

20TH AVENUE NORTH WATER MAIN IMPROVEMENTS

FORT DODGE, IOWA



building strong communities.

705 First Avenue North
Fort Dodge, Iowa 50501
515-576-7155
fax 515-576-4235

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I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

Austyn K. Wolfe 5/23/17
AUSTYN K. WOLFE, PE NO. 23779

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2017

PAGES OR SHEETS COVERED BY THIS SEAL:

ALL DRAWINGS THIS PLAN SET

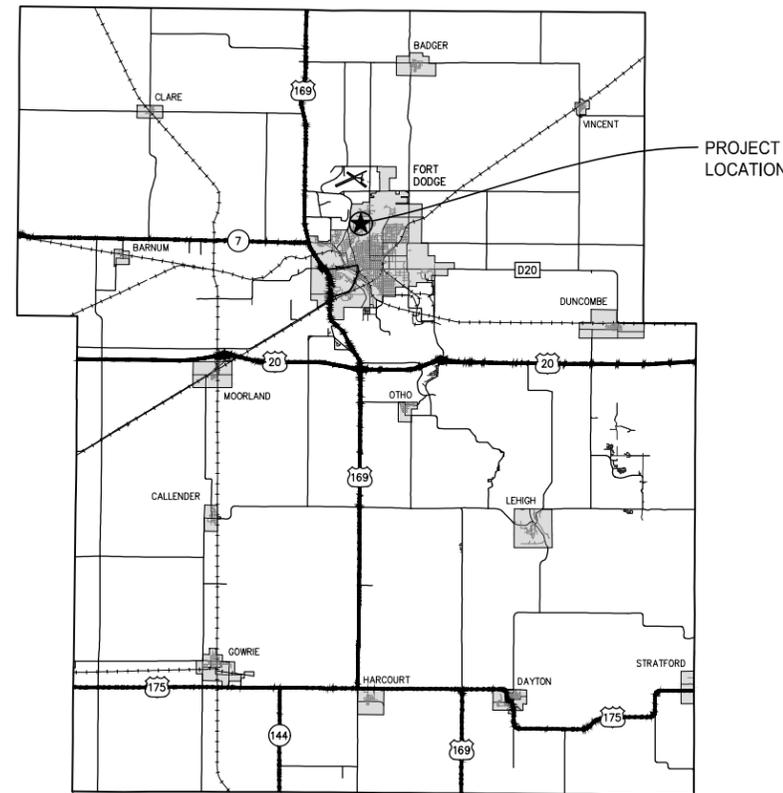
20TH AVENUE NORTH
WATER MAIN
IMPROVEMENTS
FORT DODGE, IOWA
FTD 10317001
APRIL 2017

REVISIONS
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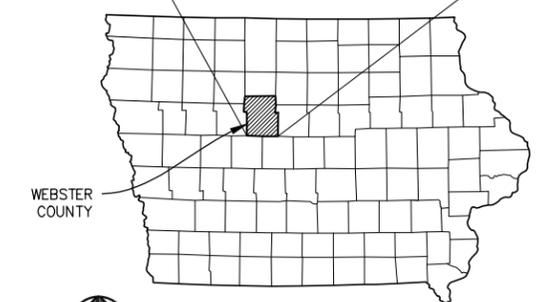
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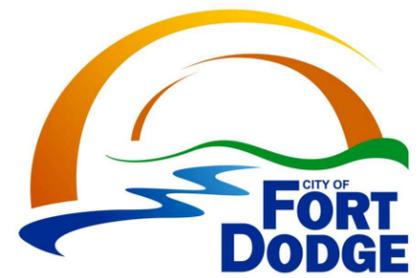
DRAWING NO.: A.1 SHEET NO.: 01 / 17



WEBSTER COUNTY MAP
NORTH
NO SCALE



IOWA STATE MAP
NORTH
NO SCALE



MAYOR AND CITY COUNCIL

- MATT BEMRICH (MAYOR)
ANDY FRITZ
DAVID FLATTERY
DEAN HILL
JEFFREY HALTER
KIM ALSTOTT
NEVEN CONRAD
TERRY MOEHNKE

CITY CLERK

JEFF NEMMERS

CITY ENGINEER

CHAD SCHAEFFER, P.E.
TONY TROTTER, P.E.

CITY MANAGER

DAVID FIERKE

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The 2017 Edition of the Iowa Statewide Urban Design and Specifications (SUDAS) for Public Improvements Manual shall apply to all work on this project except as modified herein.



1-800-292-8989
www.iowaonecall.com



UTILITIES

THE CONTRACTOR SHALL NOTIFY IOWA ONE CALL NO LESS THAN 48 HRS. IN ADVANCE OF ANY DIGGING OR EXCAVATION.

WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK.

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GENERAL NOTES:

- THE LOCATION OF KNOWN EXISTING UNDERGROUND UTILITIES ARE SHOWN ON THE DRAWINGS AND ARE BELIEVED TO BE ESSENTIALLY CORRECT. NO GUARANTEE IS MADE RELATIVE TO THE COMPLETENESS OR ACCURACY AND THE CONTRACTOR IS REQUIRED TO CONTACT THE REGISTERED UTILITY PROTECTION SERVICE AND THE OWNERS OF EACH UNDERGROUND UTILITY FIXTURE/SYSTEM SHOWN ON THE DRAWINGS AT LEAST THREE WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION IN ANY AREA.
- ALL EXISTING UTILITIES, SERVICES, POLES, AND CONNECTIONS SHALL BE PROTECTED AT THE CONTRACTOR'S EXPENSE. IF DAMAGE IS CAUSED BY CONSTRUCTION TO ANY EXISTING UTILITY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR RESTORATION OF SAME, IN ACCORDANCE WITH THE DIRECTIONS OF THE ENGINEER.
- THE CONTRACTOR SHALL EXPOSE ALL UTILITIES, OR STRUCTURES PRIOR TO CONSTRUCTION TO VERIFY THE VERTICAL AND HORIZONTAL LOCATION OF THE UTILITY, OR STRUCTURE AND ITS EFFECT ON THE NEW CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE UTILITY OWNER.
- OSHA PROHIBITS CRANE AND BACKHOE OPERATIONS WITHIN 10 FEET OF ENERGIZED PRIMARY CONDUCTORS. TEMPORARY RELOCATION OF ELECTRICAL UTILITIES, INCLUDING RESTRAINT OF POLES, RELOCATION OF POLES, AND RUBBER COVERING OF ENERGIZED CONDUCTORS MAY BE REQUIRED. THE COORDINATION AND COST OF THESE SERVICES IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR MAY RESTRAIN POLES IF THE METHOD OF SUPPORT HAS BEEN SUBMITTED TO AND APPROVED BY THE UTILITY OWNER.
- ANY EXISTING PROPERTY CORNER PINS OR MONUMENTS DAMAGED OR DESTROYED BY CONSTRUCTION SHALL BE RESET BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE UPON COMPLETION OF THE PROJECT AND PRIOR TO FINAL PAYMENT. A CERTIFICATION SHALL BE FURNISHED BY A PROFESSIONAL LAND SURVEYOR, STATING THAT SAID PINS AND MONUMENTS HAVE BEEN RESTORED.
- ELEVATION BENCHMARKS ARE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ELEVATIONS AND DIMENSIONS AND MAKE ADJUSTMENTS ACCORDINGLY UNDER THE DIRECTION OF THE ENGINEER.
- REMOVE AND STOCKPILE ALL TOPSOIL PRIOR TO ANY EXCAVATION. TOPSOIL RESPREAD SHALL BE PLACED AT A MINIMUM THICKNESS OF 6 INCHES.
- THE CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL CONSTRUCTION DEBRIS INCLUDING, BUT NOT LIMITED TO, EXCESS SOIL, ROCK, OR ANY OTHER TYPE MATERIALS. THE CONTRACTOR SHALL NOT FILL ANY WETLANDS, LOW LANDS, FLOOD PLAINS, OR DRAINAGE WAYS WITH SAID DEBRIS WITHOUT OBTAINING PROPER APPROVALS, PERMITS, LICENSES, ETC. FROM LOCAL, STATE, OR FEDERAL AGENCIES.
- ALL DISTURBED AREAS OUTSIDE OF THE WALKS, DRIVES, AND STRUCTURES SHALL BE SEEDED AND MULCHED AFTER THE AREAS HAVE BEEN FINISHED, GRADED, AND TOPSOIL HAS BEEN ADDED. FINAL SEEDING AND MULCHING SHALL BE IN ACCORDANCE WITH SUDAS SPECIFICATIONS.
- THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO MAINTAIN ALL ROADWAYS BEING USED NEAR THE CONSTRUCTION SITE.
- RESTORE DISTURBED AREAS TO PRECONSTRUCTION CONDITION.
- CONTRACTOR SHALL PROVIDE ONE MARK-UP SET OF RECORD DRAWINGS TO THE OWNER AT THE COMPLETION OF THE PROJECT. THE MARK-UP SET MUST BE NEAT AND LEGIBLE AND MUST DOCUMENT ALL DEVIATIONS FROM THE ORIGINAL CONTRACT DOCUMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY UTILITIES AS REQUIRED FOR COMPLETION OF WORK AT ANY NEW OR EXISTING STRUCTURE.
- NEW PAVEMENT SHALL BE CONSTRUCTED WITH UNIFORM TRANSITION BETWEEN SPOT ELEVATIONS.
- THE CONTRACTOR SHALL ENSURE THAT ALL WATER AND SANITARY PIPE ENDS SHALL BE CLOSED WITH A WATERTIGHT PLUG AT ANY TIME THE SITE IS NOT OCCUPIED.
- THE CONTRACTOR SHALL PROVIDE SUPPORT TO ANY EXISTING UTILITY OR SERVICE LINE THAT IS EXPOSED IN AN OPEN TRENCH.
- NO TREES OR SHRUBS SHALL BE REMOVED UNLESS APPROVED BY THE ENGINEER AND OWNER. ANY REMOVALS ARE INCIDENTAL TO THE MOBILIZATION BID ITEM.
- ALL TRENCHES SHALL BE BACKFILLED AT THE END OF EACH WORK DAY EXCLUDING THE END OF THE PIPE WHERE WORK WILL BEGIN THE NEXT DAY.
- ALL OPEN TRENCHES EXCEEDING 6 FEET IN DEPTH MUST BE PROTECTED BY ORANGE SAFETY FENCE WHEN THE SITE IS NOT OCCUPIED.

PIPING NOTES:

- ALL GRAVITY PIPING SHALL BE SLOPED UNIFORMLY BETWEEN GIVEN ELEVATIONS UNLESS APPROVED OTHERWISE. WHERE UNIFORMLY SLOPED PIPING IS NOT FEASIBLE, THE CONTRACTOR SHALL PROVIDE VERTICAL BEND OR OFFSETS AS NECESSARY. REALIGNMENT SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
- DISTURBED AREAS THROUGH NEW AND EXISTING SEEDED AREAS SHALL BE GRADED AND SEEDED AS SPECIFIED.
- WATER MAIN PIPING SHALL HAVE A MINIMUM COVER OF 5 FEET 6 INCHES UNLESS SHOWN OTHERWISE.
- LOCATIONS OF EXISTING PIPING, AS SHOWN ON PLANS, ARE DETERMINED FROM FIELD SURVEYS AND AVAILABLE RECORDS, AND ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY, AS NECESSARY, IF NEW ALIGNMENT CONFLICTS WITH THE EXISTING PIPING THE CONTRACTOR SHALL SUBMIT REVISED LAYOUT TO ENGINEER FOR APPROVAL PRIOR TO PROCEEDING WITH INSTALLATION.
- AT SANITARY SEWER AND STORM CROSSINGS, WATER PIPE SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SEWER CROSSING AS POSSIBLE.
- A MINIMUM 18-INCH VERTICAL CLEARANCE (MEASURED OUT-TO-OUT CLEAR) BETWEEN ANY NEW WATER LINE AND ANY EXISTING STORM SEWER OR CULVERT MUST BE MAINTAINED.
- A MINIMUM 18-INCH VERTICAL CLEARANCE (MEASURED OUT-TO-OUT CLEAR) BETWEEN ANY NEW WATER LINE AND ANY EXISTING SANITARY SEWER MUST BE MAINTAINED.

GENERAL DEMOLITION NOTES:

- OWNER HAS FIRST RIGHT OF REFUSAL ON ALL MATERIAL AND EQUIPMENT REMOVED.
- ALL CONCRETE TO BE DEMOLISHED SHALL BE ASSUMED TO BE STEEL REINFORCED THROUGHOUT.
- CONTRACTOR SHALL FIELD VERIFY LOCATIONS, DIMENSIONS, AND SIZES OF ALL ITEMS BEFORE BEGINNING WORK.

