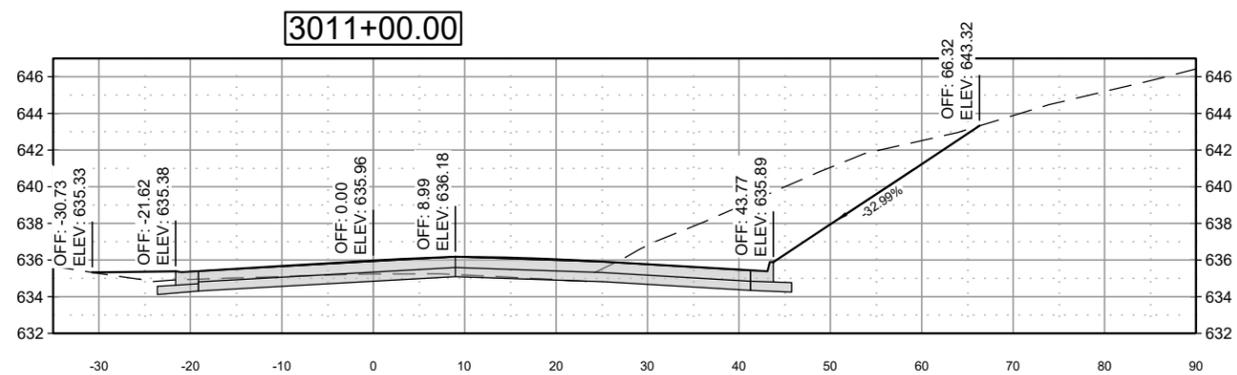
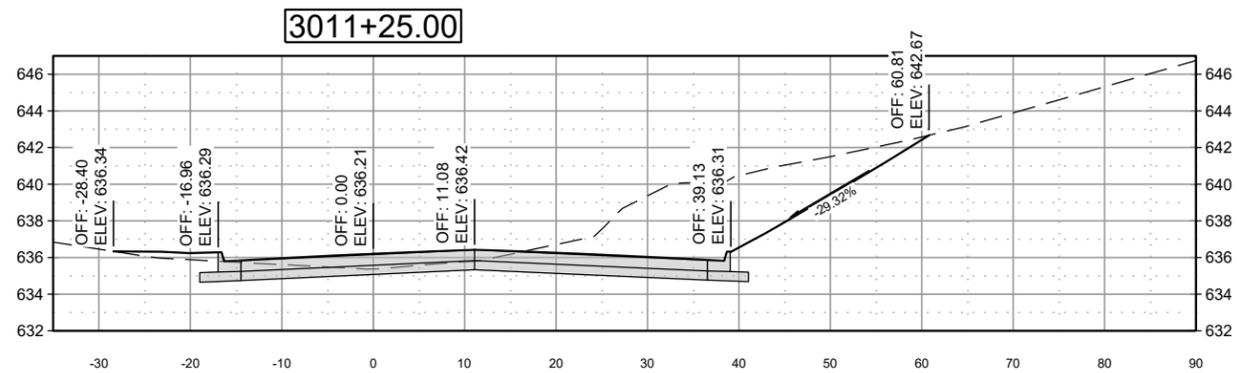
PAVEMENT CROSS SECTIONS
 HAGERMAN DRIVE - SHEET 6

DESIGNED	PM JOHNSON	SCALE:	1" = 20'
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	KK HEIM		
APPROVED	PM JOHNSON		
DATE	MARCH 12, 2025		



CA00 D3-RS

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NO.	REVISIONS	DSGN	CHKD	APVD	DATE



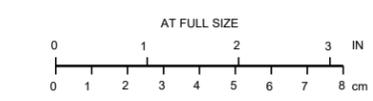
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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**PAVEMENT CROSS SECTIONS
HAGERMAN DRIVE - SHEET 7**

DESIGNED	PM JOHNSON	SCALE: 1" = 20'
DRAWN	GM REEVES	NO. 17660.60.30
CHECKED	ER SCHALLERT	REV.
APPROVED	KK HEIM	W.07
APPROVED	PM JOHNSON	0
DATE	MARCH 12, 2025	



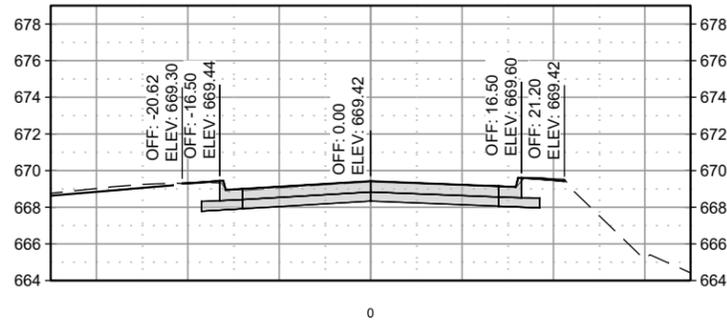
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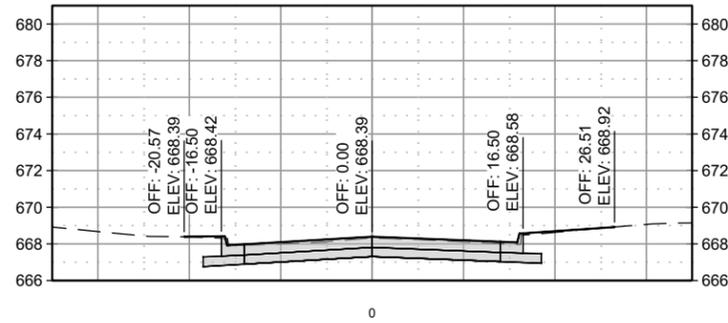
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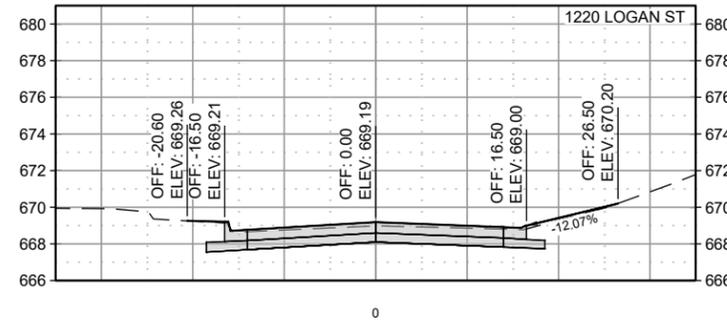
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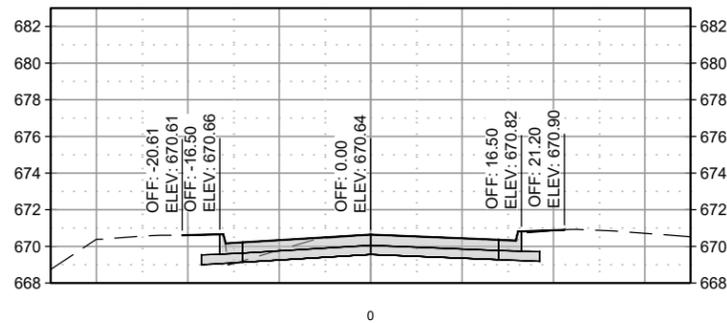
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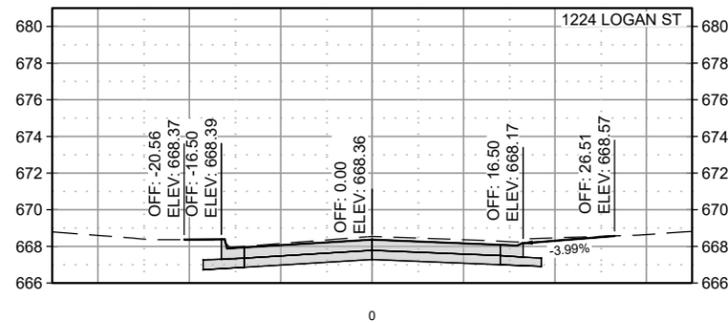
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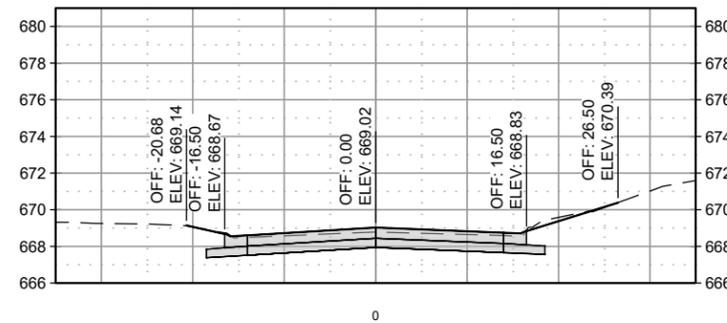
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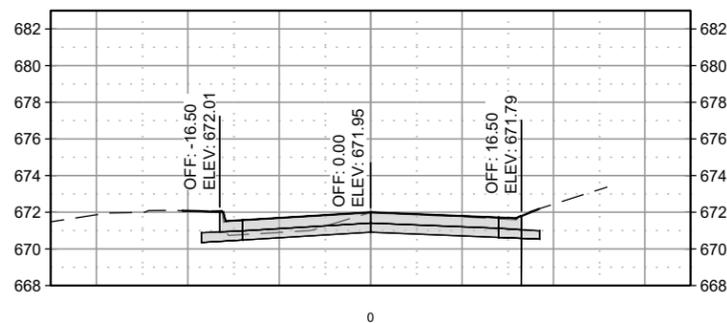
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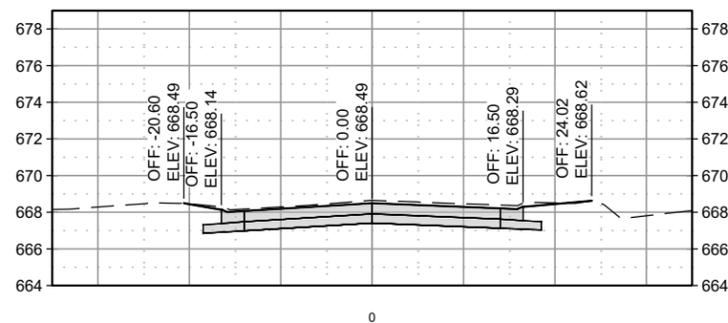
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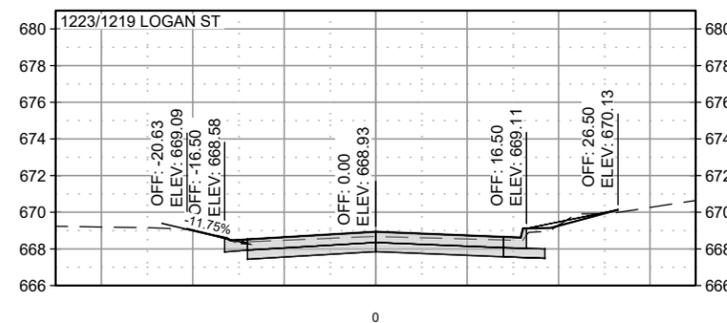
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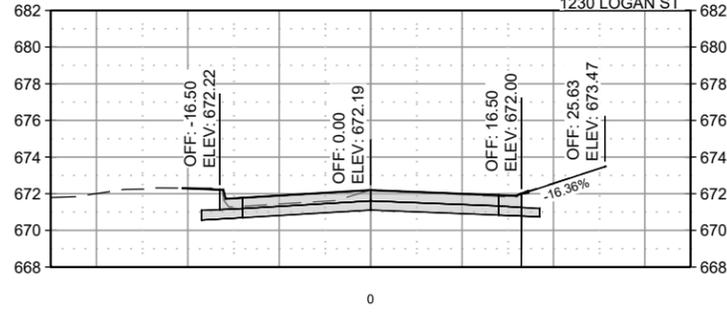
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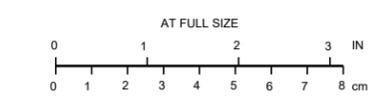
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CITY OF MUSCATINE - PHASE 6D
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 MUSCATINE, IOWA

PAVEMENT CROSS SECTIONS
 LOGAN STREET - SHEET 1

DESIGNED: PM JOHNSON	SCALE: 1" = 20'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: KK HEIM	W.08
APPROVED: PM JOHNSON	0
DATE: MARCH 12, 2025	

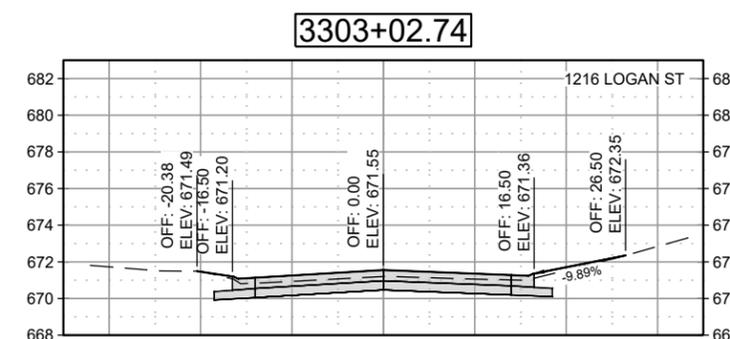
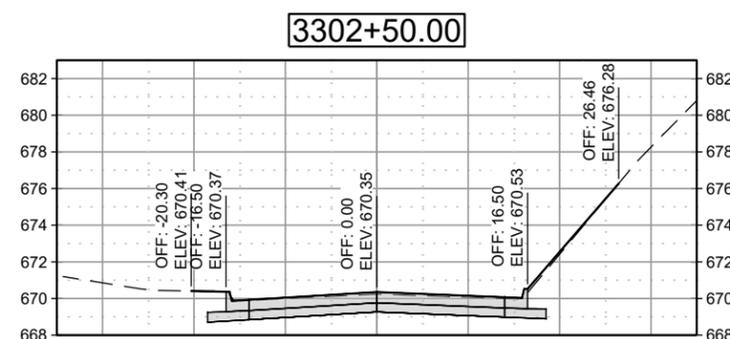
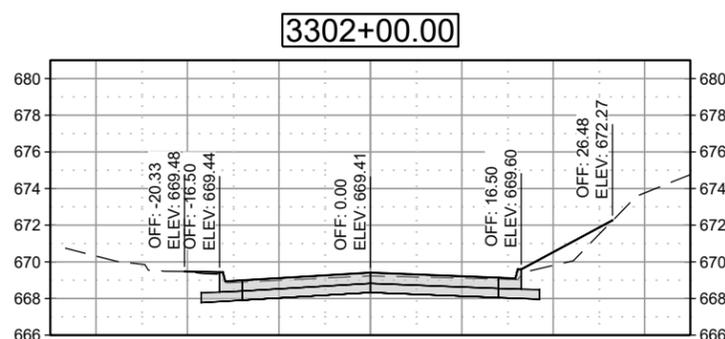
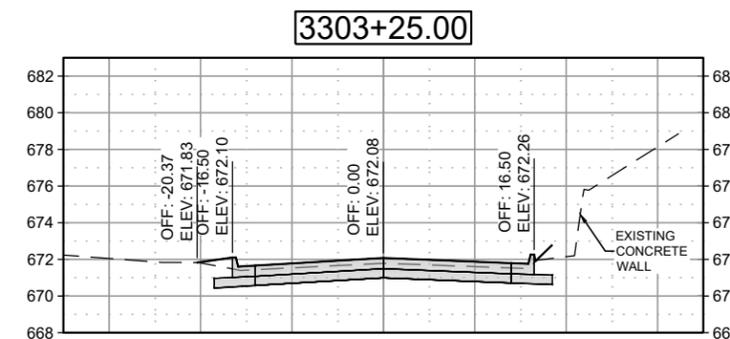
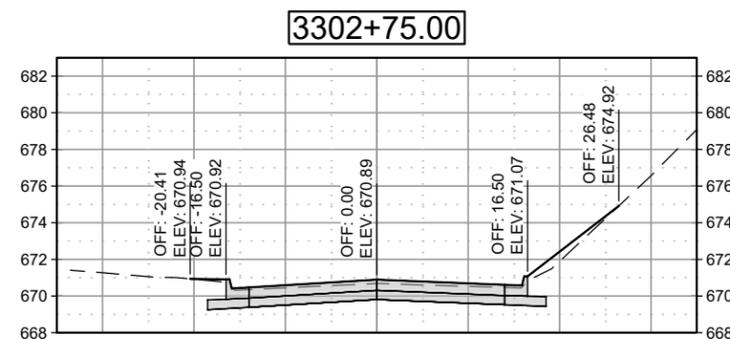
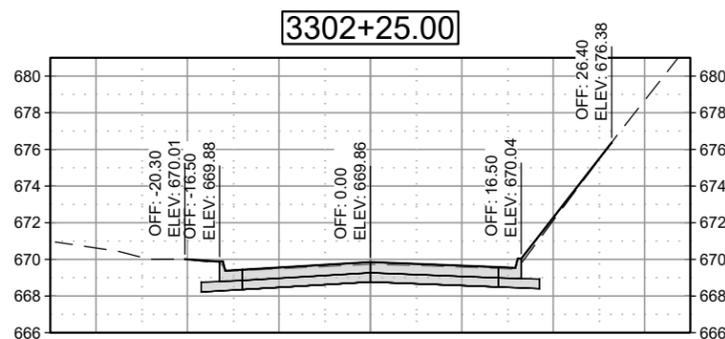
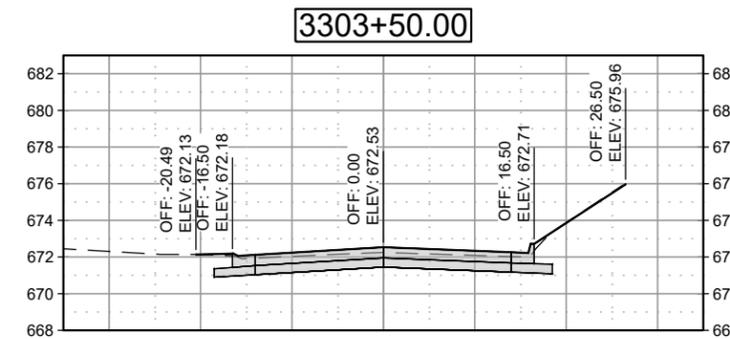
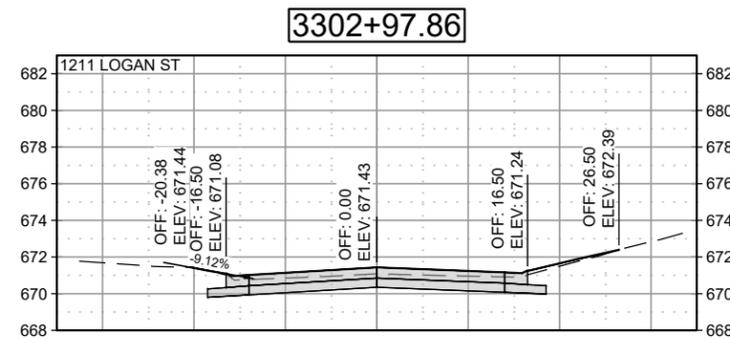
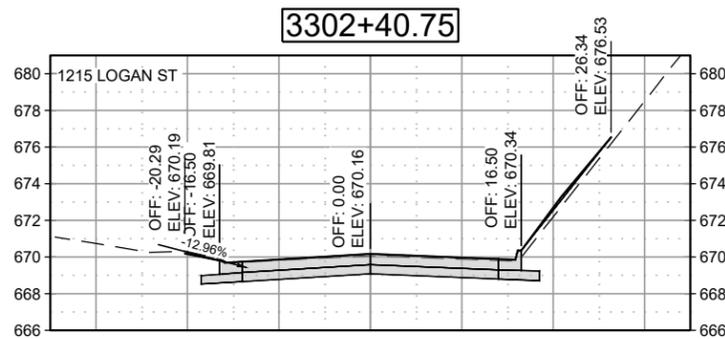
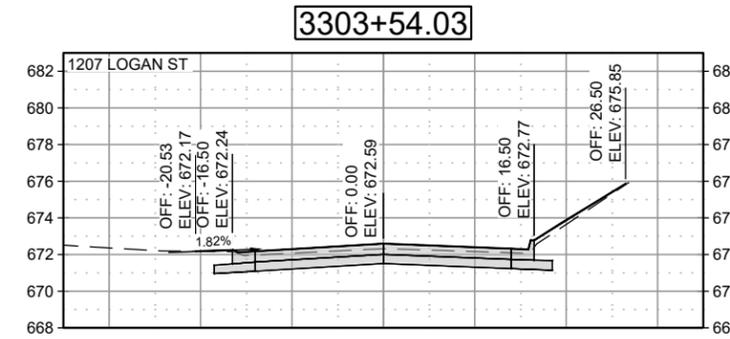
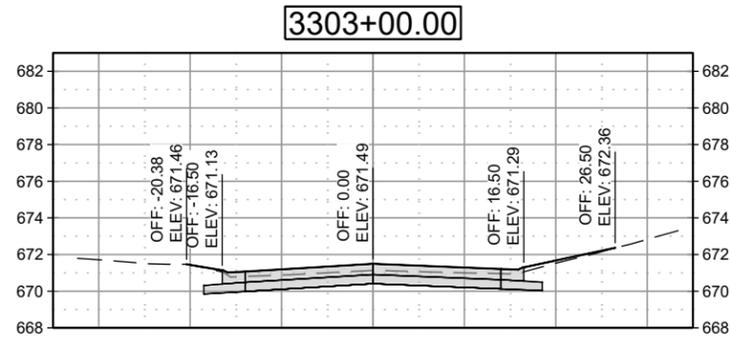


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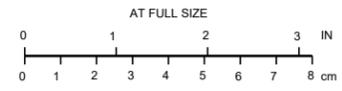
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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

PAVEMENT CROSS SECTIONS
LOGAN STREET - SHEET 2

DESIGNED: PM JOHNSON	SCALE: 1" = 20'
DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: KK HEIM	W.09
APPROVED: PM JOHNSON	0
DATE: MARCH 12, 2025	



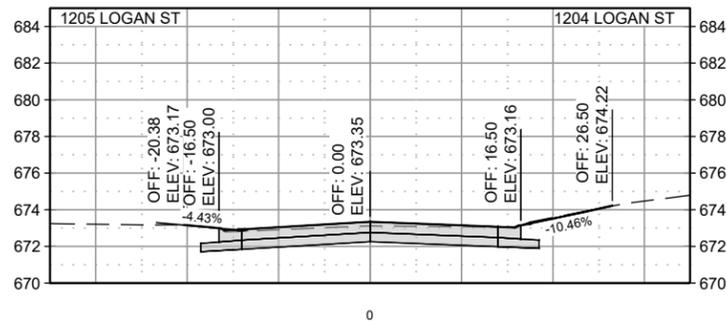
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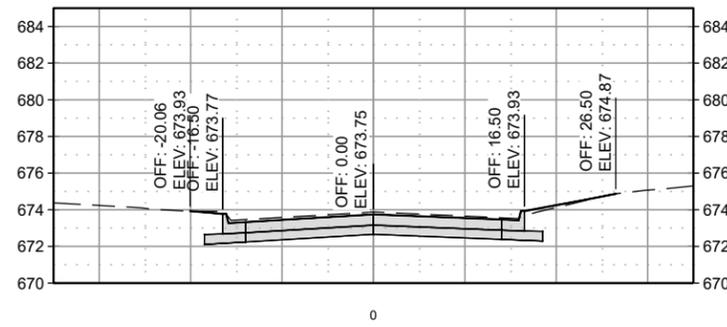
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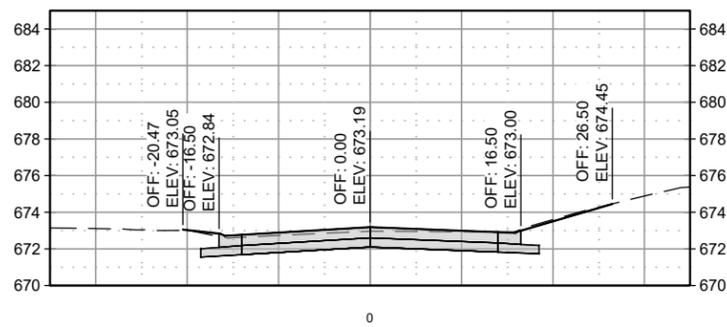
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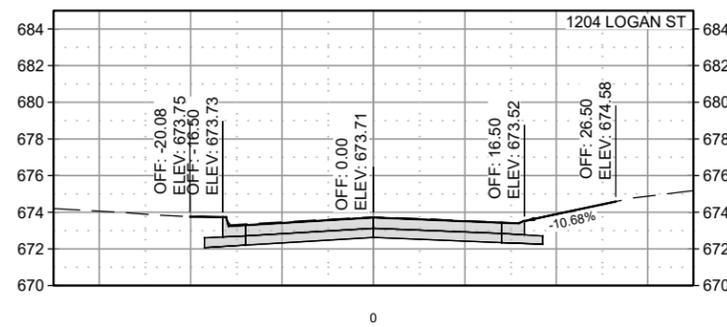
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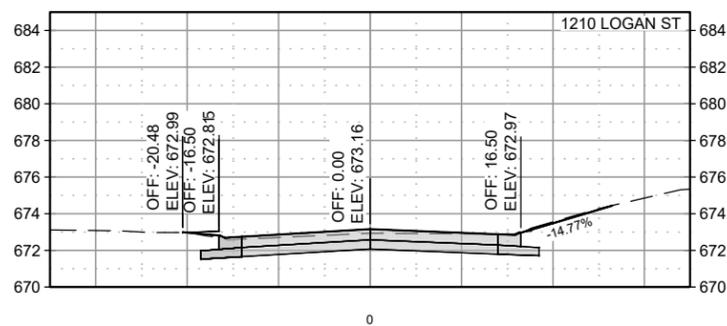
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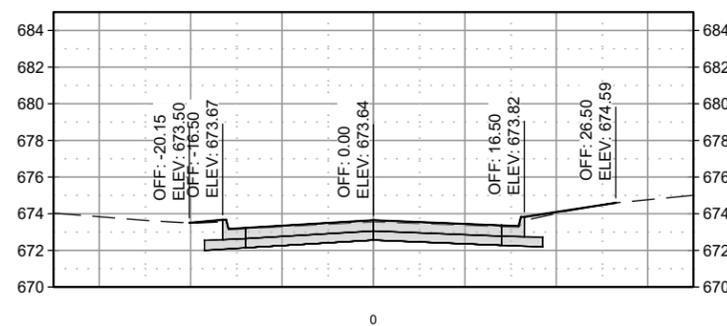
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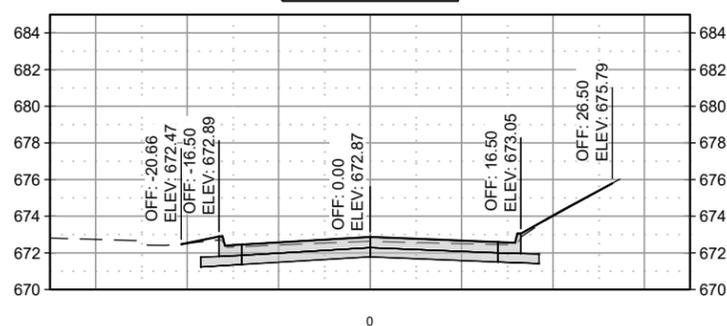
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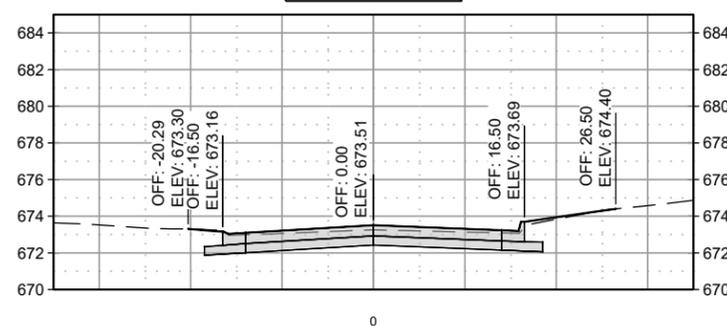
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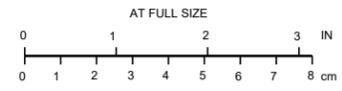
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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