GENERAL LEGEND

EXISTING / PROPOSED		EXISTING / PROPOSED		EXISTING / PROPOSED	
	SANITARY SEWER MAIN		SANITARY SEWER MANHOLE		BOLLARD (BUMPER POST)
	SANITARY SEWER SERVICE		SANITARY SEWER CLEANOUT		ROADWAY SIGN
	SANITARY SEWER FORCE MAIN		AIR RELEASE MANHOLE/RAIN MANHOLE		MAILBOX
	STORM SEWER MAIN OR CULVERT		STORM SEWER MANHOLE		WELL
	SECONDARY STORM SEWER MAIN		STORM SEWER CLEANOUT		DECIDUOUS TREE
	SECONDARY STORM SEWER SERVICE		STORM SEWER INTAKE		EVERGREEN TREE
	WATER MAIN		STORM SEWER BEEHIVE INTAKE		SHRUB OR BUSH
	WATER SERVICE		FLARED END SECTION		TREE OR SHRUB LINE
	UNDERGROUND ELECTRIC		FIRE HYDRANT		STUMP
	OVERHEAD ELECTRIC		WATER VALVE		MONITORING WELL
	UNDERGROUND TELEPHONE		WATER VALVE MANHOLE		SOIL BORINGS
	UNDERGROUND FIBER OPTIC		CURB STOP		FLAG POLE
	UNDERGROUND CABLE TV		WATER METER MANHOLE		SATELLITE DISH
	GAS MAIN OR SERVICE		YARD HYDRANT		SLOPE INDICATORS
	EXISTING PIPE ABANDONED IN PLACE		ELECTRIC MANHOLE / VAULT		CONTROL POINT
	EXISTING PIPE TO BE REMOVED		ELECTRIC PEDESTAL / TRANSFORMER		BENCH MARK
	CONTOUR LINES INTERMEDIATE		OUTDOOR ELECTRIC POWER OUTLET		SECTION CORNER
	CONTOUR LINES INDEX		POWER POLE		IRON PIN SET
	PROPERTY LINE / LOT LINE		POWER POLE w/ STREET LIGHT		IRON PIN FOUND
	SECTION LINE		STREET LIGHT POLE		DRAWING NUMBER
	EASEMENT		GUY WIRE		
	GUARD RAIL		TRAFFIC SIGNAL		
	FIELD FENCE		TRAFFIC SIGNAL BOX		
	CHAIN LINK FENCE		TRAFFIC SIGNAL MANHOLE / VAULT		
	WOODEN FENCE		RAILROAD CROSSING SIGNAL		
	ROAD CENTERLINE		TELEPHONE MANHOLE / VAULT		
	GRADING LIMITS		TELEPHONE PEDESTAL		
	CONSTRUCTION LIMITS		CABLE TV MANHOLE / VAULT		
	AG LINE		CABLE TV PEDESTAL		
	WATERWAY FLOWLINE		GAS VALVE		
	TOP OF SLOPE				
	BOTTOM OF SLOPE				
	SILT FENCE				

ABBREVIATIONS

T/S	TOP OF SLAB
BC	BACK OF CURB
TC	TOP OF CURB
FL	FLOWLINE
CL	CENTERLINE
C	CUT
F	FILL
S	OFFSET
TOP	TOP OF SLOPE
BOT	BOTTOM OF SLOPE
EP	EDGE OF PAVING

EXISTING SUBSURFACE UTILITY DATA QUALITY LEVELS (DENOTED BY (A), (B), (C), OR (D) IN LINE CODE):

UTILITY QUALITY LEVEL (A) - PRECISE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES OBTAINED BY THE ACTUAL EXPOSURE (OR VERIFICATION OF PREVIOUSLY EXPOSED AND SURVEYED UTILITIES) AND SUBSEQUENT MEASUREMENT OF SUBSURFACE UTILITIES, USUALLY AT A SPECIFIC POINT. MINIMALLY INTRUSIVE EXCAVATION EQUIPMENT IS TYPICALLY USED TO MINIMIZE THE POTENTIAL FOR UTILITY DAMAGE. A PRECISE HORIZONTAL AND VERTICAL LOCATION, AS WELL AS OTHER UTILITY ATTRIBUTES, IS SHOWN ON PLAN DOCUMENTS. ACCURACY IS TYPICALLY SET TO 15-mm VERTICAL AND TO APPLICABLE HORIZONTAL SURVEY AND MAPPING ACCURACY AS DEFINED OR EXPECTED BY THE PROJECT OWNER.

UTILITY QUALITY LEVEL (B) - INFORMATION OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES. QUALITY LEVEL B DATA SHOULD BE REPRODUCIBLE BY SURFACE GEOPHYSICS AT ANY POINT OF THEIR DEPICTION. THIS INFORMATION IS SURVEYED TO APPLICABLE TOLERANCES DEFINED BY THE PROJECT AND REDUCED ONTO PLAN DOCUMENTS.

UTILITY QUALITY LEVEL (C) - INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION TO QUALITY LEVEL D INFORMATION.

UTILITY QUALITY LEVEL (D) - INFORMATION DERIVED FROM EXISTING RECORDS OR ORAL RECOLLECTIONS.

UTILITY COMPANIES		
SERVICE	SUPPLIER	PHONE
GAS	MIDAMERICAN ENERGY COMPANY 1608 FIRST AVE. S. FORT DODGE, IOWA 50501	800-329-6261
TELEPHONE	FRONTIER COMMUNICATIONS OF IOWA, INC. 600 FIRST AVE. N. FORT DODGE, IOWA 50501	515-955-6262
ELECTRIC	MIDAMERICAN ENERGY COMPANY 1608 FIRST AVE. S. FORT DODGE, IOWA 50501	800-329-6261
CABLE TV	MEDIACOM 3635 MAPLE DR. FORT DODGE, IOWA 50501	515-955-6100
WATER	CITY OF FORT DODGE 819 FIRST AVE. S. FORT DODGE, IOWA 50501	515-573-7156
SEWER	CITY OF FORT DODGE 819 FIRST AVE. S. FORT DODGE, IOWA 50501	515-573-7156
ALL	IOWA ONE-CALL	800-292-8989

EXISTING UTILITIES NOTE

THESE EXISTING UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS AND THEREFORE MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGING THEM. NO CLAIMS WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OF DELAY CAUSED BY SUCH WORK. PAYMENT WILL BE ALLOWED FOR UNCHARTED UTILITIES PER THE SPECIFICATIONS.



building strong communities.

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Fort Dodge, Iowa 50501
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fax 515-576-4235

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GENERAL LEGEND AND NOTES

20TH AVENUE NORTH WATER MAIN IMPROVEMENTS
FORT DODGE, IOWA
FTD 10317001
APRIL 2017

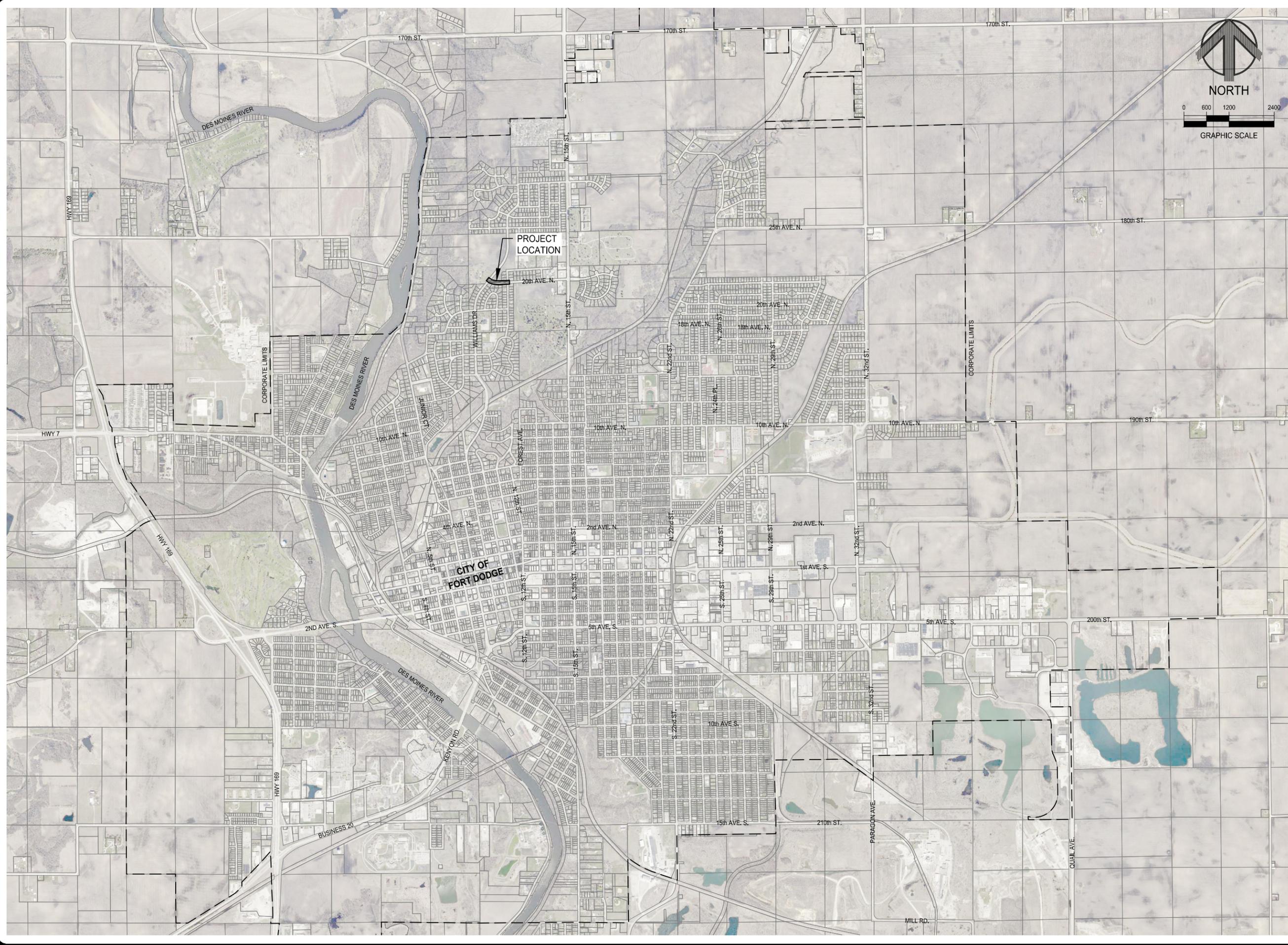
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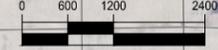
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SHEET NO.: 02 / 17

A.2 02 / 17



NORTH



GRAPHIC SCALE

PROJECT LOCATION

CITY OF FORT DODGE



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PROJECT LOCATION MAP

20TH AVENUE NORTH
WATER MAIN
IMPROVEMENTS
FORT DODGE, IOWA
FTD 10317001
APRIL 2017

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CHECKED BY	FIELD BOOK NO.
AKW	-

DRAWING NO.	SHEET NO.
A.3	03 / 17

**OVERALL PROJECT
SITE PLAN
AND SURVEY CONTROL**

**20TH AVENUE NORTH
WATER MAIN
IMPROVEMENTS**
FORT DODGE, IOWA
FTD 10317001
APRIL 2017

REVISIONS

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DRAWING NO.	SHEET NO.
A.4	04 / 17

SURVEY CONTROL NOTES:

1. THE HORIZONTAL DATUM USED IS:
IOWA REGIONAL COORDINATE SYSTEM
ZONE 4: SIOUX CITY-IOWA FALLS
NORTH AMERICAN DATUM OF 1983 (NAD 83)
2. THE VERTICAL DATUM USED IS:
NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

★ SURVEY CONTROL POINTS

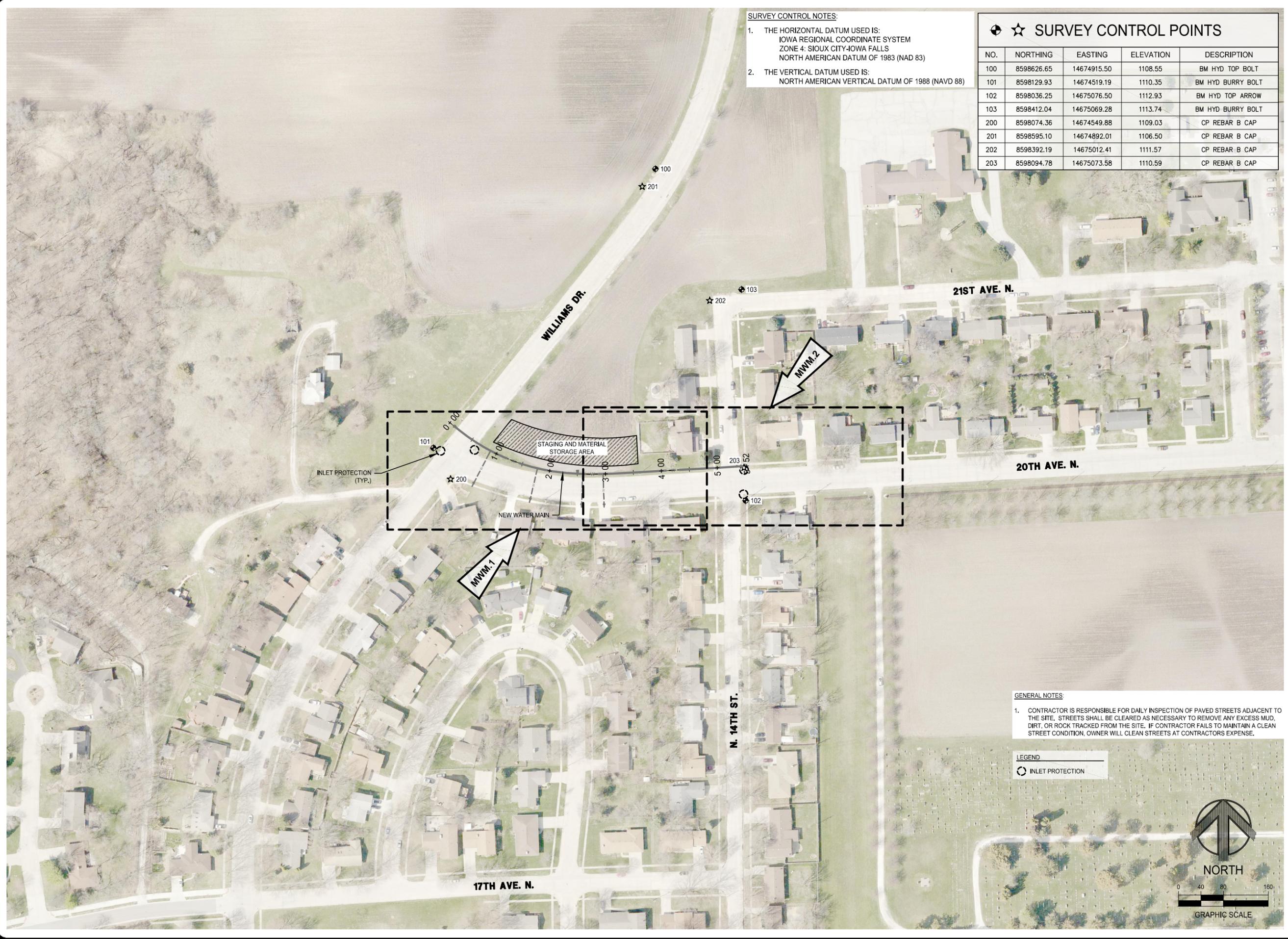
NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	8598626.65	14674915.50	1108.55	BM HYD TOP BOLT
101	8598129.93	14674519.19	1110.35	BM HYD BURRY BOLT
102	8598036.25	14675076.50	1112.93	BM HYD TOP ARROW
103	8598412.04	14675069.28	1113.74	BM HYD BURRY BOLT
200	8598074.36	14674549.88	1109.03	CP REBAR B CAP
201	8598595.10	14674892.01	1106.50	CP REBAR B CAP
202	8598392.19	14675012.41	1111.57	CP REBAR B CAP
203	8598094.78	14675073.58	1110.59	CP REBAR B CAP