PAVEMENT CROSS SECTIONS
LOGAN STREET - SHEET 3

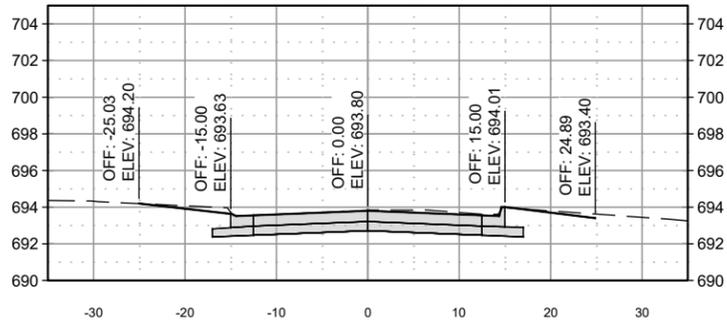
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DRAWN: GM REEVES	NO. 17660.60.30
CHECKED: ER SCHALLERT	REV.
APPROVED: KK HEIM	W.10
APPROVED: PM JOHNSON	0
DATE: MARCH 12, 2025	



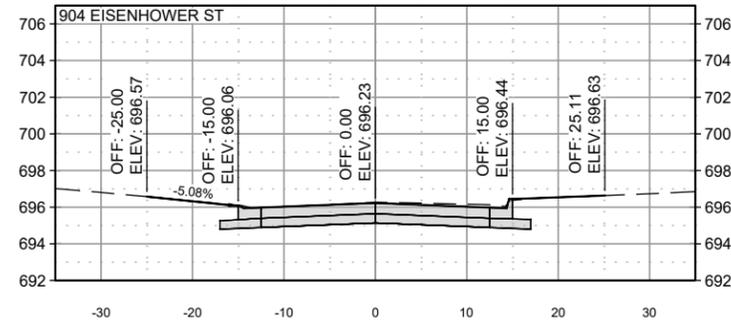
LA00 D3-RS

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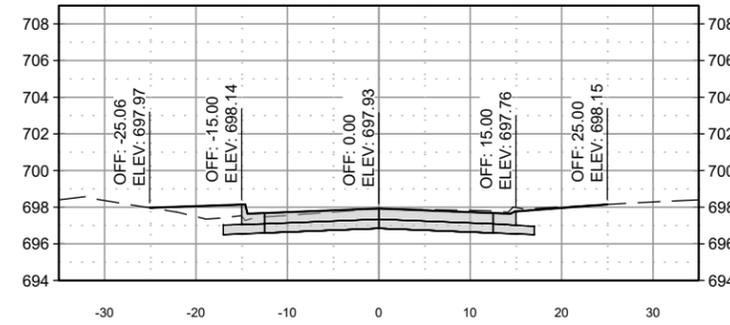
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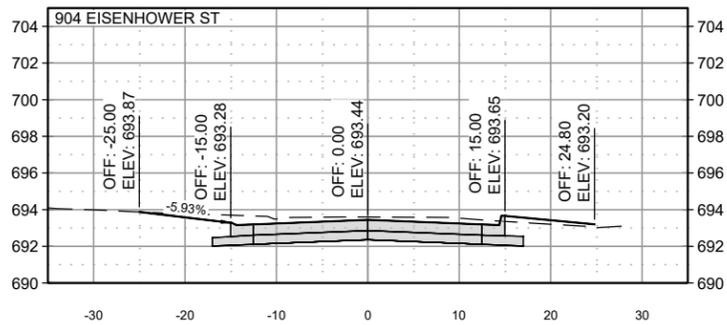
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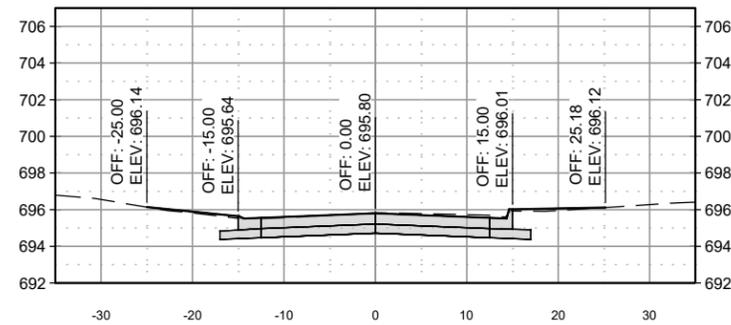
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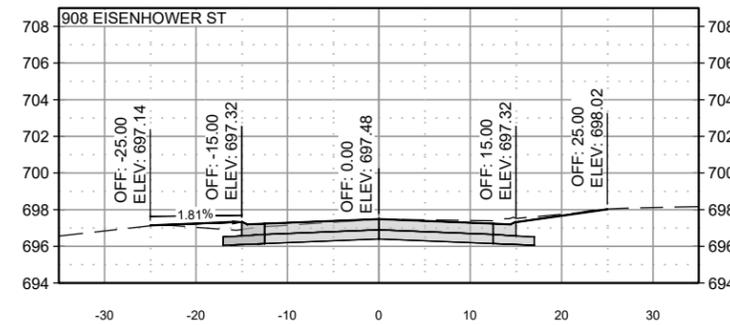
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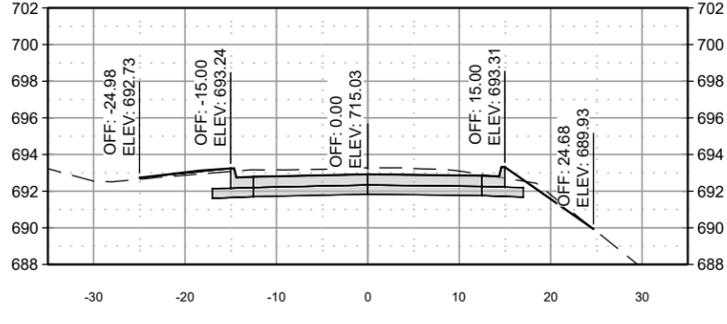
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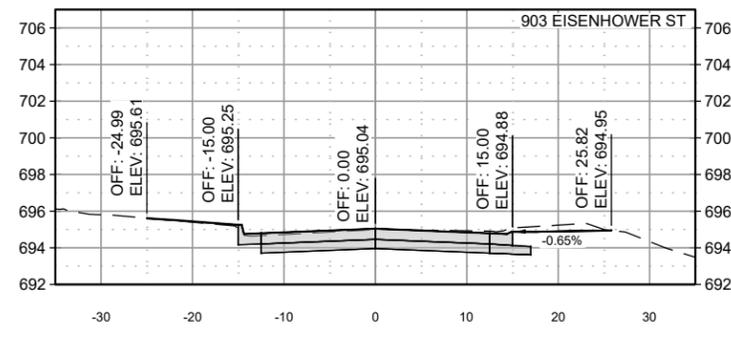
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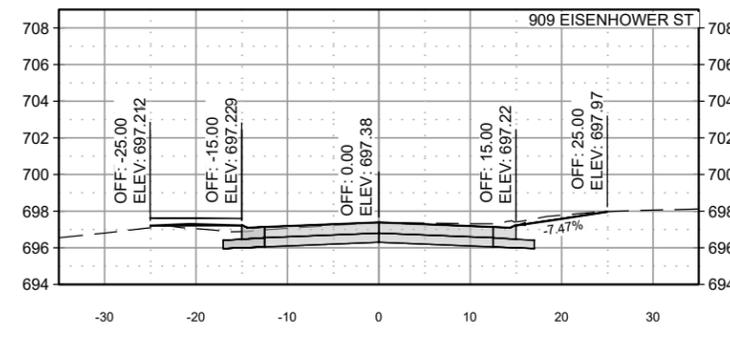
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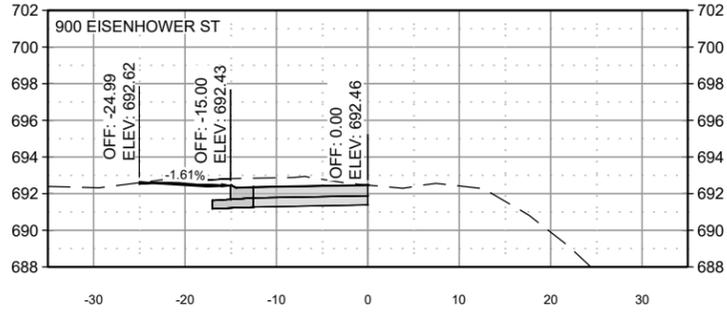
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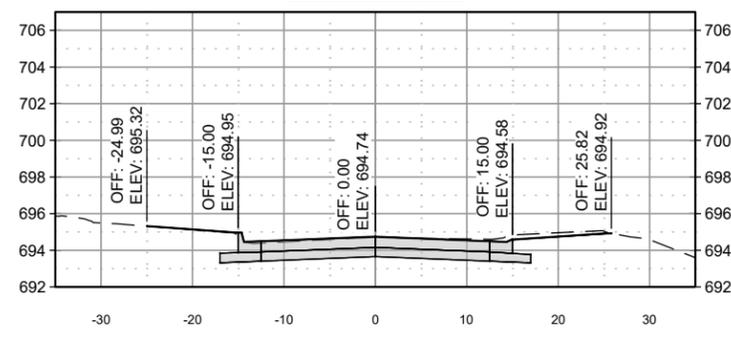
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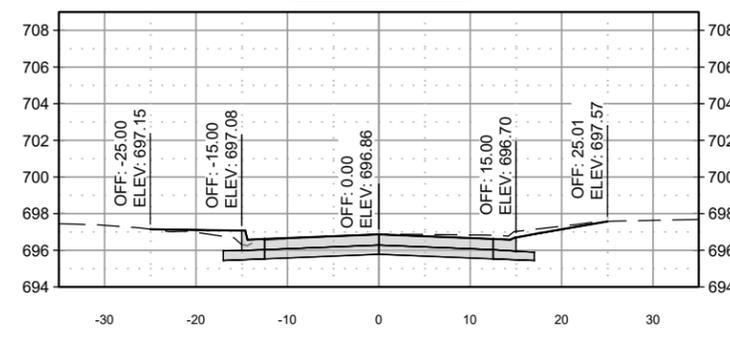
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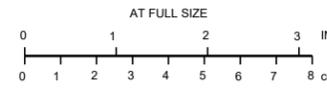
NO.	REVISIONS	DSGN	CHKD	APVD	DATE

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CITY OF MUSCATINE - PHASE 6D
 WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
 MUSCATINE, IOWA

PAVEMENT CROSS SECTIONS
 EISENHOWER STREET - SHEET 1

DESIGNED	PM JOHNSON	SCALE:	1" = 20'
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	KK HEIM		
APPROVED	PM JOHNSON		
DATE	MARCH 12, 2025		

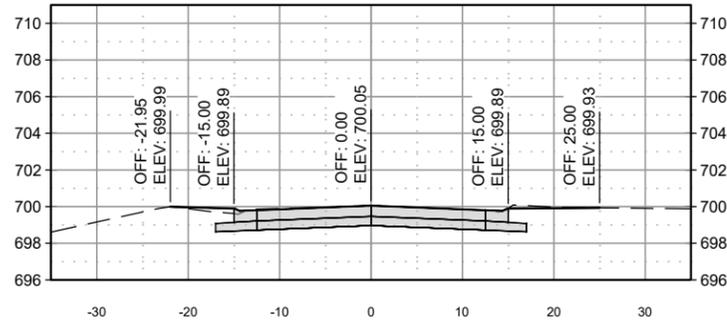


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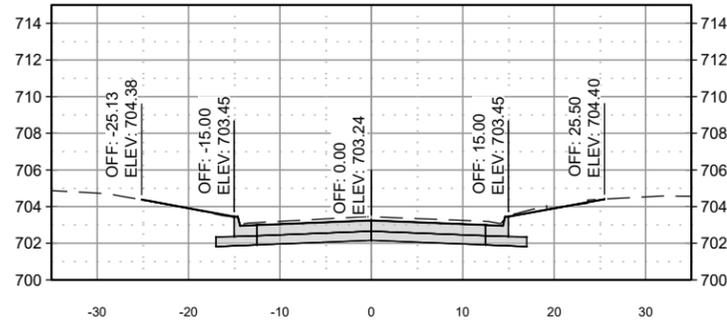
LA00 D3-RS

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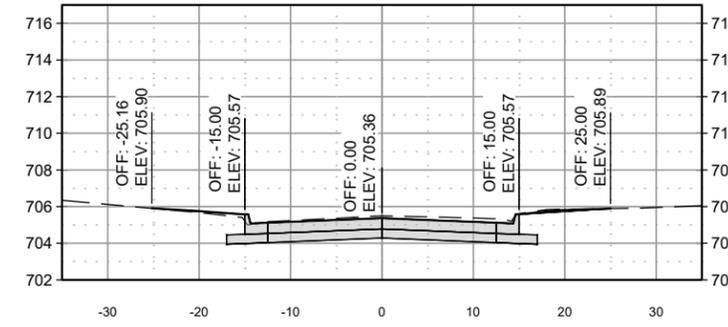
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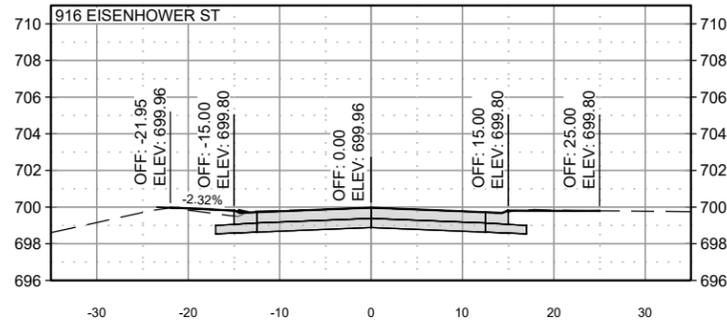
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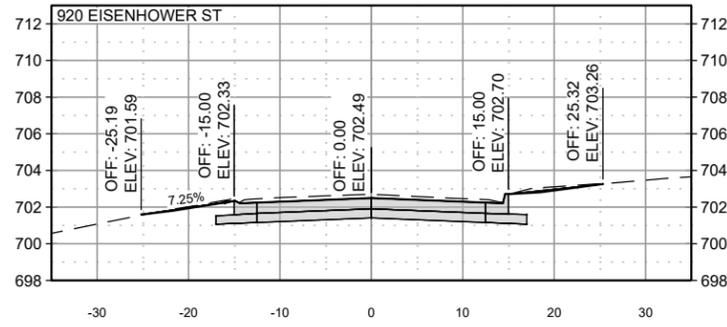
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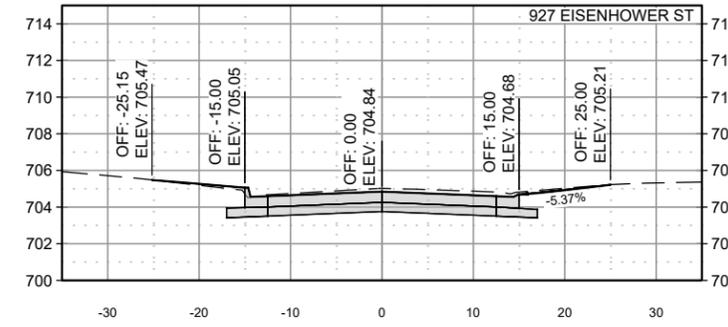
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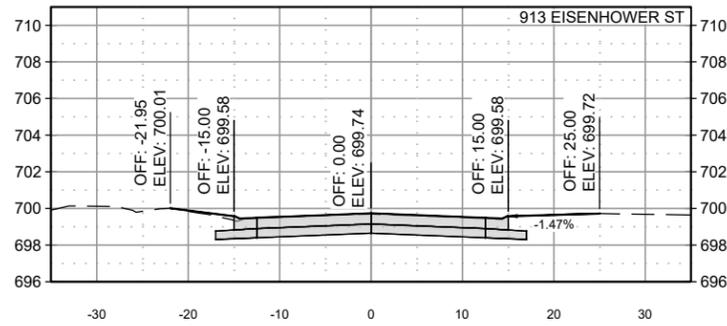
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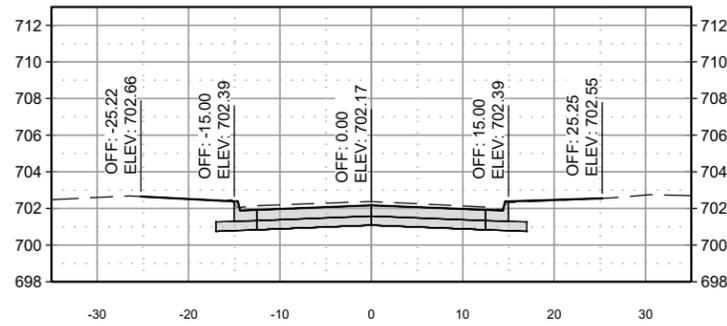
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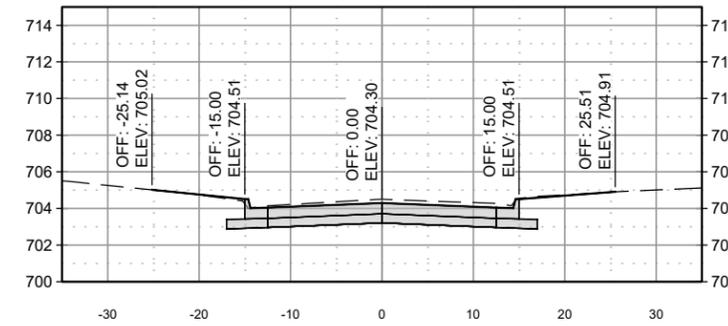
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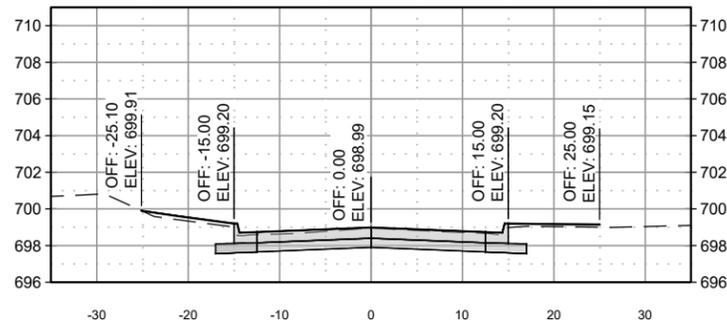
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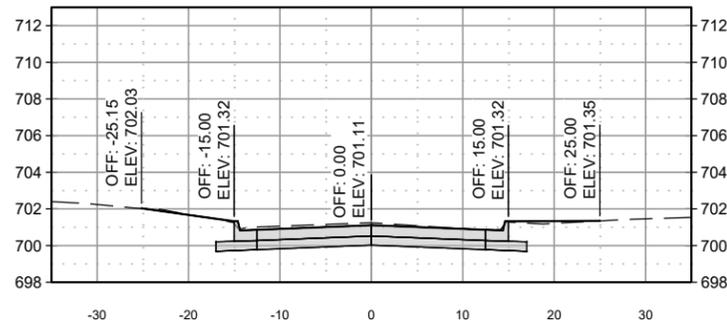
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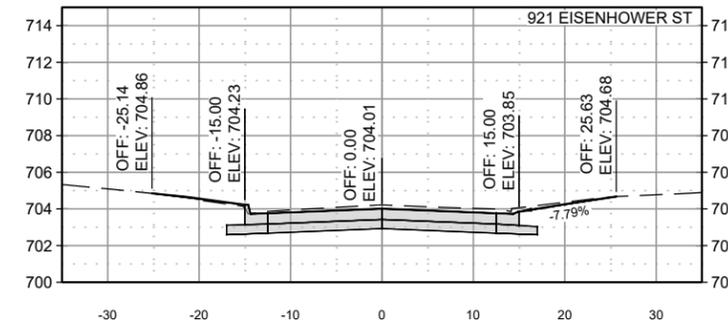
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3102+75.00



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NO.	REVISIONS	DSGN	CHKD	APVD	DATE



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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

PAVEMENT CROSS SECTIONS
EISENHOWER STREET - SHEET 2

DESIGNED	PM JOHNSON	SCALE:	1" = 20'
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	KK HEIM		
APPROVED	PM JOHNSON		
DATE	MARCH 12, 2025		