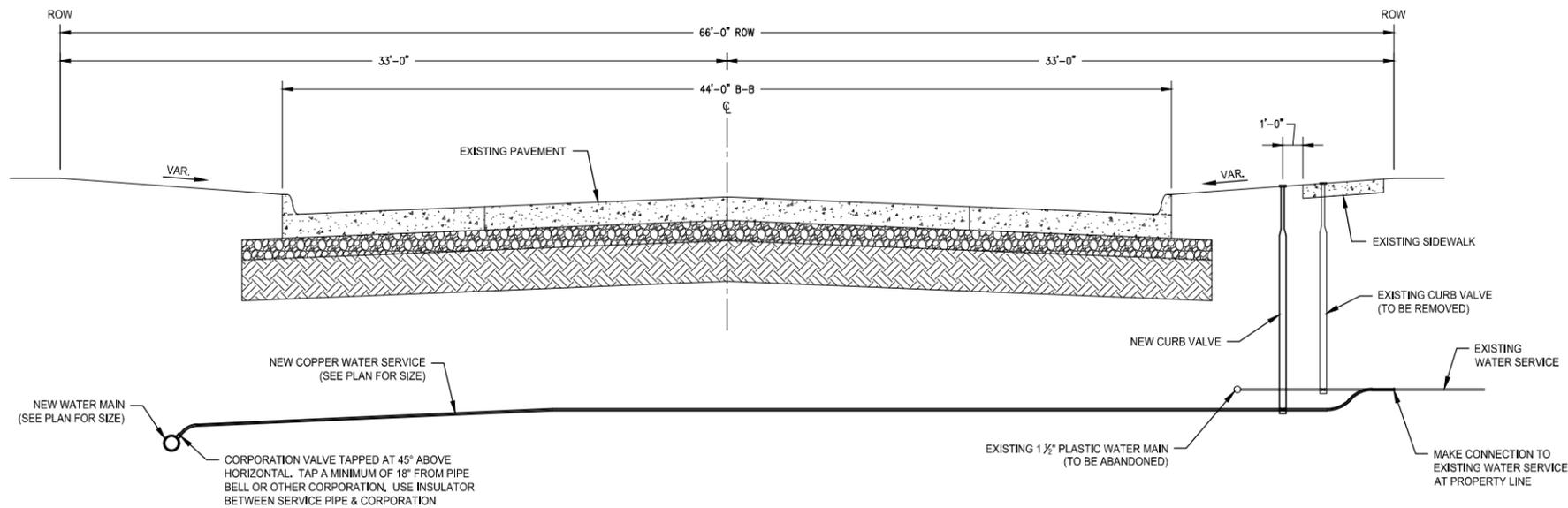
GENERAL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR DAILY INSPECTION OF PAVED STREETS ADJACENT TO THE SITE. STREETS SHALL BE CLEARED AS NECESSARY TO REMOVE ANY EXCESS MUD, DIRT, OR ROCK TRACKED FROM THE SITE. IF CONTRACTOR FAILS TO MAINTAIN A CLEAN STREET CONDITION, OWNER WILL CLEAN STREETS AT CONTRACTORS EXPENSE.

LEGEND

	INLET PROTECTION
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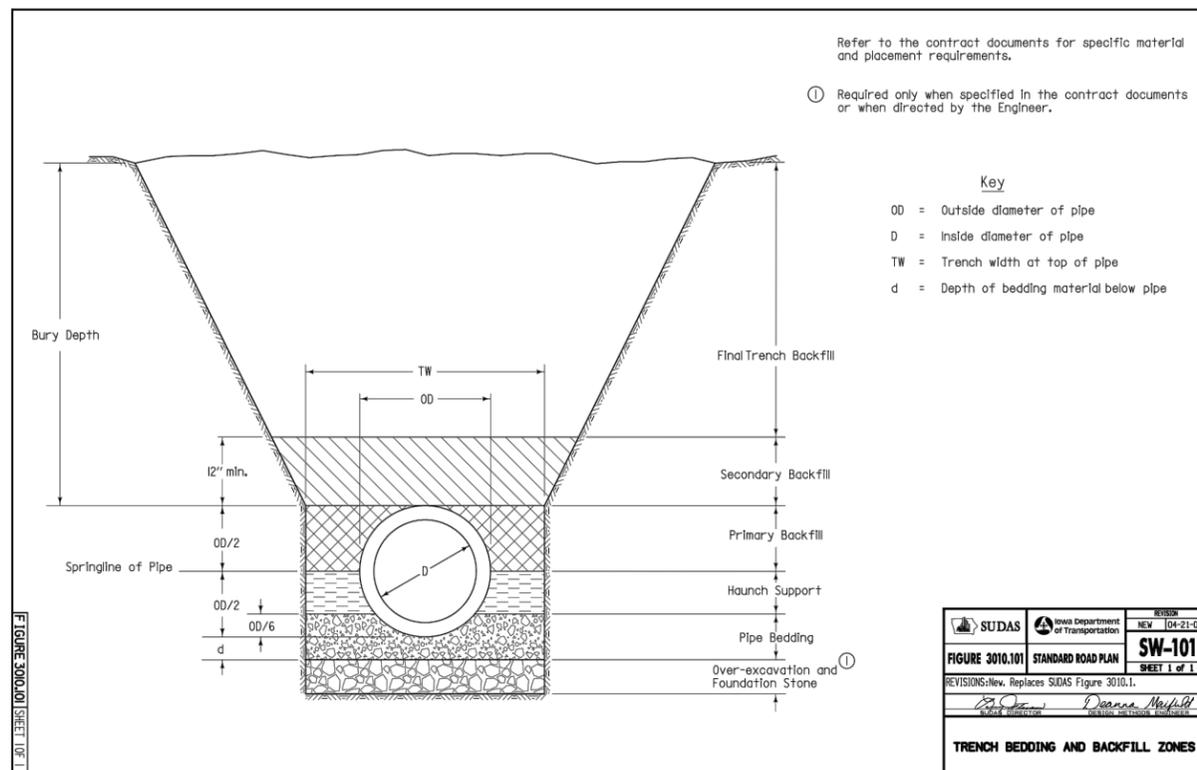


WATER SERVICE DETAIL
NOT TO SCALE

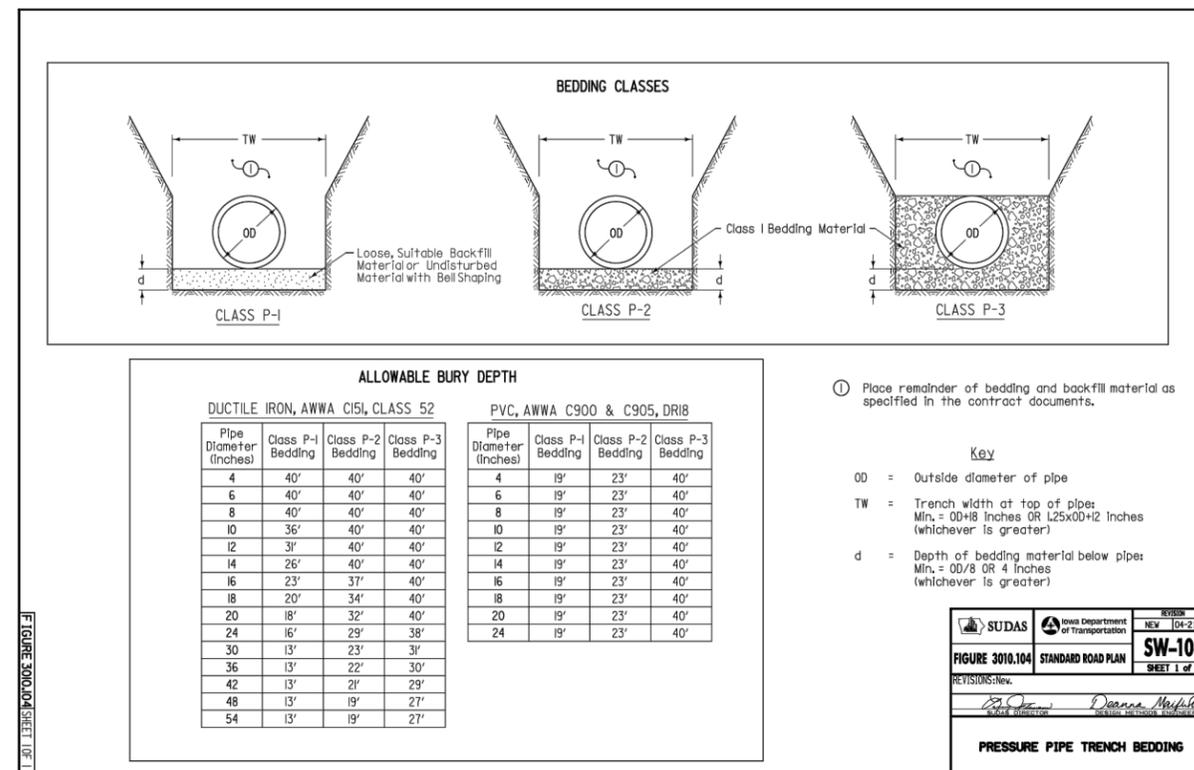
PROPOSED WATER SERVICES					
Address	Location		Size	Quantity	Remarks
	Station	Side	(in.)	(LF)	
1779 Williams Dr.	0+89	RT.	1.00	75	Bore under 20th Ave. North
1205 20th Ave. North	1+78	RT.	1.00	65	Bore under 20th Ave. North
1209 20th Ave. North	2+59	RT.	1.00	65	Bore under 20th Ave. North
1307 20th Ave. North	2+96	RT.	1.00	65	Bore under 20th Ave. North
Total 1.00" Services =				270	

NOTES:
MAKE CONNECTION TO EXISTING SERVICES AT THE PROPERTY LINE.
SERVICES TO BE INSTALLED AT A MINIMUM 5.5 FEET BELOW GRADE.

TYPICAL SECTIONS
AND DETAILS



SUDAS	Iowa Department of Transportation	REVISION
FIGURE 3010.101	STANDARD ROAD PLAN	NEW 04-21-09
REVISIONS: New, Replaces SUDAS Figure 3010.1.		SW-101
SHEET 1 OF 1		
TRENCH BEDDING AND BACKFILL ZONES		



SUDAS	Iowa Department of Transportation	REVISION
FIGURE 3010.104	STANDARD ROAD PLAN	NEW 04-21-09
REVISIONS: New.		SW-104
SHEET 1 OF 1		
PRESSURE PIPE TRENCH BEDDING		