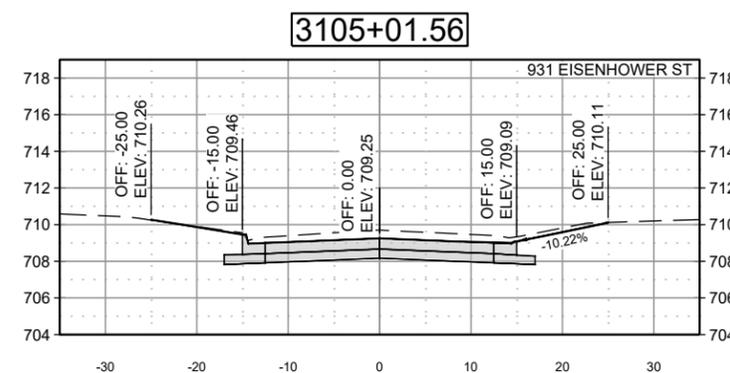
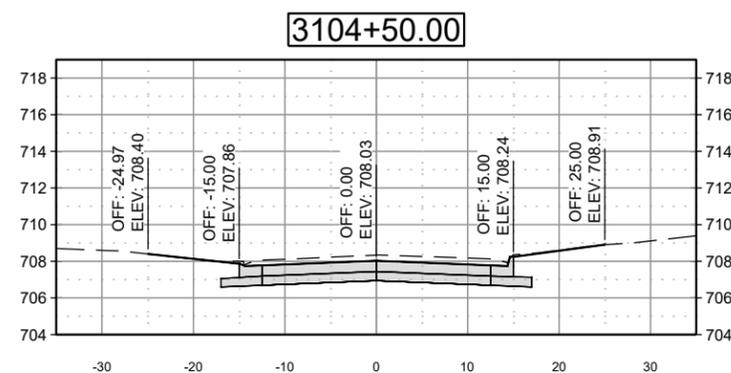
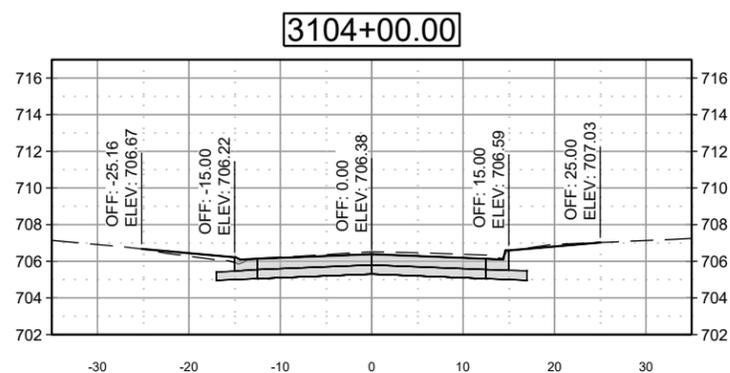
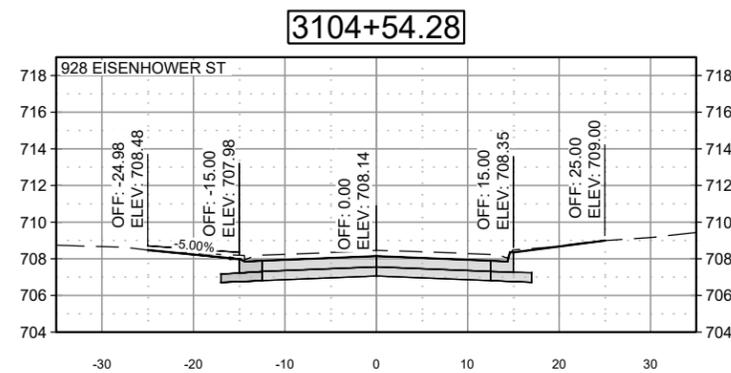
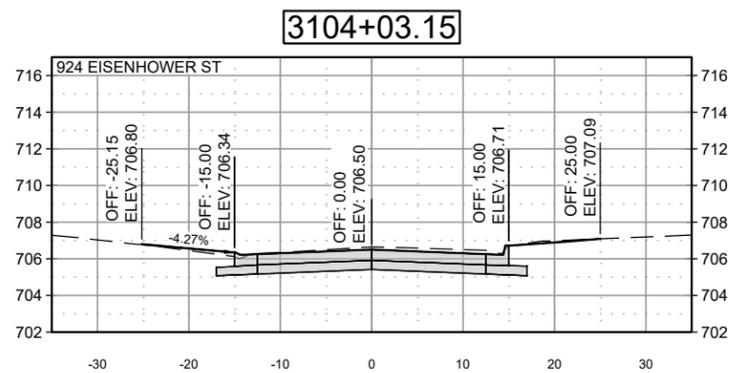
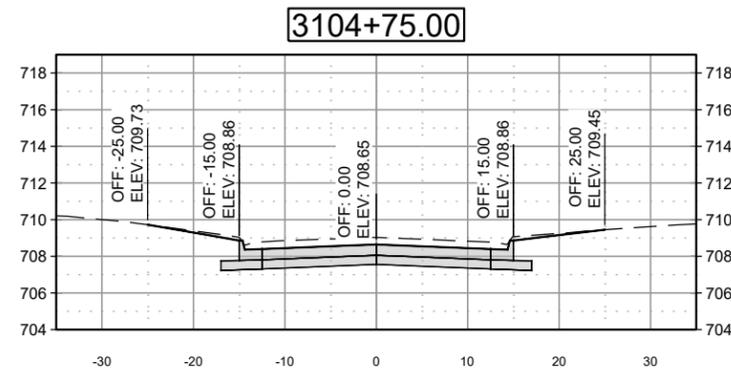
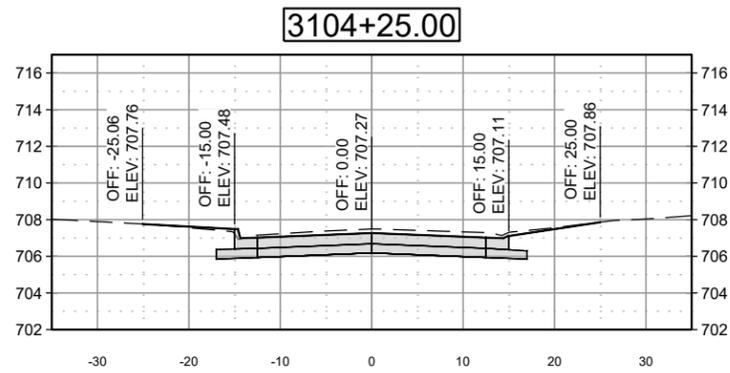
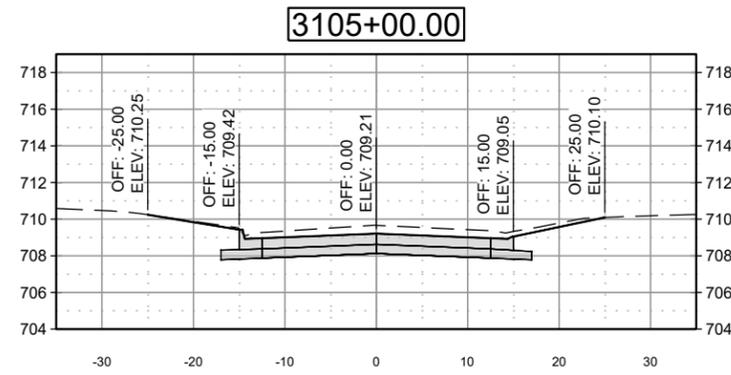
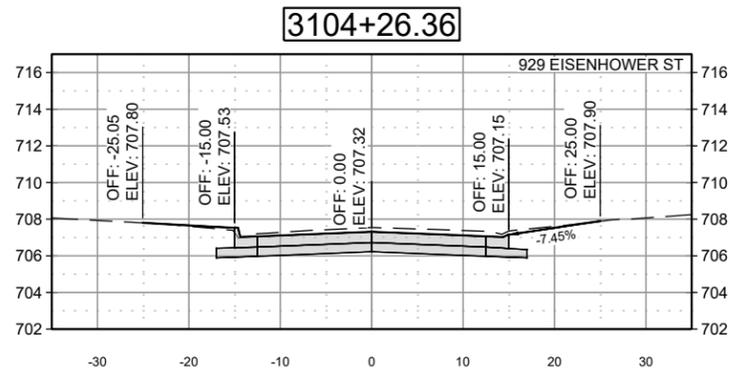


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NO.	REVISIONS	DSGN	CHKD	APVD	DATE



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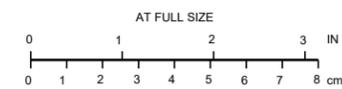
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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

PAVEMENT CROSS SECTIONS
EISENHOWER STREET - SHEET 3

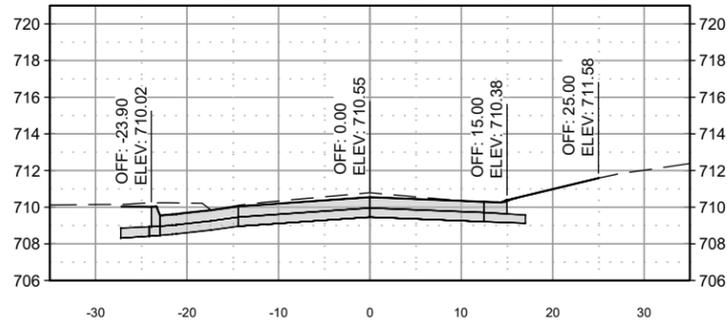
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DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	KK HEIM		
APPROVED	PM JOHNSON		
DATE	MARCH 12, 2025		

W.13 0

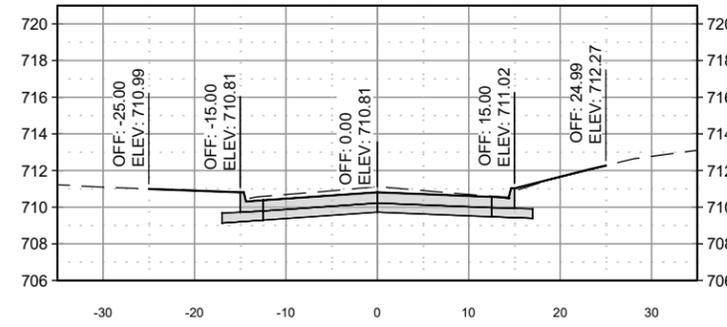


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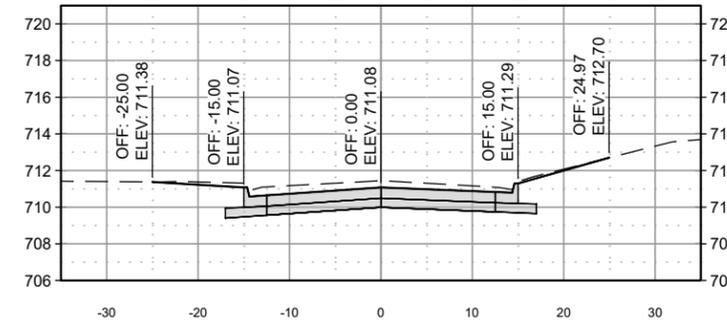
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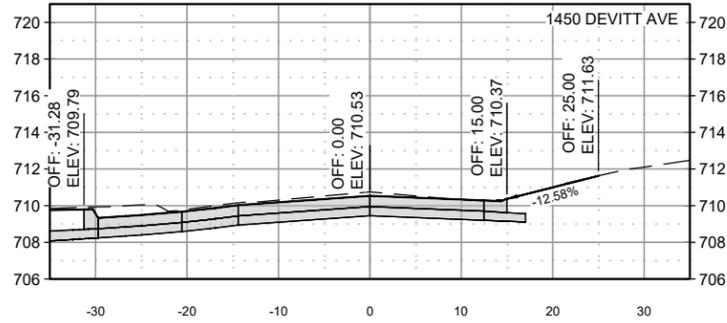
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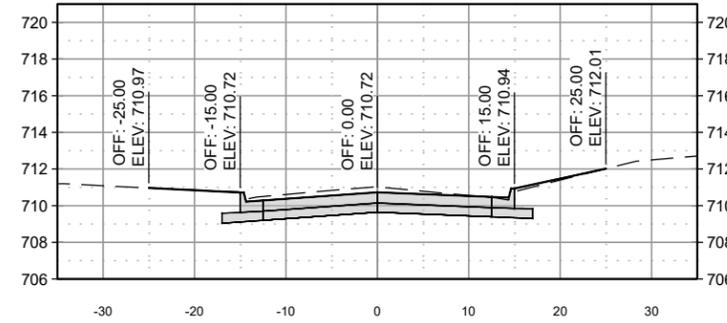
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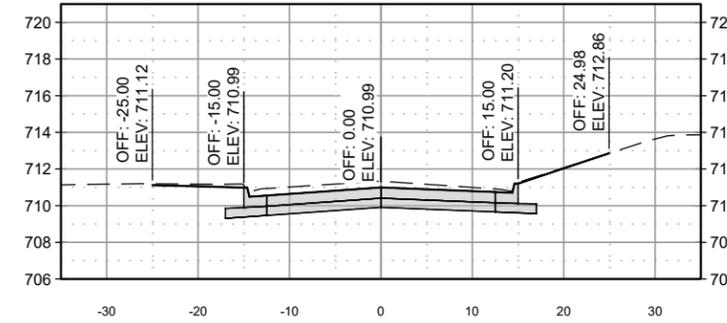
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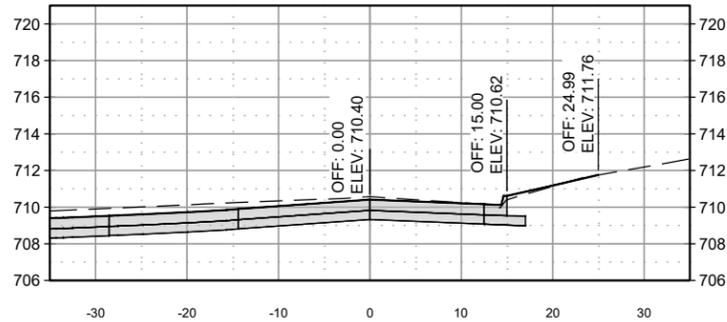
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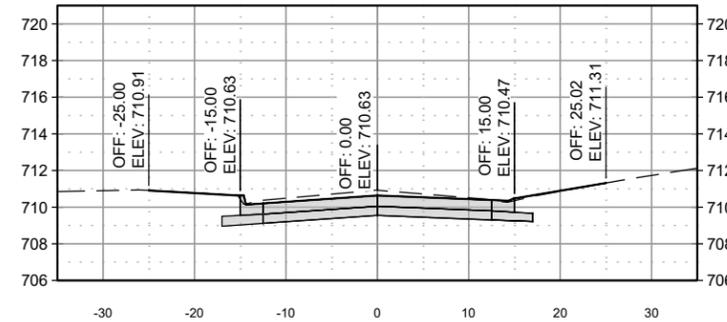
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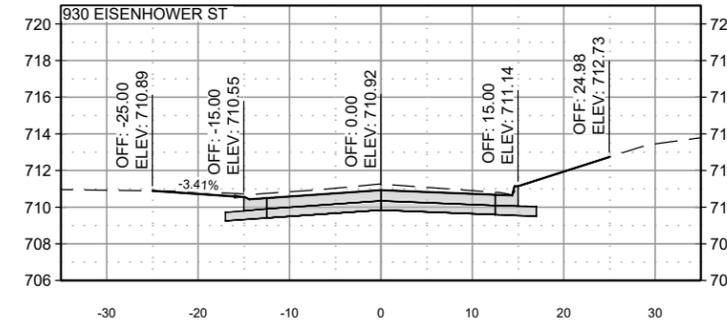
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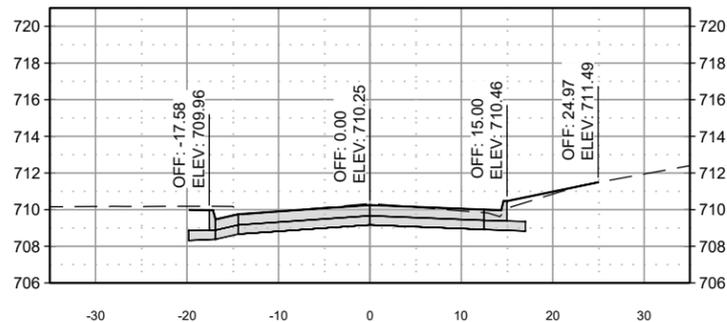
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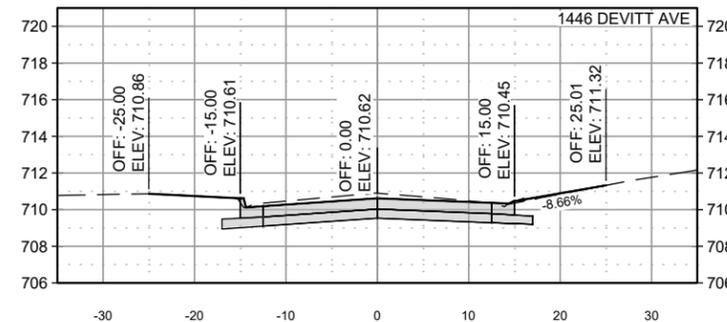
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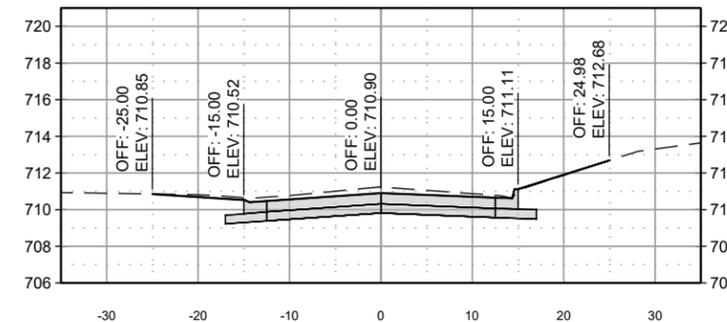
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3201+20.17



3202+00.00



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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

PAVEMENT CROSS SECTIONS
DEVITT AVENUE - SHEET 1

DESIGNED	PM JOHNSON	SCALE:	1" = 20'
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	KK HEIM		
APPROVED	PM JOHNSON		
DATE	MARCH 12, 2025		

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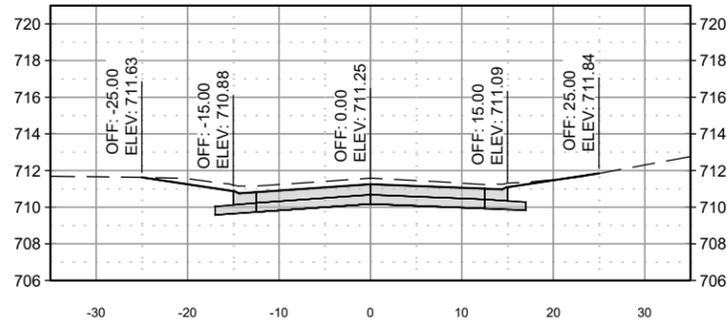
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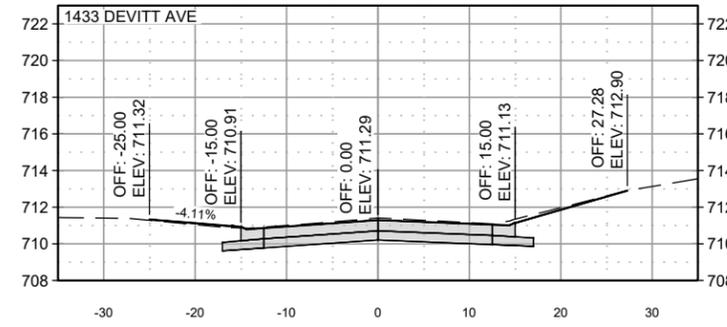
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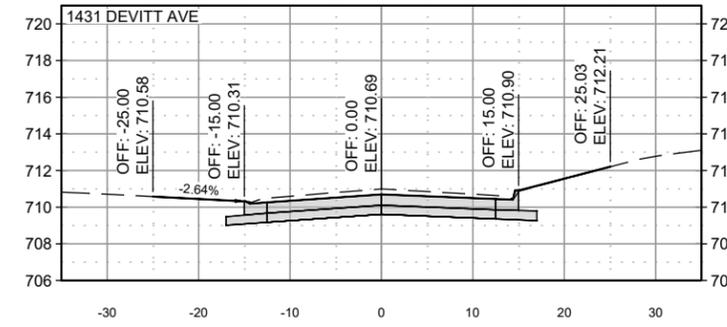
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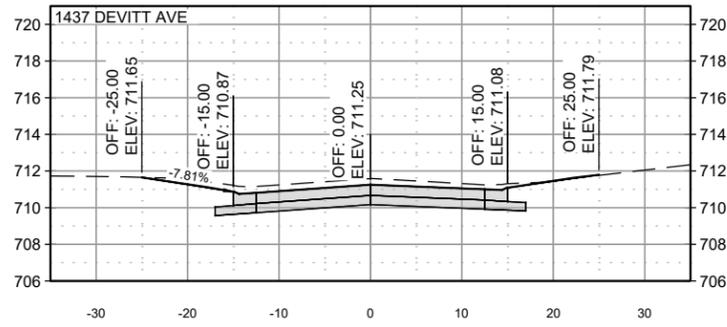
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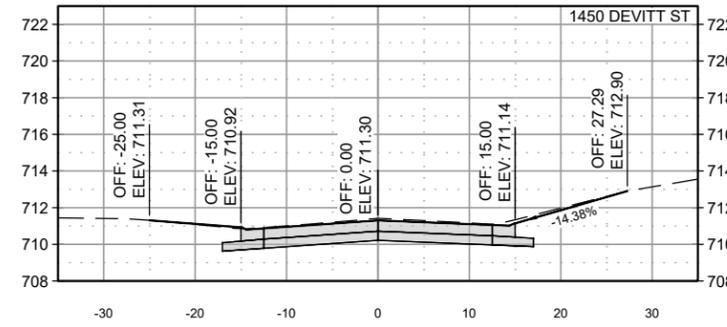
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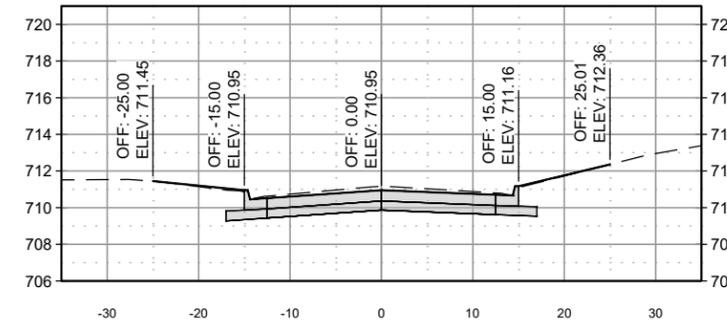
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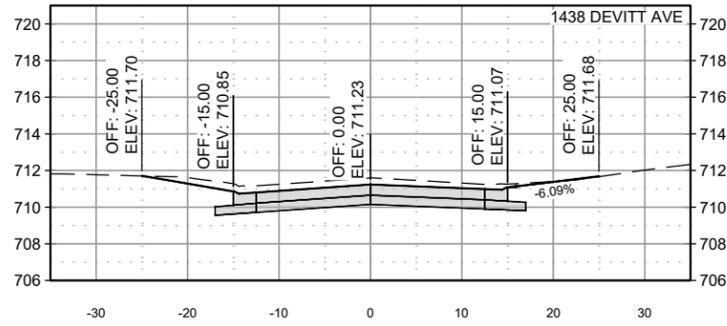
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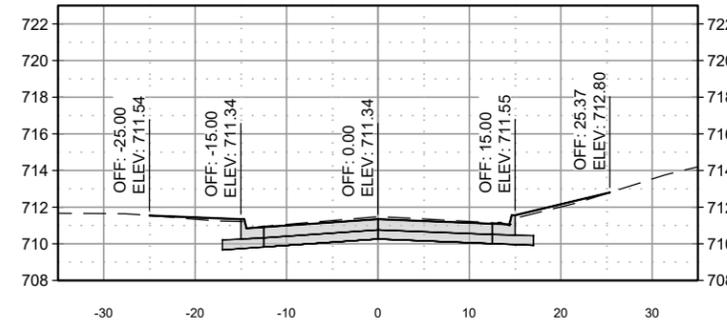
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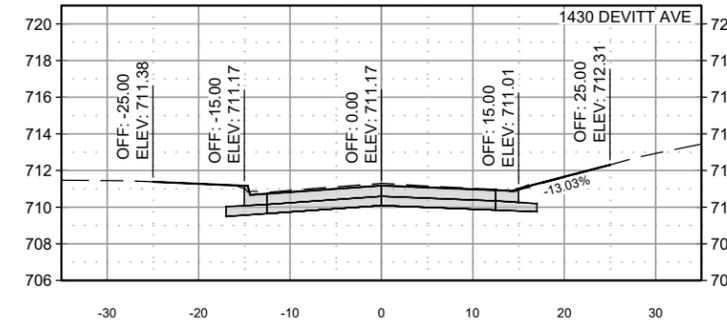
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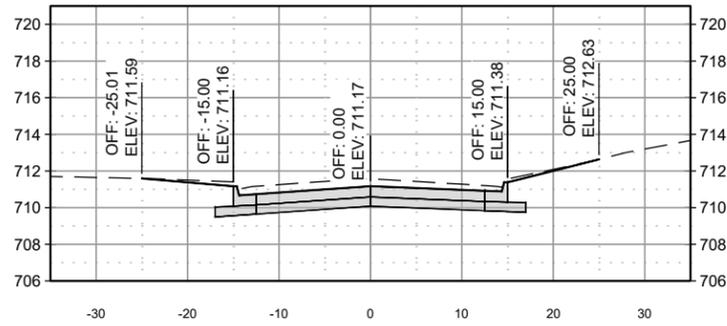
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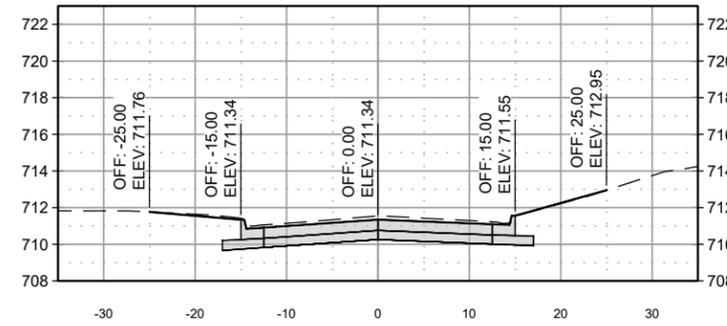
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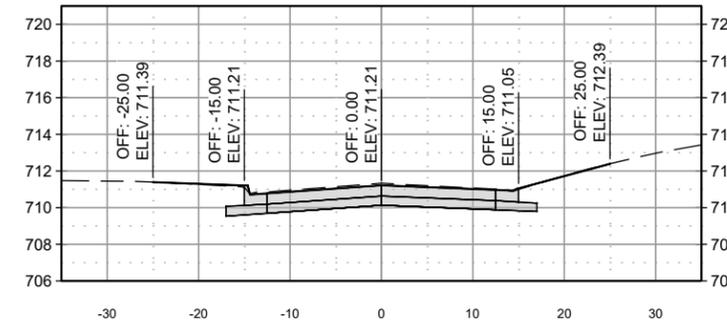
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NO.	REVISIONS	DSGN	CHKD	APVD	DATE

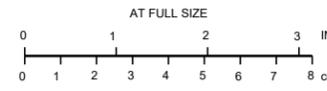


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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

PAVEMENT CROSS SECTIONS
DEVITT AVENUE - SHEET 2

DESIGNED	PM JOHNSON	SCALE:	1" = 20'
DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	KK HEIM		
APPROVED	PM JOHNSON		
DATE	MARCH 12, 2025		