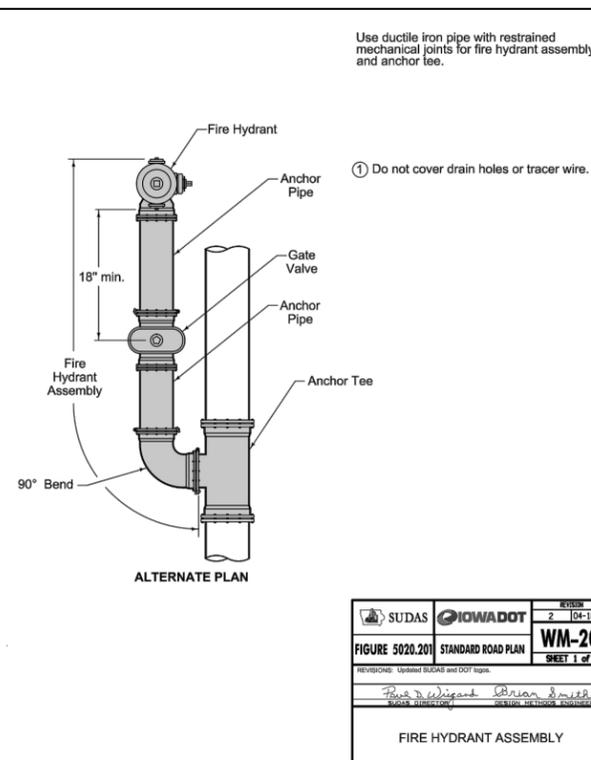
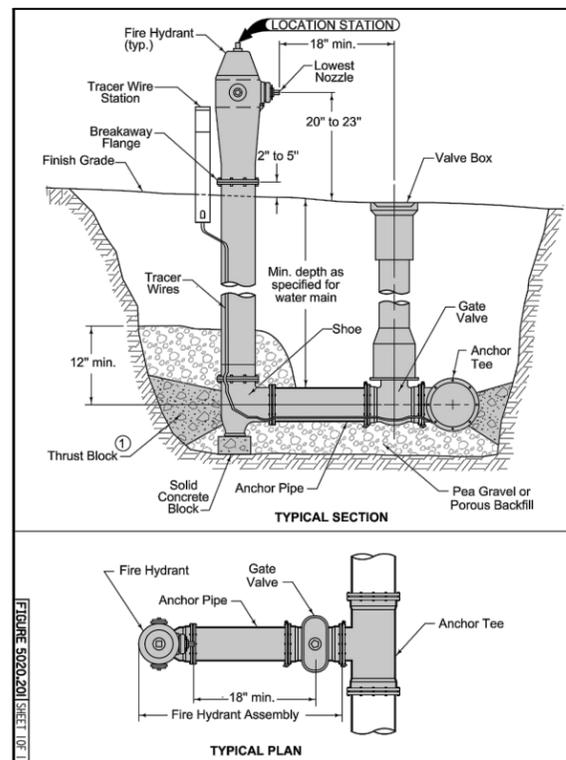
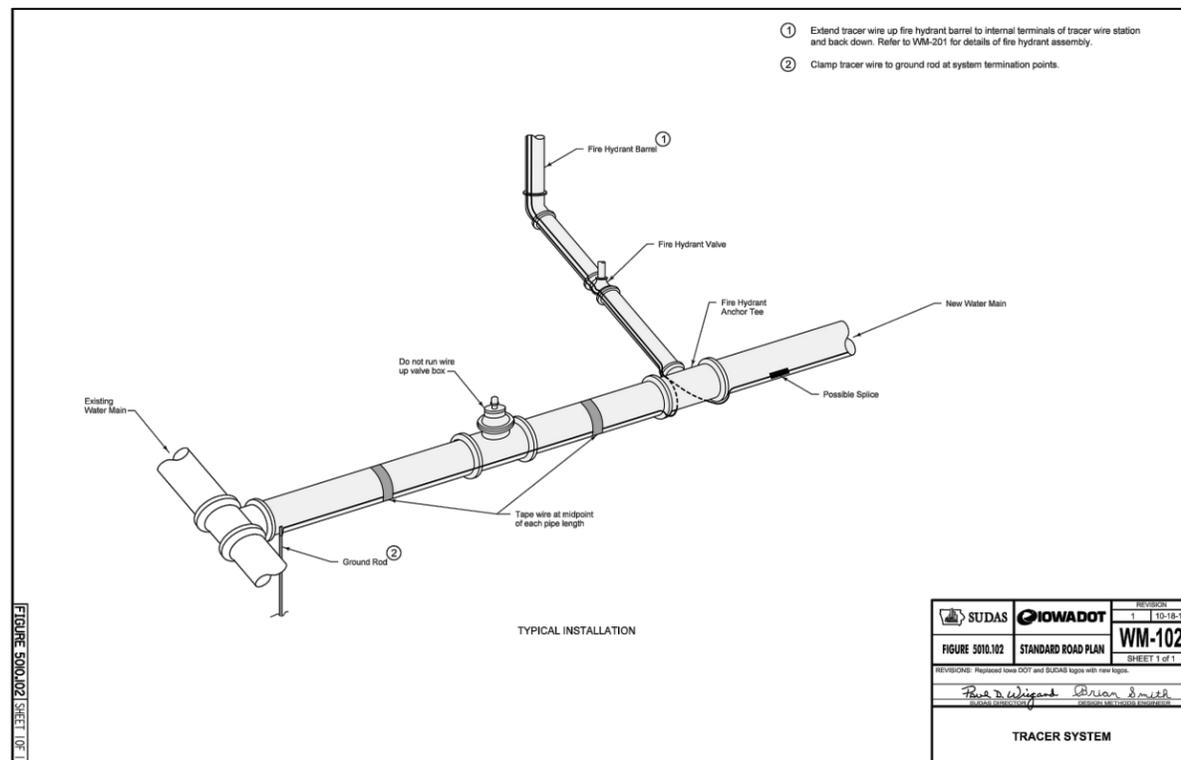
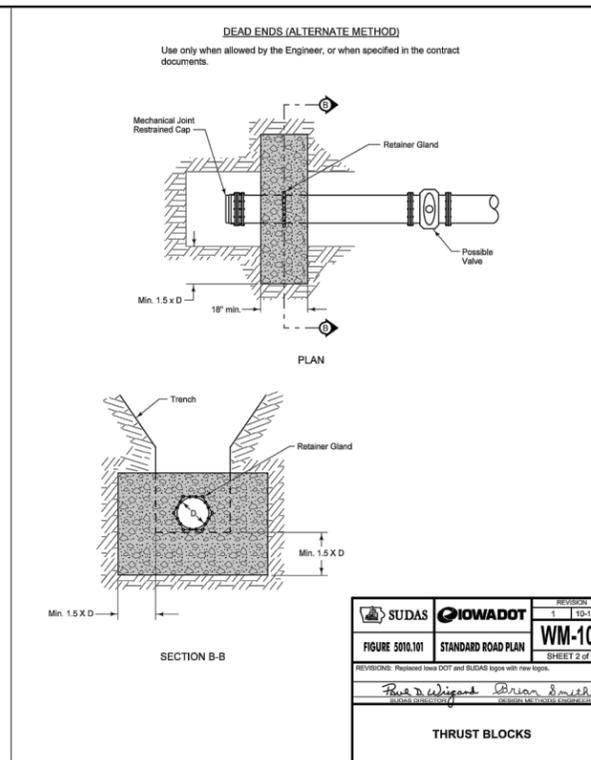
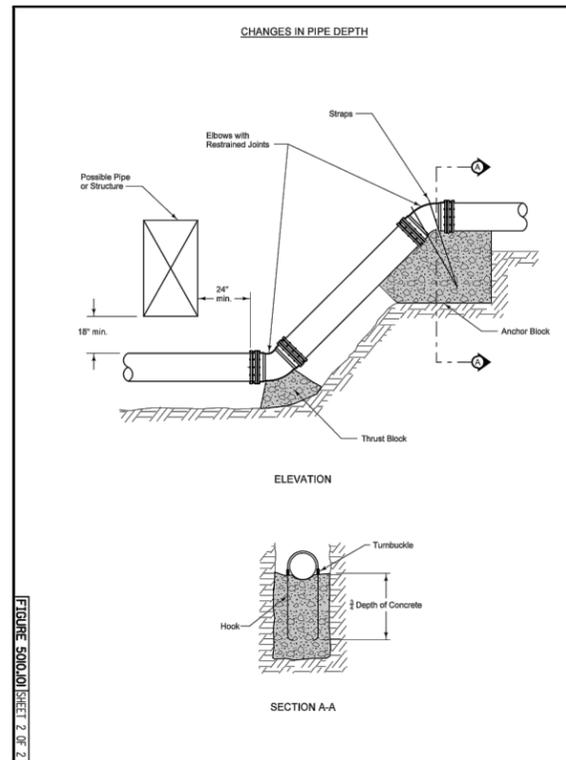
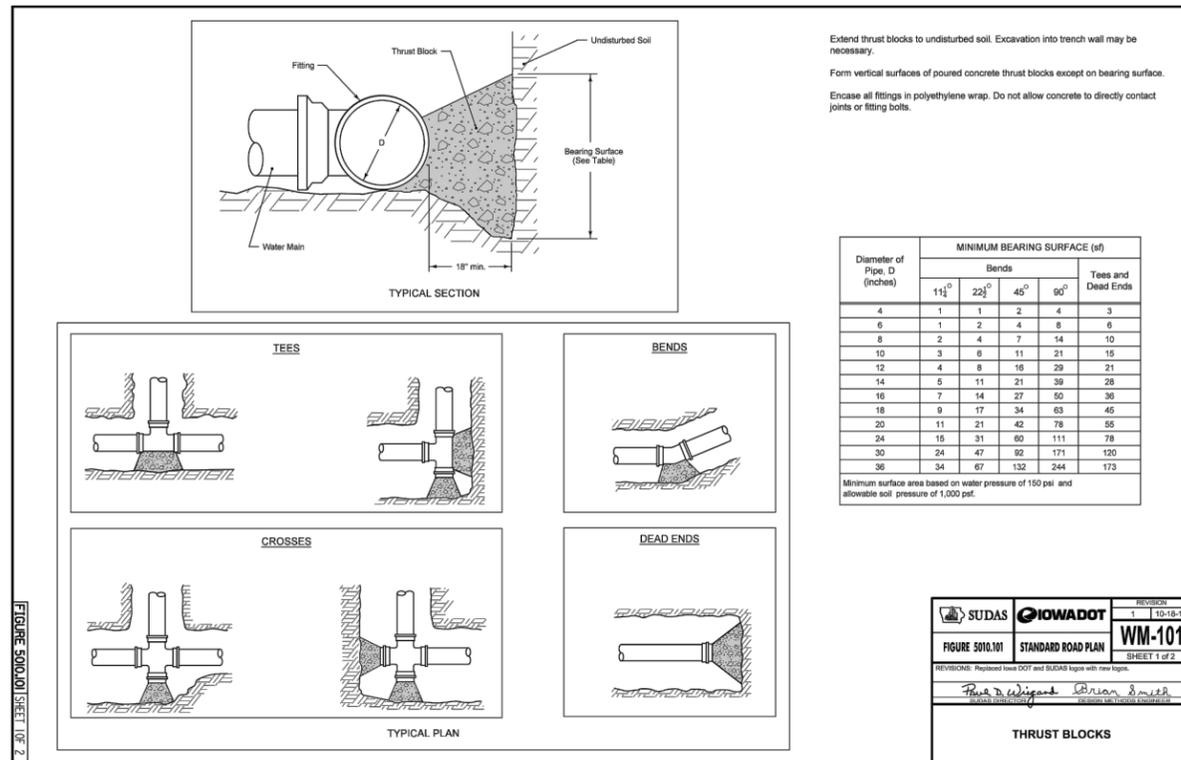
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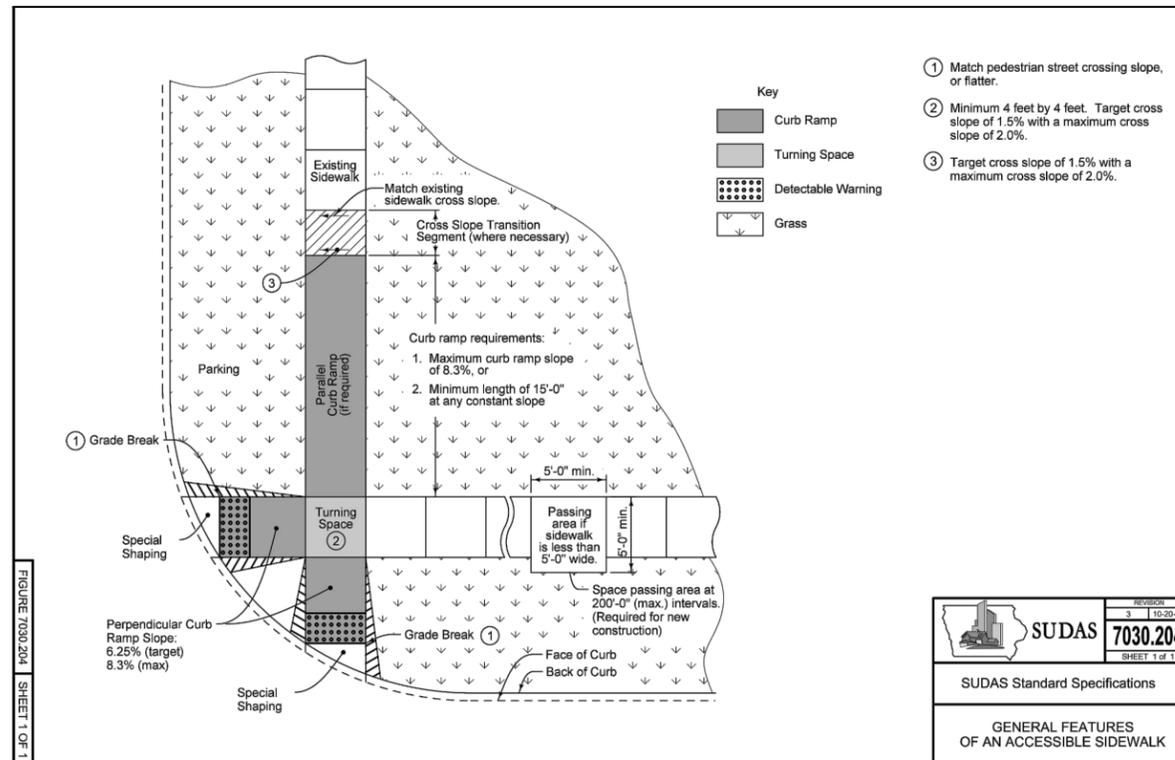
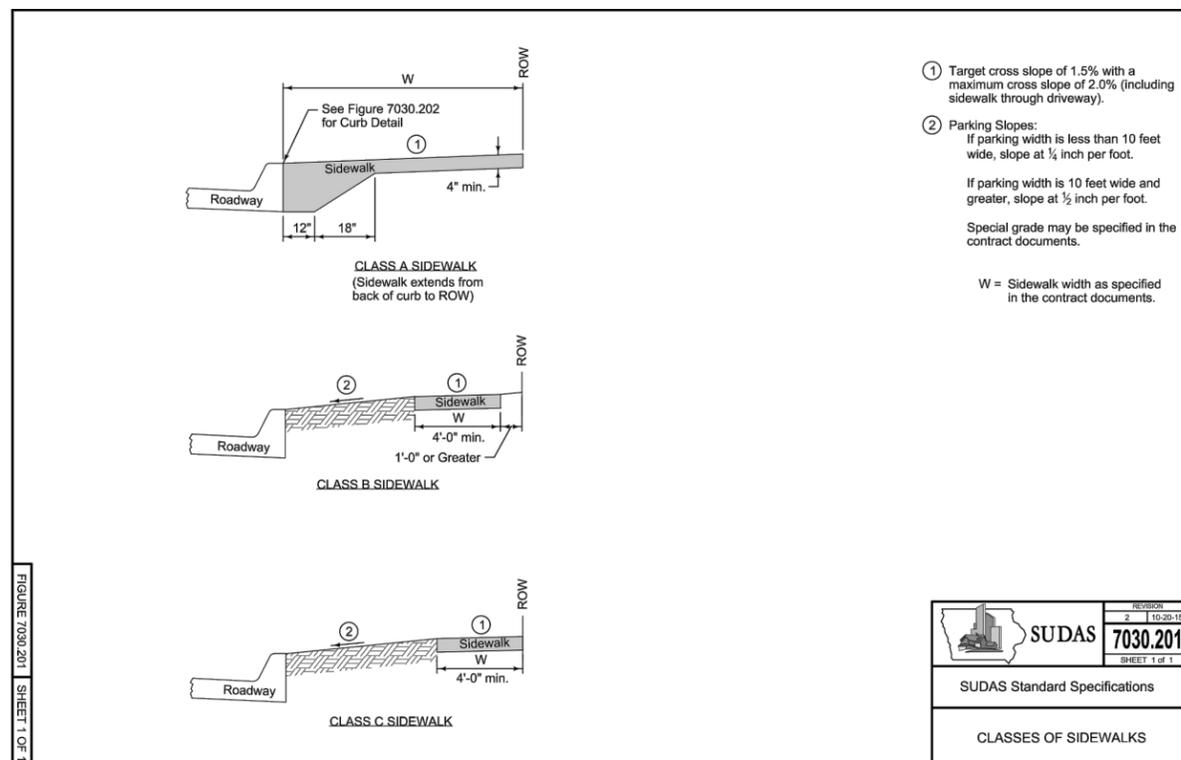
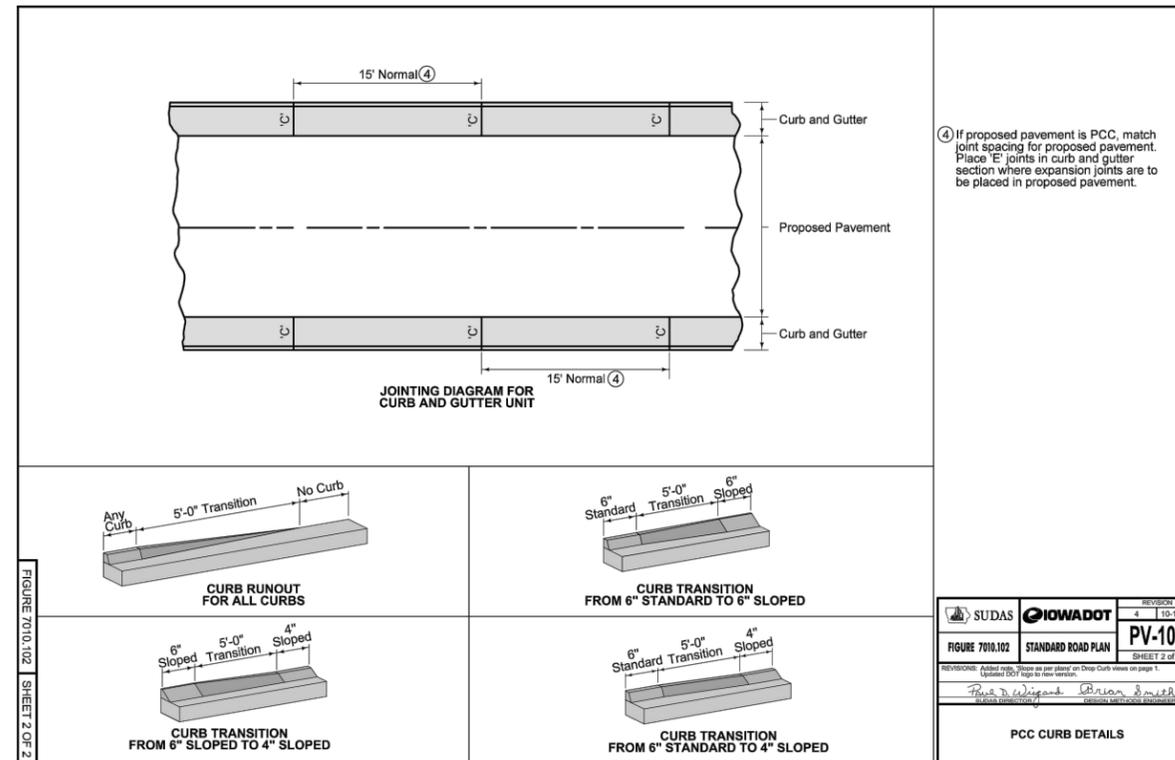
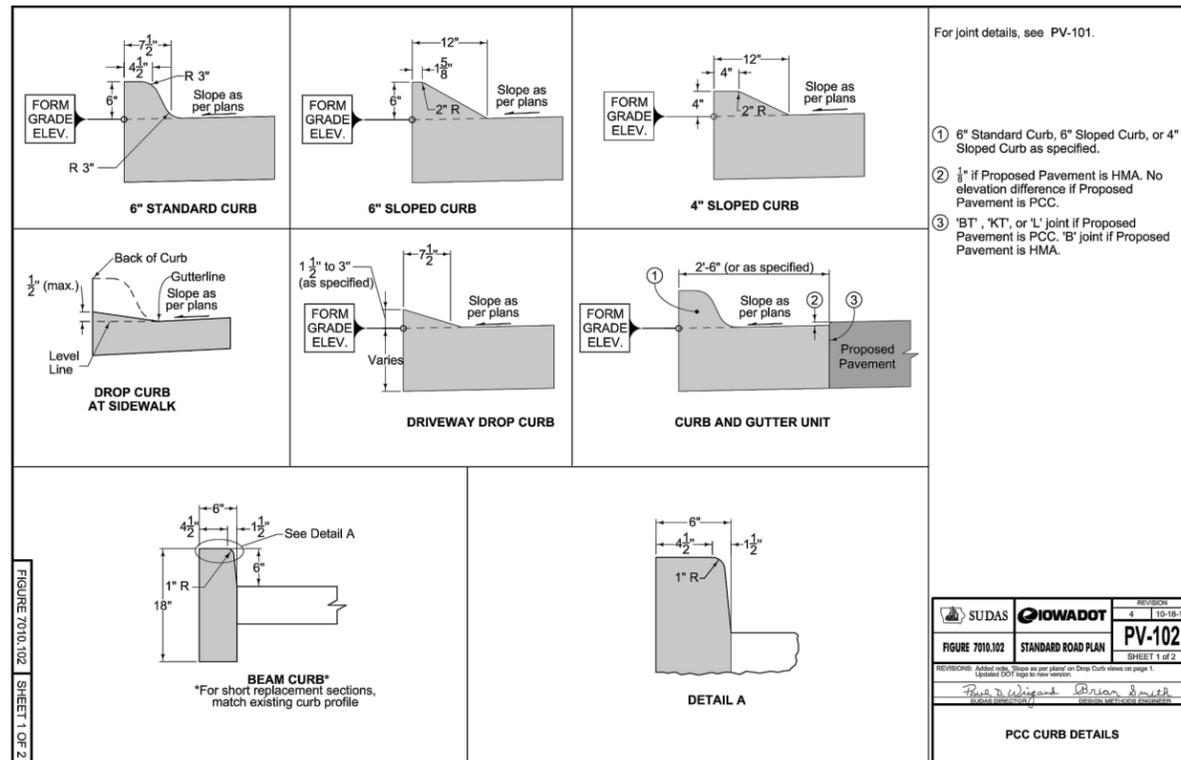
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FIELD BOOK NO.: -

DRAWING NO.: B.1
SHEET NO.: 05 / 17

TYPICAL SECTIONS AND DETAILS



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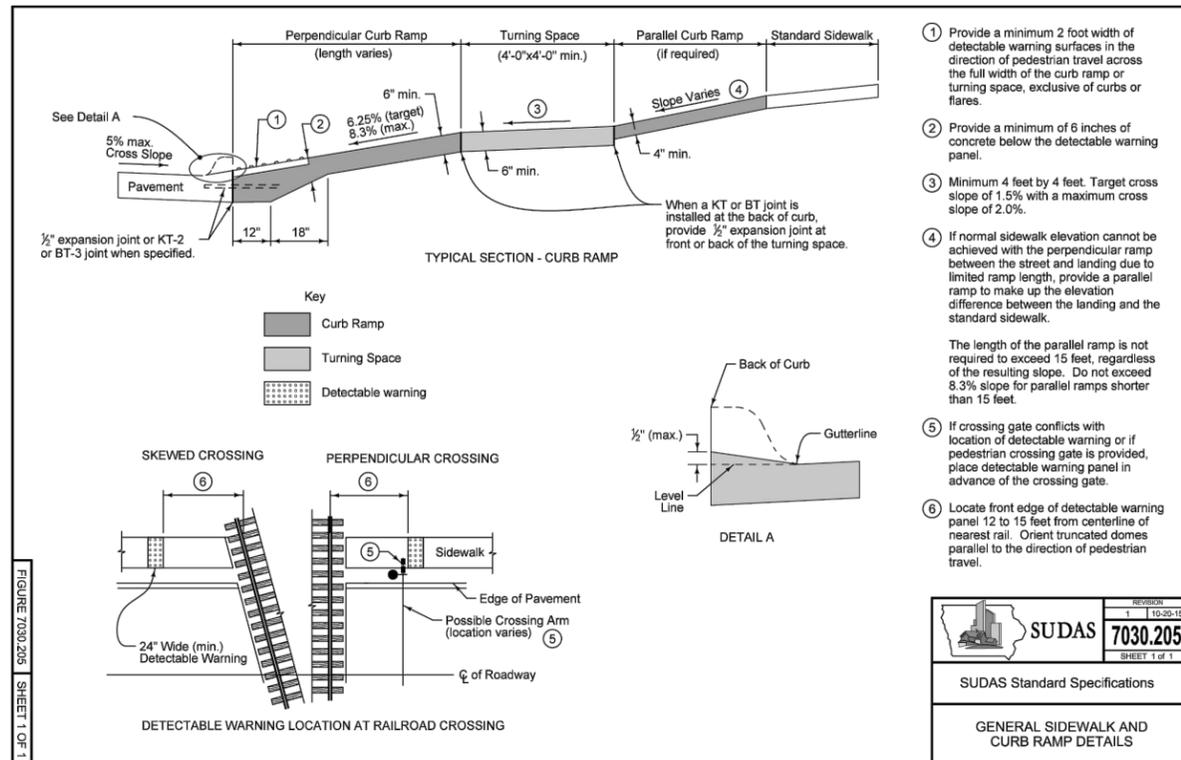


TYPICAL SECTIONS AND DETAILS

20TH AVENUE NORTH
WATER MAIN
IMPROVEMENTS
FORT DODGE, IOWA
FTD 10317001
APRIL 2017

REVISIONS

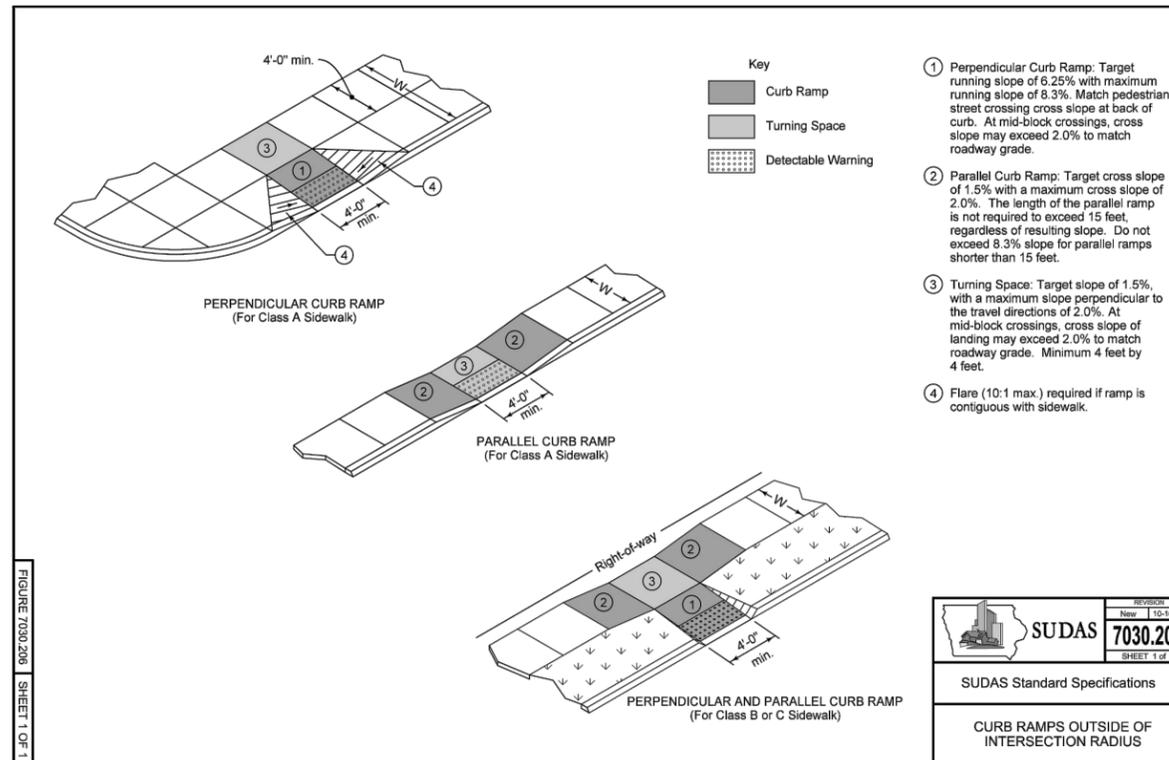
ENGINEER: AKW
DRAWN BY: CRH
CHECKED BY: AKW
FIELD BOOK NO.:
DRAWING NO.: B.3
SHEET NO.: 07 / 17



- Provide a minimum 2 foot width of detectable warning surfaces in the direction of pedestrian travel across the full width of the curb ramp or turning space, exclusive of curbs or flares.
- Provide a minimum of 6 inches of concrete below the detectable warning panel.
- Minimum 4 feet by 4 feet. Target cross slope of 1.5% with a maximum cross slope of 2.0%.
- If normal sidewalk elevation cannot be achieved with the perpendicular ramp between the street and landing due to limited ramp length, provide a parallel ramp to make up the elevation difference between the landing and the standard sidewalk.

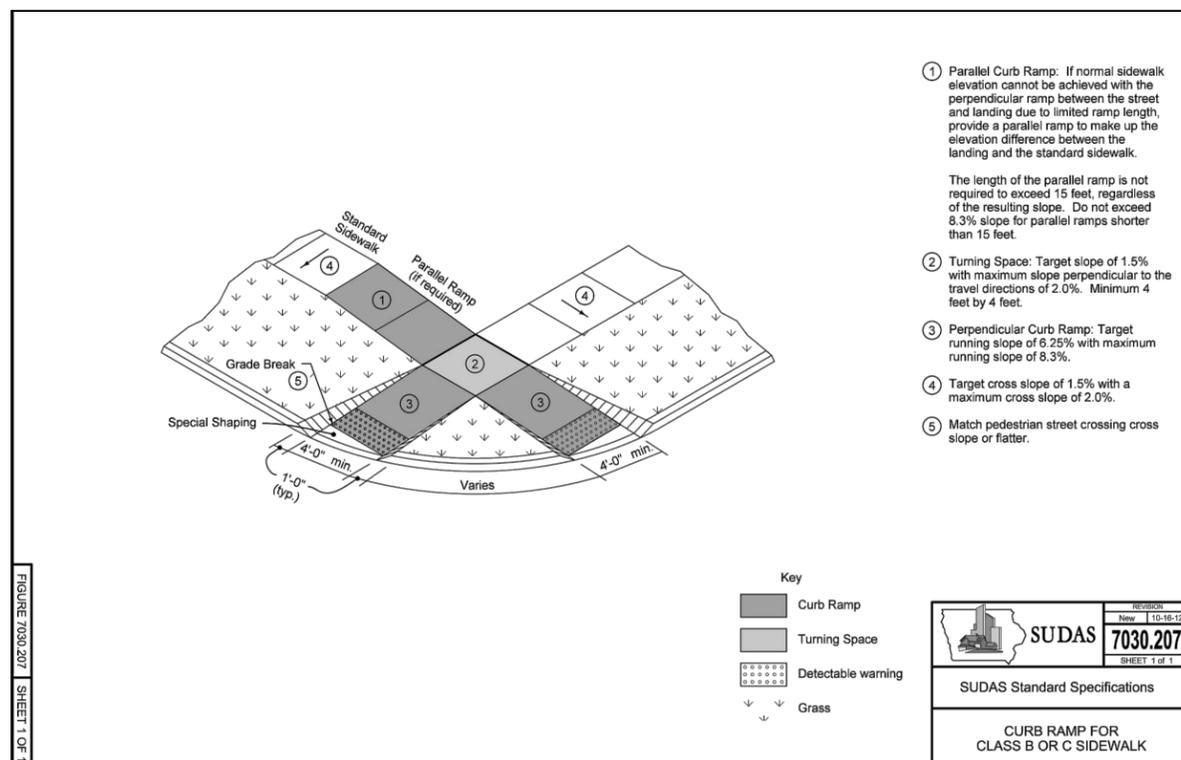
The length of the parallel ramp is not required to exceed 15 feet, regardless of the resulting slope. Do not exceed 8.3% slope for parallel ramps shorter than 15 feet.
- If crossing gate conflicts with location of detectable warning or if pedestrian crossing gate is provided, place detectable warning panel in advance of the crossing gate.
- Locate front edge of detectable warning panel 12 to 15 feet from centerline of nearest rail. Orient truncated domes parallel to the direction of pedestrian travel.