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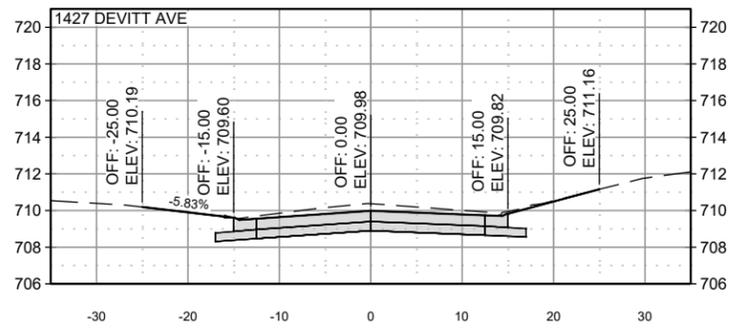
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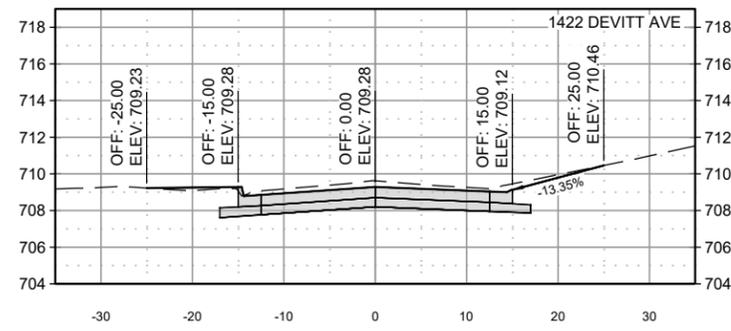
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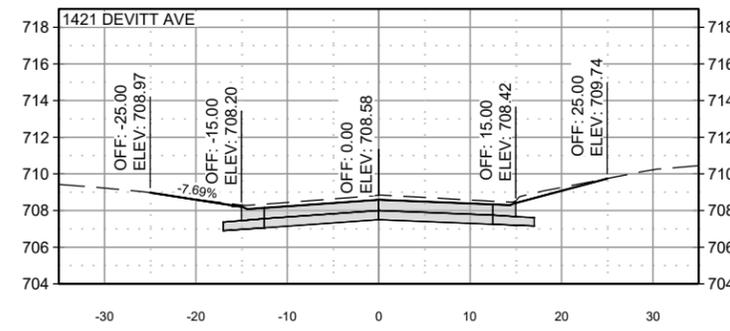
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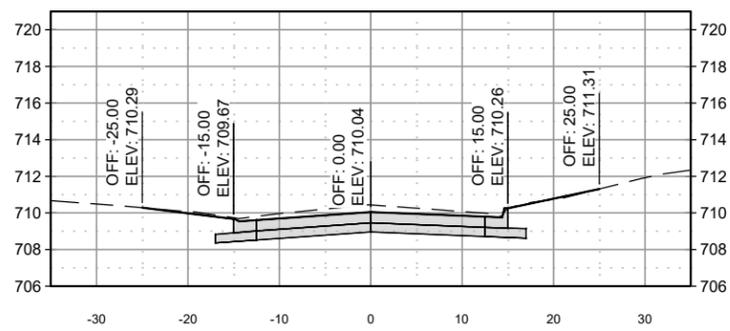
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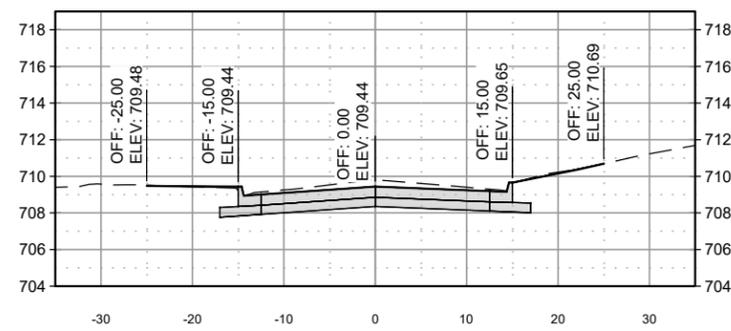
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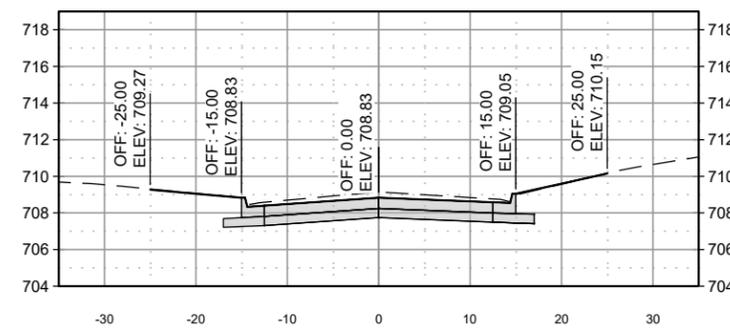
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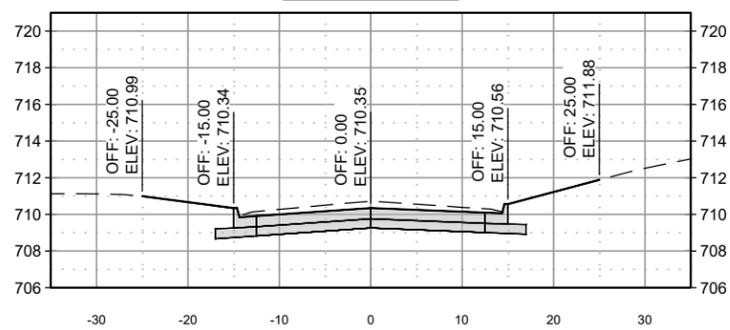
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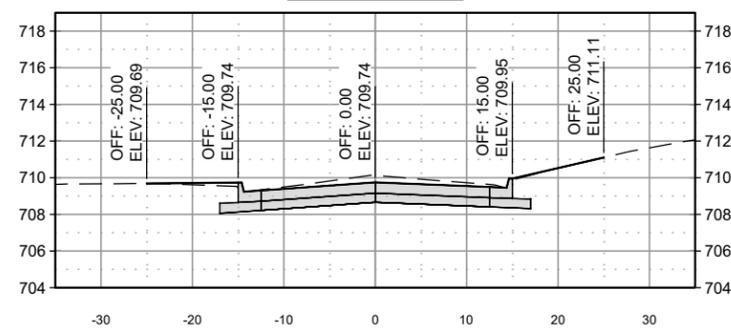
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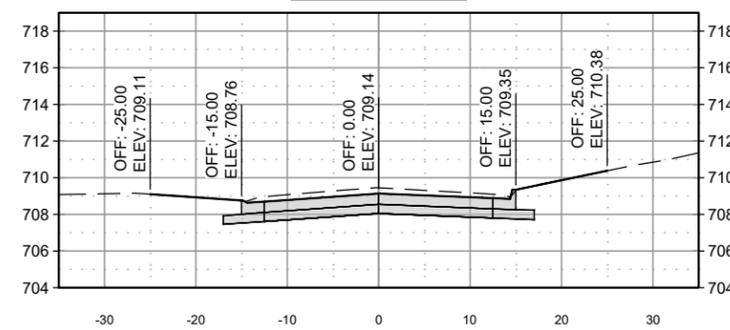
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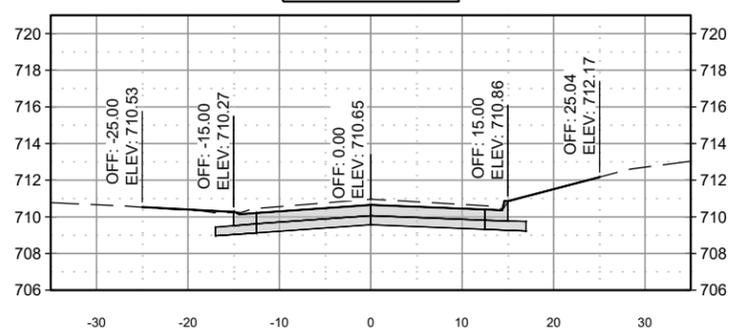
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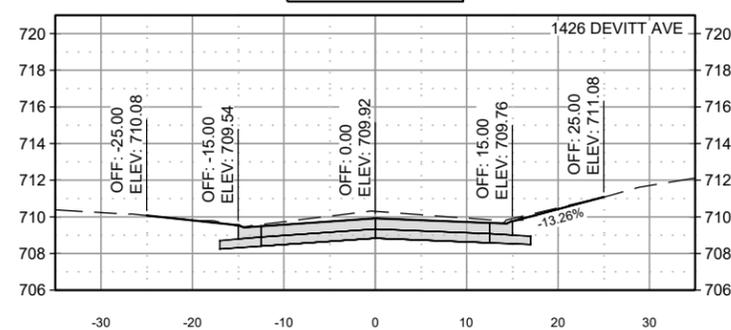
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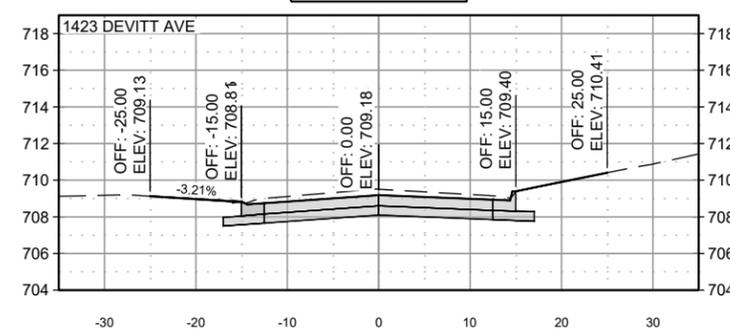
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NO.	REVISIONS	DSGN	CHKD	APVD	DATE



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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**PAVEMENT CROSS SECTIONS
DEVITT AVENUE - SHEET 3**