	REVISION
	1 10-20-15
7030.205	
SHEET 1 of 1	
SUDAS Standard Specifications	
GENERAL SIDEWALK AND CURB RAMP DETAILS	



- Perpendicular Curb Ramp: Target running slope of 6.25% with maximum running slope of 8.3%. Match pedestrian street crossing cross slope at back of curb. At mid-block crossings, cross slope may exceed 2.0% to match roadway grade.
- Parallel Curb Ramp: Target cross slope of 1.5% with a maximum cross slope of 2.0%. The length of the parallel ramp is not required to exceed 15 feet, regardless of resulting slope. Do not exceed 8.3% slope for parallel ramps shorter than 15 feet.
- Turning Space: Target slope of 1.5%, with a maximum slope perpendicular to the travel directions of 2.0%. At mid-block crossings, cross slope of landing may exceed 2.0% to match roadway grade. Minimum 4 feet by 4 feet.
- Flare (10:1 max.) required if ramp is contiguous with sidewalk.

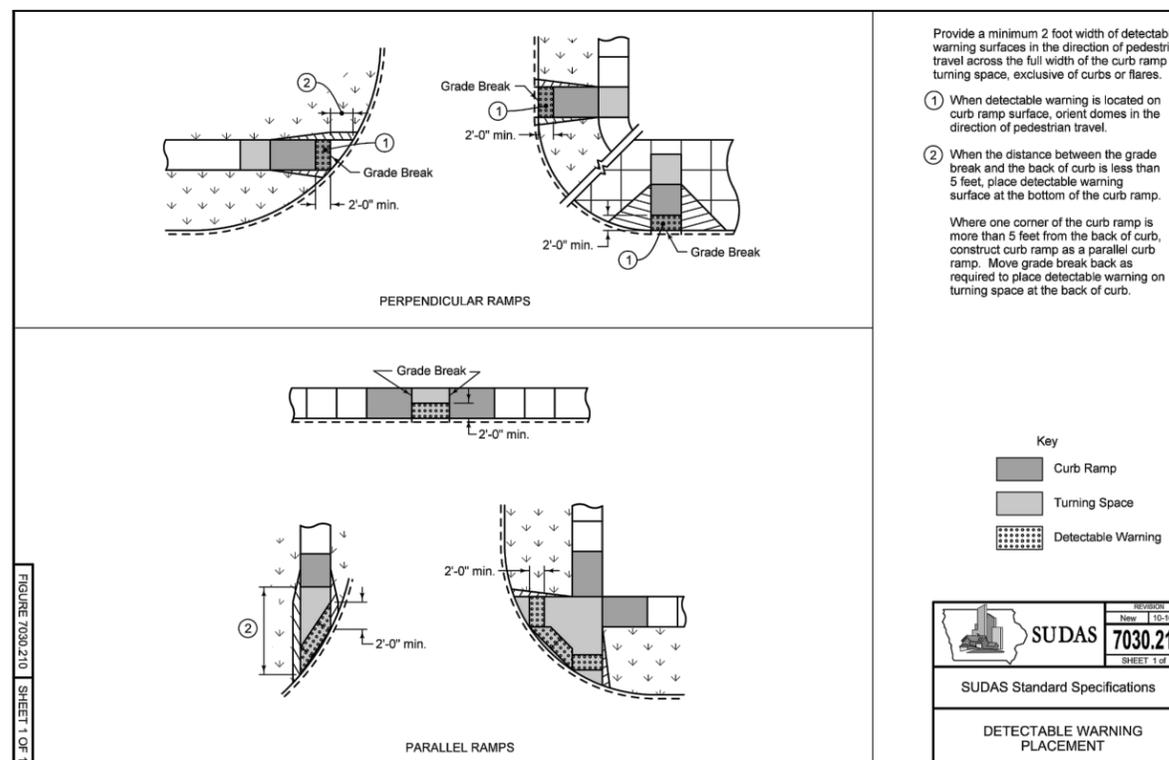
	REVISION
	New 10-16-12
7030.206	
SHEET 1 of 1	
SUDAS Standard Specifications	
CURB RAMPS OUTSIDE OF INTERSECTION RADIUS	



- Parallel Curb Ramp: If normal sidewalk elevation cannot be achieved with the perpendicular ramp between the street and landing due to limited ramp length, provide a parallel ramp to make up the elevation difference between the landing and the standard sidewalk.

The length of the parallel ramp is not required to exceed 15 feet, regardless of the resulting slope. Do not exceed 8.3% slope for parallel ramps shorter than 15 feet.
- Turning Space: Target slope of 1.5% with maximum slope perpendicular to the travel directions of 2.0%. Minimum 4 feet by 4 feet.
- Perpendicular Curb Ramp: Target running slope of 6.25% with maximum running slope of 8.3%.
- Target cross slope of 1.5% with a maximum cross slope of 2.0%.
- Match pedestrian street crossing cross slope or flatter.

	REVISION
	New 10-16-12
7030.207	
SHEET 1 of 1	
SUDAS Standard Specifications	
CURB RAMP FOR CLASS B OR C SIDEWALK	



- Provide a minimum 2 foot width of detectable warning surfaces in the direction of pedestrian travel across the full width of the curb ramp or turning space, exclusive of curbs or flares.
- When detectable warning is located on curb ramp surface, orient domes in the direction of pedestrian travel.
 - When the distance between the grade break and the back of curb is less than 5 feet, place detectable warning surface at the bottom of the curb ramp.

Where one corner of the curb ramp is more than 5 feet from the back of curb, construct curb ramp as a parallel curb ramp. Move grade break back as required to place detectable warning on turning space at the back of curb.

	REVISION
	New 10-16-12
7030.210	
SHEET 1 of 1	
SUDAS Standard Specifications	
DETECTABLE WARNING PLACEMENT	

TYPICAL SECTIONS AND DETAILS

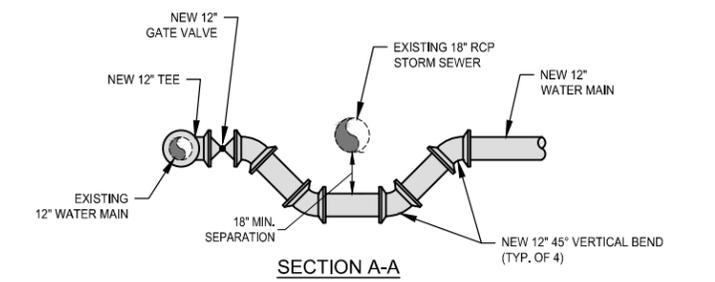
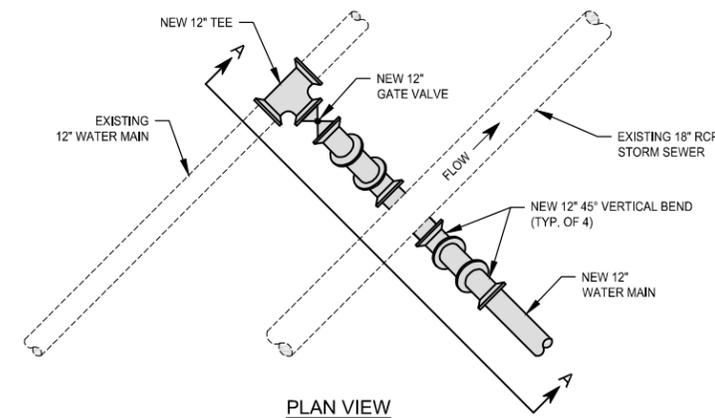
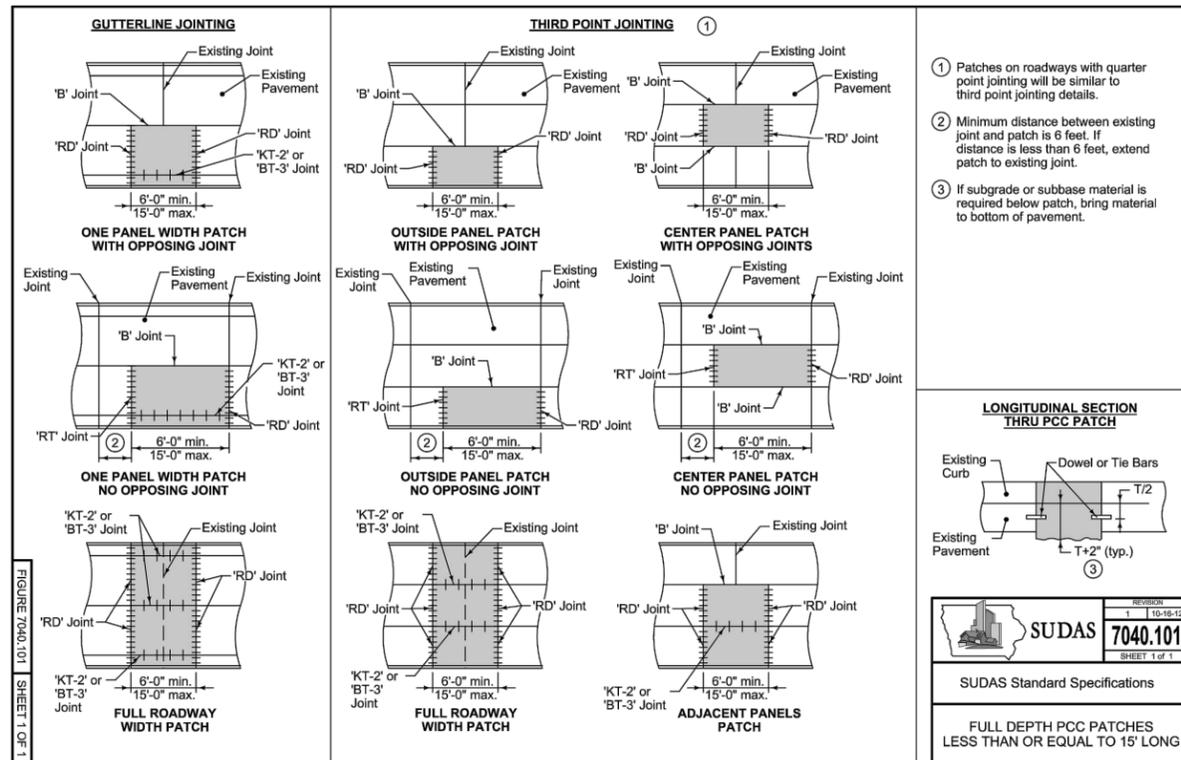
20TH AVENUE NORTH
WATER MAIN
IMPROVEMENTS
FORT DODGE, IOWA
FTD 10317001
APRIL 2017

REVISIONS	

ENGINEER: AKW DRAWN BY: CRH

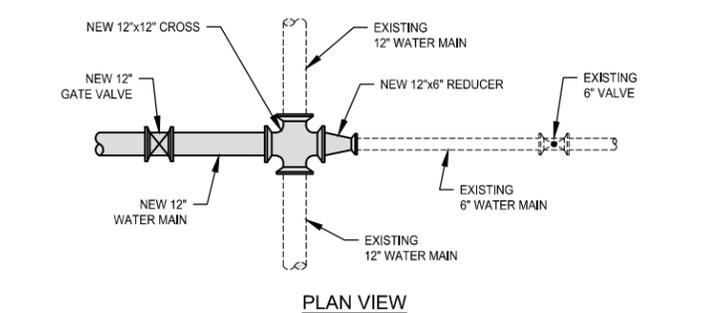
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DRAWING NO.: B.4 SHEET NO.: 08 / 17



WATER MAIN CONNECTION DETAIL (WILLIAMS DR.)

NORTH
NOT TO SCALE



WATER MAIN CONNECTION DETAIL (N 14TH ST.)

NORTH
NOT TO SCALE

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ESTIMATED PROJECT QUANTITIES				
Item No.	Item Code	Description	Unit	Quantity
SECTION 1000 - GENERAL				
1.01	1000-100-X-1	TRAFFIC CONTROL	LS	1
1.02	1000-100-X-2	REMOVE AND REINSTALL SIGN	EA	3
1.03	1000-100-X-5	UNCHARTED UTILITIES CROSSING	EA	2
1.04	1000-100-X-6	UNCHARTED UTILITIES PARALLEL	LF	50
1.05	1090-105-D-0	MOBILIZATION	LS	1
SECTION 2010 - EARTHWORK, SUBGRADE, AND SUBBASE				
2.01	2010-108-D-1	TOPSOIL, ON-SITE	CY	208
SECTION 3010 - TRENCH EXCAVATION AND BACKFILL				
3.01	3010-108-F-0	TRENCH COMPACTION TESTING	LS	1
SECTION 4020 - STORM SEWERS				
4.01	4020-108-A-1	STORM SEWER, TRENCHED, PVC (C905 DR18), 18 IN. DIA.	LF	50
4.02	4020-108-C-0	REMOVAL OF STORM SEWER, RCP, 18 IN. DIA.	LF	50
SECTION 5010 - PIPE AND FITTINGS				
5.01	5010-108-A-1	WATER MAIN, TRENCHED, PVC, 12 IN. DIA.	LF	560
5.02	5010-108-C-1	FITTING, 12 IN. DIA.	EA	15
5.03	5010-108-D-0	WATER SERVICE STUB, COPPER, TRENCHLESS, 1 IN. DIA.	EA	4
5.04	5010-108-X-0	WATER SERVICE STOP AND STOP BOX	EA	4
5.05	5010-108-X-1	PLUGGING WATER SERVICE, 1-1/2 IN. DIA.	EA	1
SECTION 5020 - VALVES, FIRE HYDRANTS, AND APPURTENANCES				
5.06	5020-108-B-0	VALVE, GATE, 12 IN. DIA.	EA	2
5.07	5020-108-C-0	FIRE HYDRANT ASSEMBLY	EA	1
SECTION 7030 - RECREATIONAL TRAILS, SIDEWALKS, AND DRIVEWAYS				
7.01	7030-108-A-0	REMOVAL OF SIDEWALK	SY	80
7.02	7030-108-A-0	REMOVAL OF DRIVEWAY	SY	60
7.03	7030-108-E-0	SIDEWALK, PCC, 4 IN.	SY	100
7.04	7030-108-G-0	DETECTABLE WARNING	SF	65
7.05	7030-108-H-1	DRIVEWAY, PAVED, PCC, 6 IN.	SY	60
SECTION 7040 - PAVEMENT REHABILITATION				
7.06	7040-108-A-0	FULL DEPTH PATCHES	SY	230
SECTION 9010 - SEEDING				
9.01	9010-108-A-0	CONVENTIONAL SEEDING, SEEDING, FERTILIZING, AND MULCHING	AC	0.25

ESTIMATED QUANTITIES REFERENCE INFORMATION

Data listed below is for informational purposes only, and shall not constitute a basis for any extra work order.

ITEM NO.	ITEM CODE	DESCRIPTION												
		THE MOST RECENT EDITION OF THE IOWA STATEWIDE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS MANUAL (SUDAS) SHALL APPLY TO ALL WORK PERFORMED ON THIS PROJECT, EXCEPT AS MODIFIED HEREIN.												
1.01	1000-100-X-1	TRAFFIC CONTROL A. REFER TO J SHEETS FOR TRAFFIC CONTROL PLAN. B. INCLUDES ALL TYPE II BARRICADES AND SIDEWALK CLOSED SIGNS REQUIRED FOR SIDEWALK CLOSURES												
1.02	1000-100-X-2	REMOVE AND REINSTALL SIGN A. REFER TO PLAN SHEETS FOR LOCATIONS B. REMOVE AND STORE SIGNS DURING CONSTRUCTION. REINSTALL SIGNS BEFORE REOPENING PROJECT AREA												
1.03	1000-100-X-5	UNCHARTED UTILITIES CROSSING A. AN UNCHARTED UTILITY CROSSING IS DEFINED AS AN UNCHARTED UTILITY INTERSECTING THE PROPOSED IMPROVEMENT OR CROSSING THE PROPOSED IMPROVEMENT AT RIGHT ANGLES OR WITHIN 30 DEGREES OF A RIGHT ANGLE. TO QUALITY FOR EXTRA COMPENSATION, THE CONSTRUCTION MUST REQUIRE THE USE OF SHORING OR OTHER MEANS TO PROTECT THE EXISTING UNCHARTED UTILITY. THE CONTRACTOR SHALL BE COMPENSATED FOR UNCHARTED UTILITIES ENCOUNTERED, BASED ON THE NUMBER OF UNCHARTED UTILITIES CROSSED AND THE UNIT PRICE BID. ANY UNCHARTED UTILITY 3 INCHES IN DIAMETER OR SMALLER SHALL BE CONSIDERED INCIDENTAL, AND NO COMPENSATION SHALL BE AWARDED (I.E. WATER SERVICE LINES, GAS SERVICES, ETC.).												
1.04	1000-100-X-6	UNCHARTED UTILITIES PARALLEL A. AN UNCHARTED UTILITY PARALLEL IS DEFINED AS A UTILITY EXISTING PARALLEL TO THE PROPOSED IMPROVEMENT OR CROSSING THE PROPOSED IMPROVEMENT AT MORE THAN 30 DEGREES TO A RIGHT ANGLE. TO QUALITY FOR EXTRA COMPENSATION, THE CONSTRUCTION MUST REQUIRE THE USE OF SHORING OR OTHER MEANS TO PROTECT THE EXISTING UNCHARTED UTILITY. THE CONTRACTOR SHALL BE COMPENSATED FOR UNCHARTED UTILITIES ENCOUNTERED, BASED ON THE NUMBER OF LINEAR FEET OF PARALLEL CONFLICT UTILITY AND THE UNIT PRICE BID. ANY UNCHARTED UTILITY 3 INCHES IN DIAMETER OR SMALLER SHALL BE CONSIDERED INCIDENTAL AND NO COMPENSATION SHALL BE AWARDED (I.E. WATER SERVICE LINES, GAS SERVICES, ETC.).												
1.05	1090-105-D-0	MOBILIZATION A. REFER TO SEC. 2533 - MOBILIZATION OF THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION FOR REQUIREMENTS. B. REFER TO SEC. 1090 1.05 D. FOR BASIS OF PAYMENT.												
2.01	2010-108-D-1	TOPSOIL, ON-SITE A. STRIP AND SALVAGE THE TOP 8" OF TOPSOIL ON ALL DISTRIBUTED AREAS. RESPREAD TO A DEPTH OF 4". SHRINKAGE ON RESPREAD IS ASSUMED TO BE 45%. B. TOPSOIL TO BE RESPREAD SHALL BE FREE OF ROCK AND DEBRIS AND BE SUITABLE FOR THE GROWTH OF GRASS. C. INCLUDES PREPARING TOPSOIL FOR SEEDING. D. EXCESS TOPSOIL CAN BE WASTED ON SITE BY PROVIDING ADDITIONAL THICKNESS OF TOPSOIL.												
3.01	3010-108-F-0	TRENCH COMPACTION TESTING A. PROVIDE ALL TEST RESULTS TO THE ENGINEER AND CITY												
4.01	4020-108-A-1	STORM SEWER, TRENCHED, PVC (C905 DR18), 18 IN. DIA. A. PLAN QUANTITY IS 50 LF. BID ITEM INCLUDES AN ADDITIONAL 10 LF FOR FIELD ADJUSTMENT TO FINAL QUANTITY. B. REFER TO FIG. 3010.103 FOR FLEXIBLE GRAVITY PIPE TRENCH BEDDING. C. CONNECTIONS TO EXISTING STORM SEWER SHALL BE CONSIDERED INCIDENTAL												
4.02	4020-108-C-0	REMOVAL OF STORM SEWER, RCP, 18 IN. DIA. A. PLAN QUANTITY IS 50 LF. BID ITEM INCLUDES AN ADDITIONAL 10 LF FOR FIELD ADJUSTMENT TO FINAL QUANTITY.												
5.01	5010-108-A-1	WATER MAIN, TRENCHED, PVC, 12 IN. DIA. A. REFER TO FIG. 3010.101 FOR TRENCH BEDDING AND BACKFILL ZONE DETAILS. B. REFER TO FIG. 3010.104 FOR PRESSURE PIPE TRENCH BEDDING DETAILS. C. REFER TO FIG. 5010.101 FOR THRUST BLOCK DETAILS. D. REFER TO FIG. 5010.102 FOR TRACER SYSTEM DETAILS. INSTALL TRACER WIRE TEST STATIONS NEXT TO EACH FIRE HYDRANT. TRACER WIRE TEST STATIONS SHALL BE RHINO TRI-VIEW TRACER WIRE INTERNAL TEST STATIONS OR APPROVED EQUAL. TRACER WIRE SPLICES WILL ONLY BE ALLOWED IF APPROVED BY THE ENGINEER. ALLOW ENGINEER TO INSPECT UNDERGROUND SPLICES PRIOR TO BACKFILLING. THE CITY WILL TEST ALL TRACER SYSTEMS PRIOR TO ACCEPTANCE OF THE PROJECT. THE CONTRACTOR WILL REPAIR ANY DISCONTINUITIES FOUND.												
5.02	5010-108-C-1	FITTING, 12 IN. DIA. A. PLAN QUANTITY IS 15 EACH. BID ITEM INCLUDES AN ADDITIONAL 3 EACH FOR FIELD ADJUSTMENT TO FINAL QUANTITY. B. QUANTITIES: <table border="1"> <thead> <tr> <th>FITTING TYPE</th> <th>QUANTITY</th> </tr> </thead> <tbody> <tr> <td>12" TEE</td> <td>1</td> </tr> <tr> <td>12"X6" TEE</td> <td>1</td> </tr> <tr> <td>12"X12"X12"X12" CROSS</td> <td>1</td> </tr> <tr> <td>12"X6" REDUCER</td> <td>1</td> </tr> <tr> <td>12" 45 DEG BEND</td> <td>8</td> </tr> </tbody> </table>	FITTING TYPE	QUANTITY	12" TEE	1	12"X6" TEE	1	12"X12"X12"X12" CROSS	1	12"X6" REDUCER	1	12" 45 DEG BEND	8
FITTING TYPE	QUANTITY													
12" TEE	1													
12"X6" TEE	1													
12"X12"X12"X12" CROSS	1													
12"X6" REDUCER	1													
12" 45 DEG BEND	8													
5.03	5010-108-D-0	WATER SERVICE STUB, COPPER, TRENCHLESS, 1 IN. DIA. A. WATER SERVICE TO BE 1 IN DIA TO CONNECTION TO EXISTING SERVICE. MATCH EXISTING SERVICE SIZE AT CONNECTION.												
5.04	5010-108-X-0	WATER SERVICE STOP AND STOP BOX A. BID ITEM IS FOR REPLACEMENT OF WATER SERVICE STOP AND STOP BOX.												
5.05	5010-108-X-1	PLUGGING WATER SERVICE 1-1/2 IN. DIA. A. BID ITEM IS FOR PERMANENT PLUGGING OF SHARED 1-1/2 IN. DIA. SHARED SERVICE LINE. B. EXCAVATE AND CLOSE EXISTING CORPORATION STOP. C. PERMANENTLY PLUG AND ABANDON PIPE DOWNSTREAM OF STOP.												
5.06	5020-108-B-0	VALVE, GATE, 12 IN. DIA.												
5.07	5020-108-C-0	FIRE HYDRANT ASSEMBLY A. REFER TO FIG. 5020.201 FOR FIRE HYDRANT ASSEMBLY DETAILS. B. HYDRANT SHALL BE MUELLER SUPER CENTURION 250, CATALOG #A-423; 5-1/4" MAIN VALVE, 3-WAY, FORT DODGE THREADS, 1" SQUARE OPERATING NUT, TWO 2-1/4" HOSE NOZZLES, ONE 4-1/2" PUMPER NOZZLE, FORT DODGE THREADS, AND SHOP COAT YELLOW.												
7.01	7030-108-A-0	REMOVAL OF SIDEWALK A. PLAN QUANTITY IS 70 SY. BID ITEM INCLUDES AN ADDITIONAL 10 SY FOR FIELD ADJUSTMENT TO FINAL QUANTITY												
7.02	7030-108-A-0	REMOVAL OF DRIVEWAY A. PLAN QUANTITY IS 60 SY. BID ITEM INCLUDES AN ADDITIONAL 10 SY FOR FIELD ADJUSTMENT TO FINAL QUANTITY												
7.03	7030-108-E-0	SIDEWALK, PCC, 4 IN. A. REFER TO FIG. 7030.201 FOR CLASSES OF SIDEWALK DETAILS. B. REFER TO FIG. 7030.204 FOR GENERAL FEATURES OF AN ACCESSIBLE SIDEWALK DETAILS. C. REFER TO FIG. 7030.205 FOR GENERAL SIDEWALK AND CURB RAMP DETAILS. D. REFER TO FIG. 7030.206 FOR CURB RAMP OUTSIDE OF INTERSECTION DETAILS. E. PLAN QUANTITY IS 82 SY. BID ITEM INCLUDES AN ADDITIONAL 18 SY FOR FIELD ADJUSTMENT TO FINAL QUANTITY												
7.04	7030-108-G-0	DETECTABLE WARNING												
7.05	7030-108-H-1	DRIVEWAY, PCC, 6 IN. A. REFER TO FIG. 7030.101 FOR CONCRETE DRIVEWAY, TYPE A DETAILS. B. PLAN QUANTITY IS 60 SY. BID ITEM INCLUDES AN ADDITIONAL 10 SY FOR FIELD ADJUSTMENT TO FINAL QUANTITY												
7.06	7040-108-A-0	FULL DEPTH PATCHES A. REFER TO FIG. 7040.101 FOR FULL DEPTH PCC PATCHES LESS THAN OR EQUAL TO 15' LONG DETAILS.												
9.01	9010-108-A-0	CONVENTIONAL SEEDING, SEEDING, FERTILIZING, AND MULCHING A. SEED ALL DISTURBED AREAS WITH A TYPE 1 (PERMANENT LAWN MIXTURE) B. WATERING SHALL BE CONSIDERED INCIDENTAL C. PLAN QUANTITY IS 0.25 ACRES.												