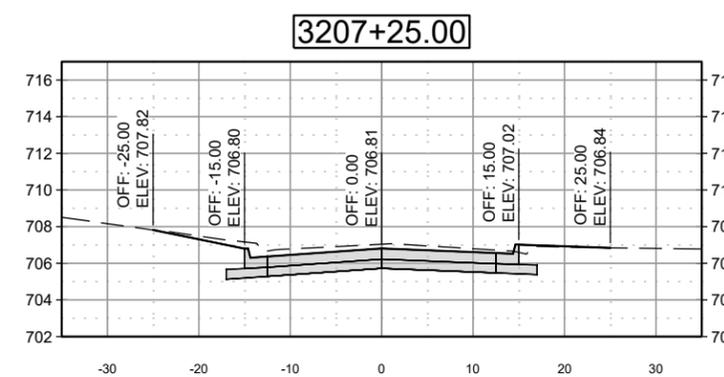
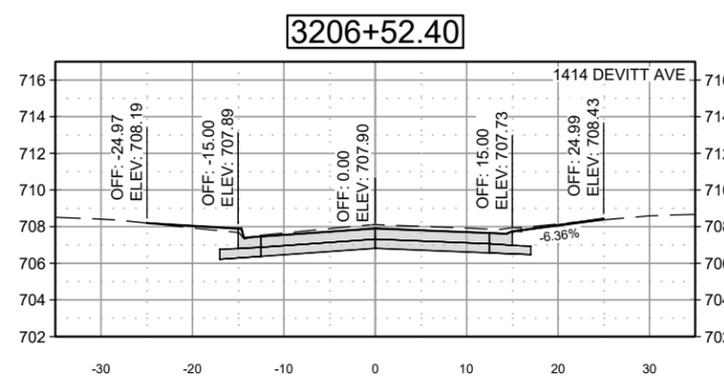
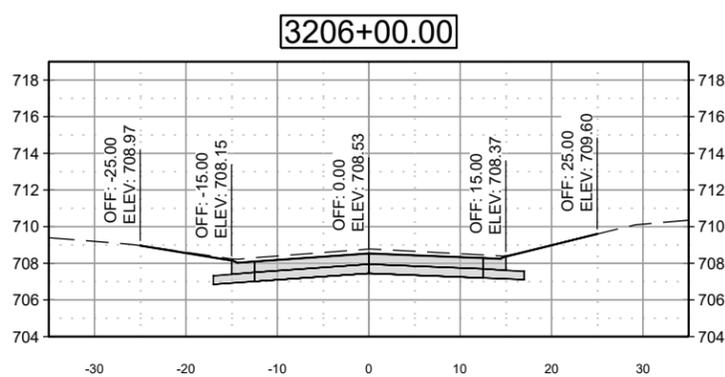
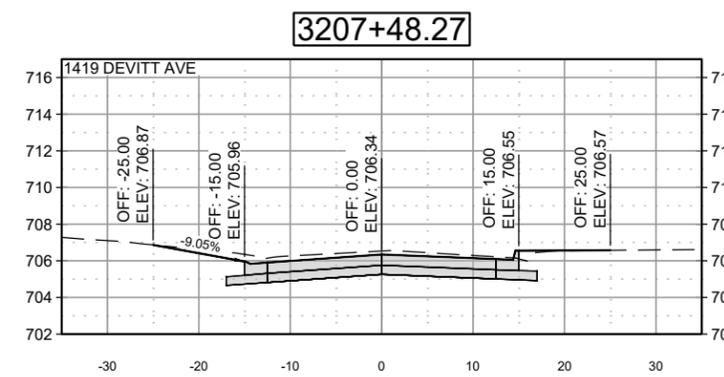
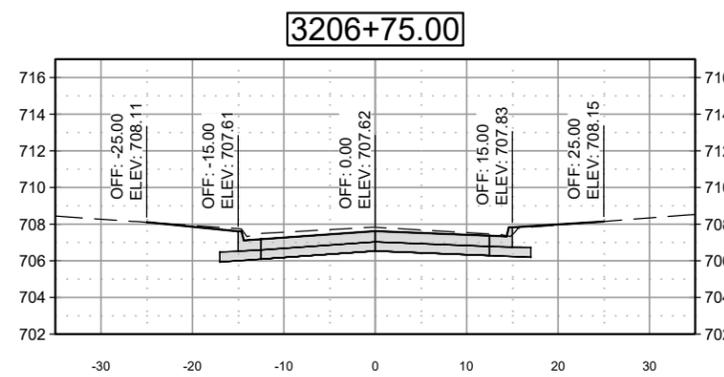
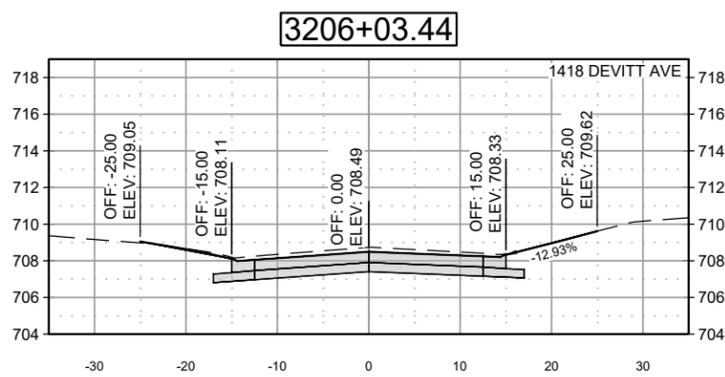
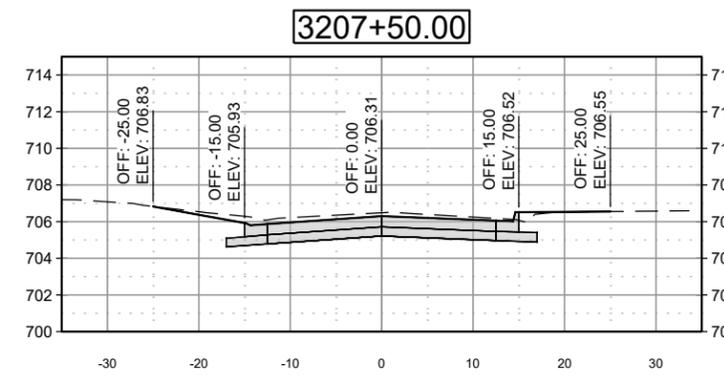
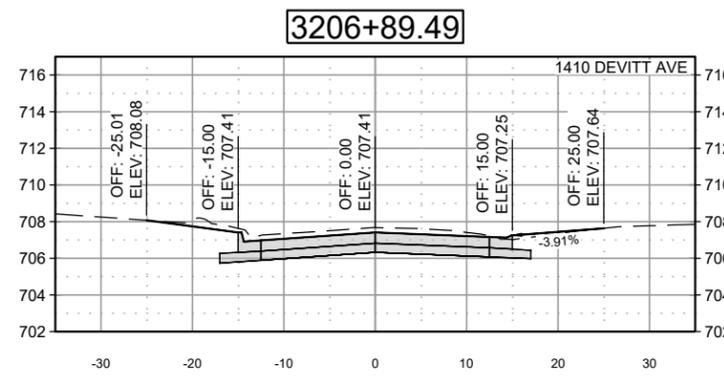
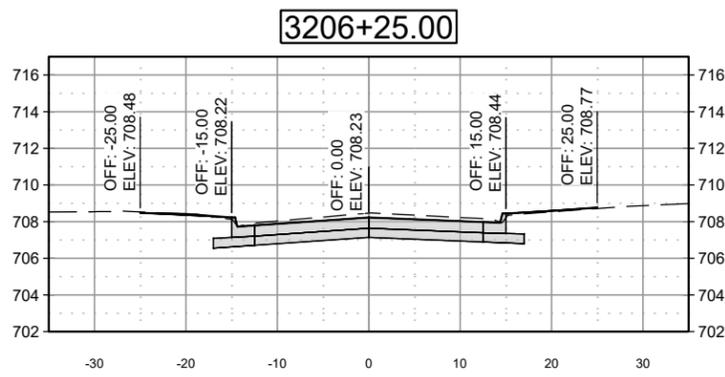
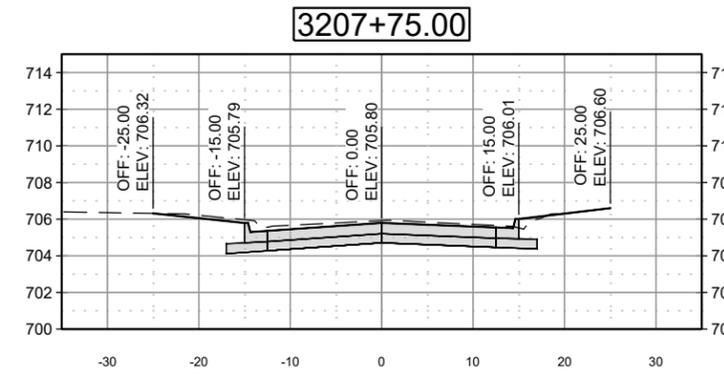
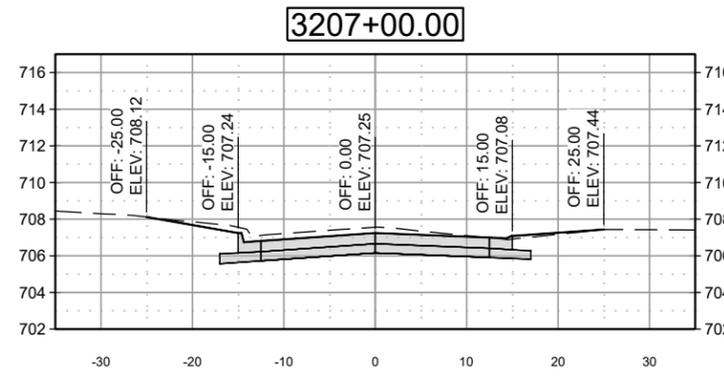
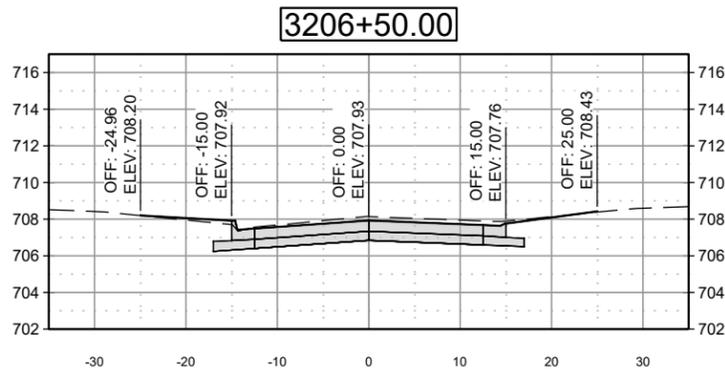
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DRAWN	GM REEVES	NO.	17660.60.30
CHECKED	ER SCHALLERT	REV.	
APPROVED	KK HEIM		
APPROVED	PM JOHNSON		
DATE	MARCH 12, 2025		

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LADD D3-RS

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NO.	REVISIONS	DSGN	CHKD	APVD	DATE

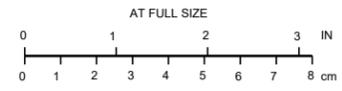


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CITY OF MUSCATINE - PHASE 6D
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MUSCATINE, IOWA

**PAVEMENT CROSS SECTIONS
DEVITT AVENUE - SHEET 4**

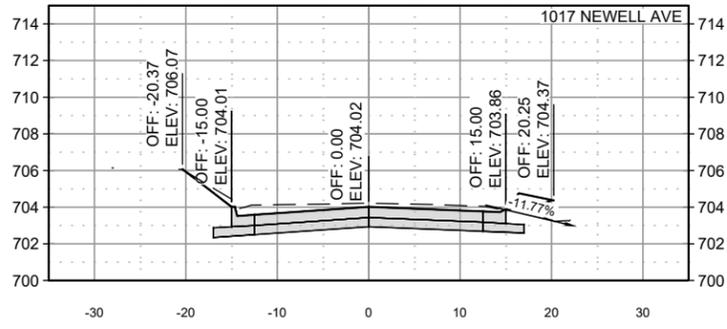
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DRAWN	GM REEVES	NO. 17660.60.30
CHECKED	ER SCHALLERT	REV.
APPROVED	KK HEIM	W.17
APPROVED	PM JOHNSON	0
DATE	MARCH 12, 2025	



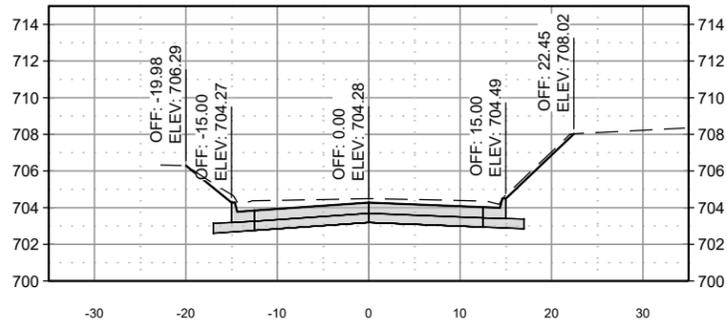
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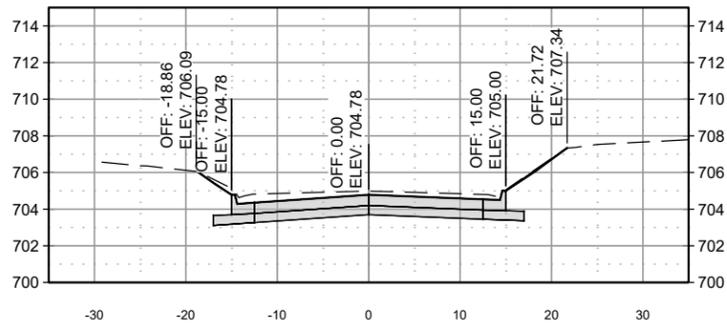
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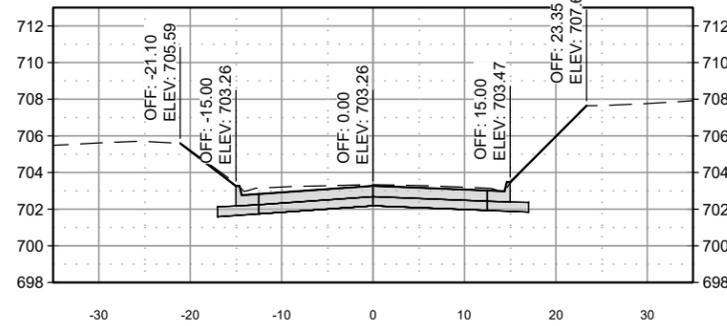
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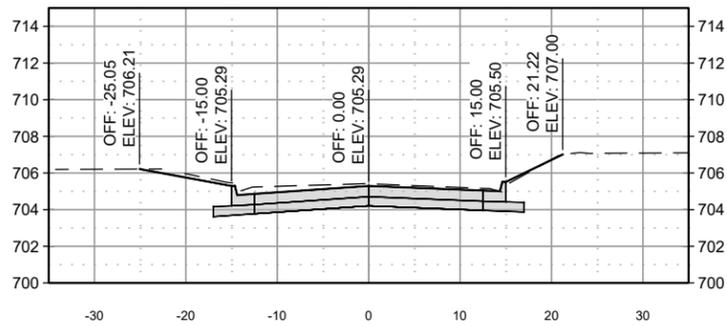
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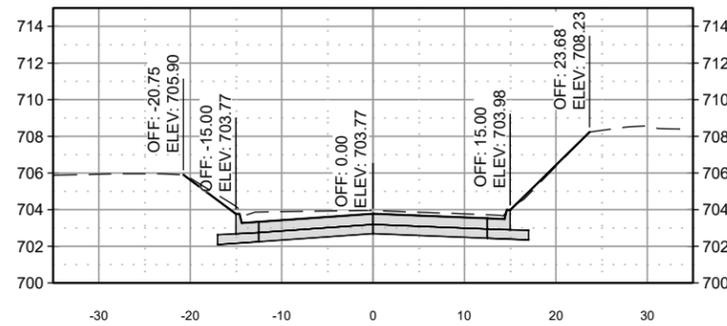
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3208+00.00



3208+75.00



NO.	REVISIONS	DSGN	CHKD	APVD	DATE



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CITY OF MUSCATINE - PHASE 6D
WEST HILL AREA SANITARY AND STORM SEWER SEPARATION
MUSCATINE, IOWA

**PAVEMENT CROSS SECTIONS
DEVITT AVENUE - SHEET 5**

DESIGNED	PM JOHNSON	SCALE: 1" = 20'
DRAWN	GM REEVES	NO. 17660.60.30
CHECKED	ER SCHALLERT	REV.
APPROVED	KK HEIM	W.18
APPROVED	PM JOHNSON	0
DATE	MARCH 12, 2025	



LOAD D3-RS