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ESTIMATED QUANTITIES AND REFERENCE INFORMATION

20TH AVENUE NORTH
WATER MAIN
IMPROVEMENTS
FORT DODGE, IOWA
FTD 10317001
APRIL 2017

REVISIONS

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ENGINEER
AKW

DRAWN BY
CRH

CHECKED BY
AKW

FIELD BOOK NO.
-

DRAWING NO.
C.1

SHEET NO.
10 / 17

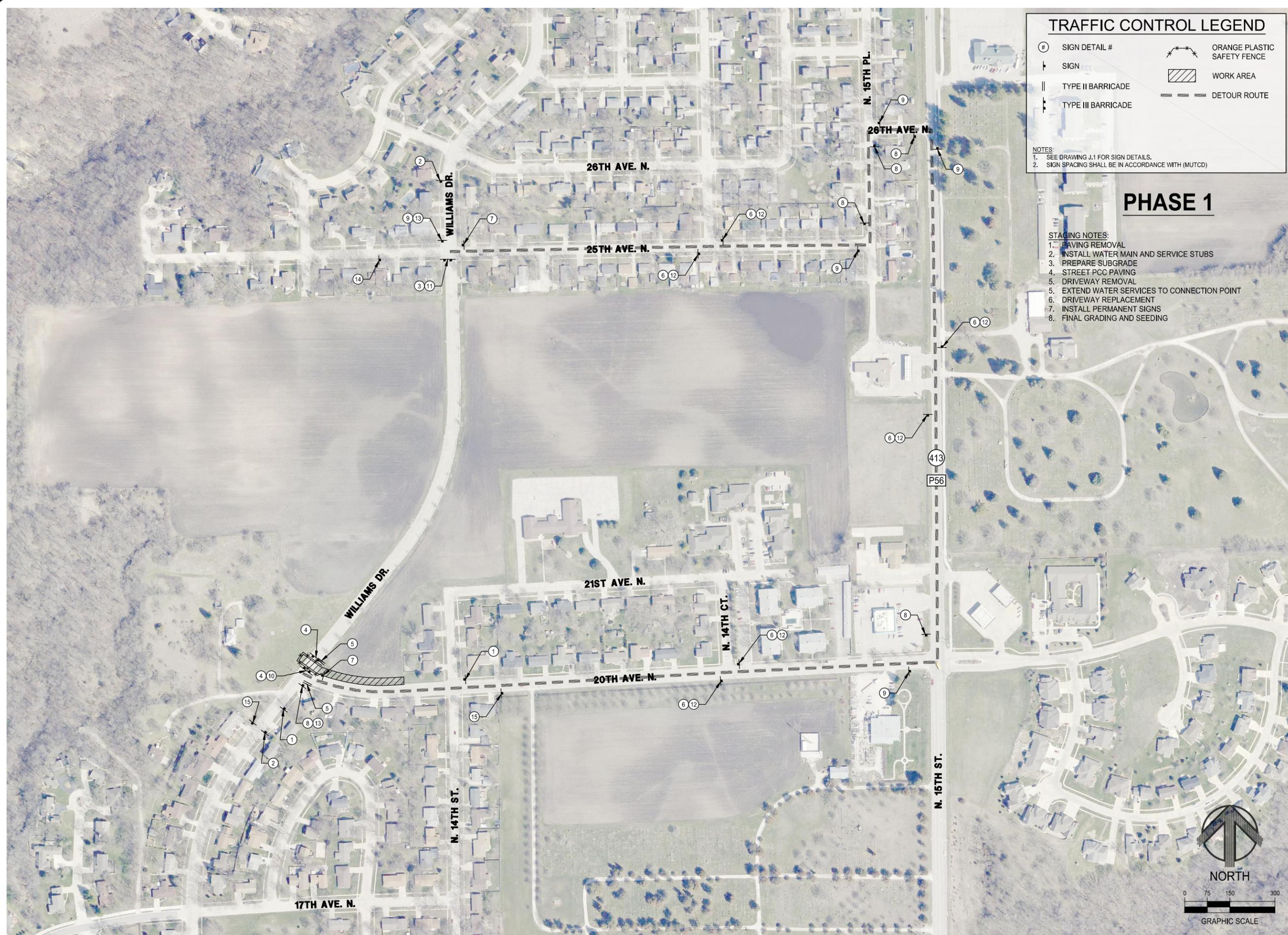
TRAFFIC CONTROL LEGEND

- | | | | |
|---|--------------------|--|-----------------------------|
| # | SIGN DETAIL # | | ORANGE PLASTIC SAFETY FENCE |
| + | SIGN | | WORK AREA |
| | TYPE II BARRICADE | | DETOUR ROUTE |
| | TYPE III BARRICADE | | |

- NOTES:
- SEE DRAWING J.1 FOR SIGN DETAILS.
 - SIGN SPACING SHALL BE IN ACCORDANCE WITH (MUTCD)

PHASE 1

- STAGING NOTES:
- PAVING REMOVAL
 - INSTALL WATER MAIN AND SERVICE STUBS
 - PREPARE SUBGRADE
 - STREET PCC PAVING
 - DRIVEWAY REMOVAL
 - EXTEND WATER SERVICES TO CONNECTION POINT
 - DRIVEWAY REPLACEMENT
 - INSTALL PERMANENT SIGNS
 - FINAL GRADING AND SEEDING



STAGING AND TRAFFIC CONTROL

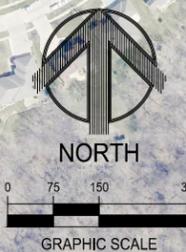
**20TH AVENUE NORTH
WATER MAIN
IMPROVEMENTS**
FORT DODGE, IOWA
FTD 10317001
APRIL 2017

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ENGINEER: AKW
DRAWN BY: CRH

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DRAWING NO.: J.2
SHEET NO.: 12 / 17



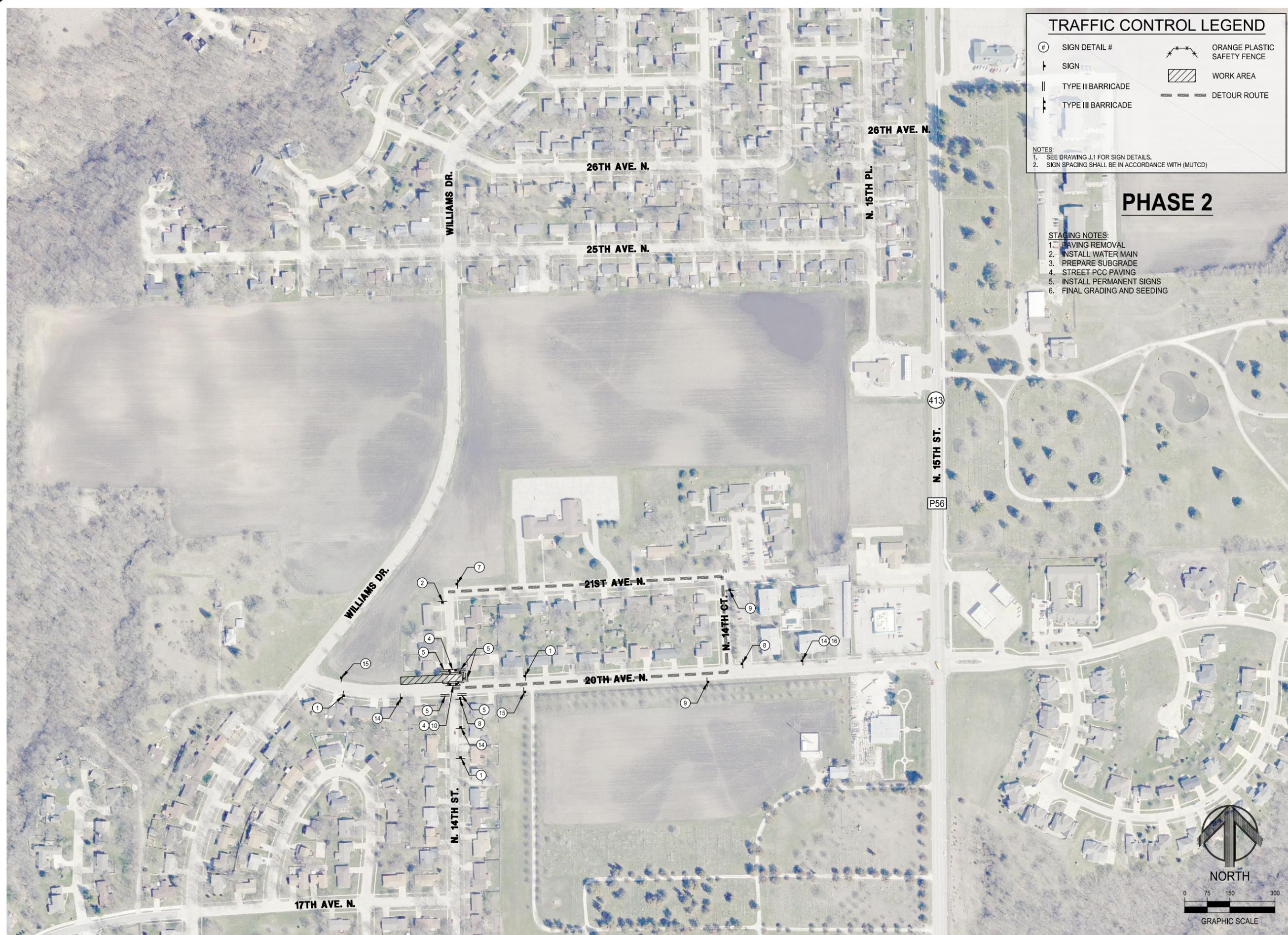
TRAFFIC CONTROL LEGEND

#	SIGN DETAIL #		ORANGE PLASTIC SAFETY FENCE
+	SIGN		WORK AREA
	TYPE II BARRICADE		DETOUR ROUTE
	TYPE III BARRICADE		

NOTES:
1. SEE DRAWING J.1 FOR SIGN DETAILS.
2. SIGN SPACING SHALL BE IN ACCORDANCE WITH (MUTCD)

PHASE 2

- STAGING NOTES:**
- PAVING REMOVAL
 - INSTALL WATER MAIN
 - PREPARE SUBGRADE
 - STREET PCC PAVING
 - INSTALL PERMANENT SIGNS
 - FINAL GRADING AND SEEDING



STAGING AND TRAFFIC CONTROL

**20TH AVENUE NORTH
WATER MAIN
IMPROVEMENTS**
FORT DODGE, IOWA
FTD 10317001
APRIL 2017

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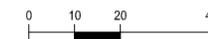
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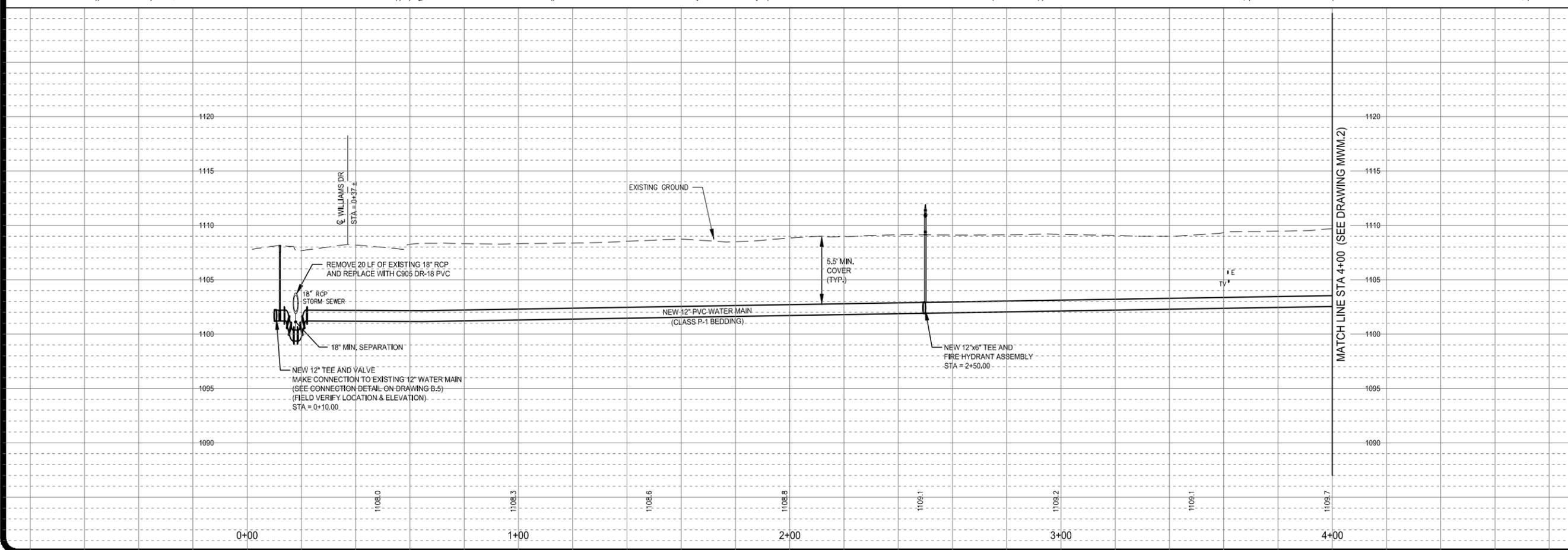
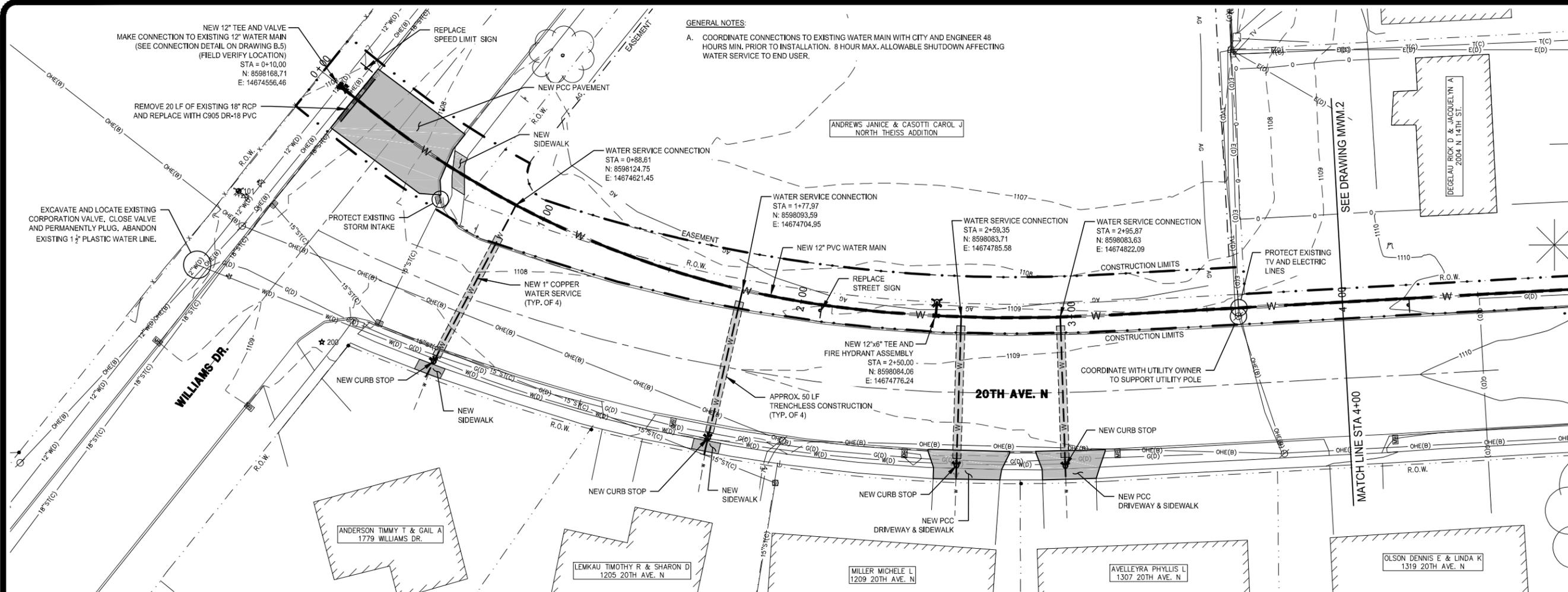


NORTH



GRAPHIC SCALE

WATER MAIN
PLAN AND PROFILE



GENERAL NOTES:

- A. COORDINATE CONNECTIONS TO EXISTING WATER MAIN WITH CITY AND ENGINEER 48 HOURS MIN. PRIOR TO INSTALLATION. 8 HOUR MAX. ALLOWABLE SHUTDOWN AFFECTING WATER SERVICE TO END USER.

20TH AVENUE NORTH
WATER MAIN
IMPROVEMENTS
FORT DODGE, IOWA
FTD 10317001
APRIL 2017

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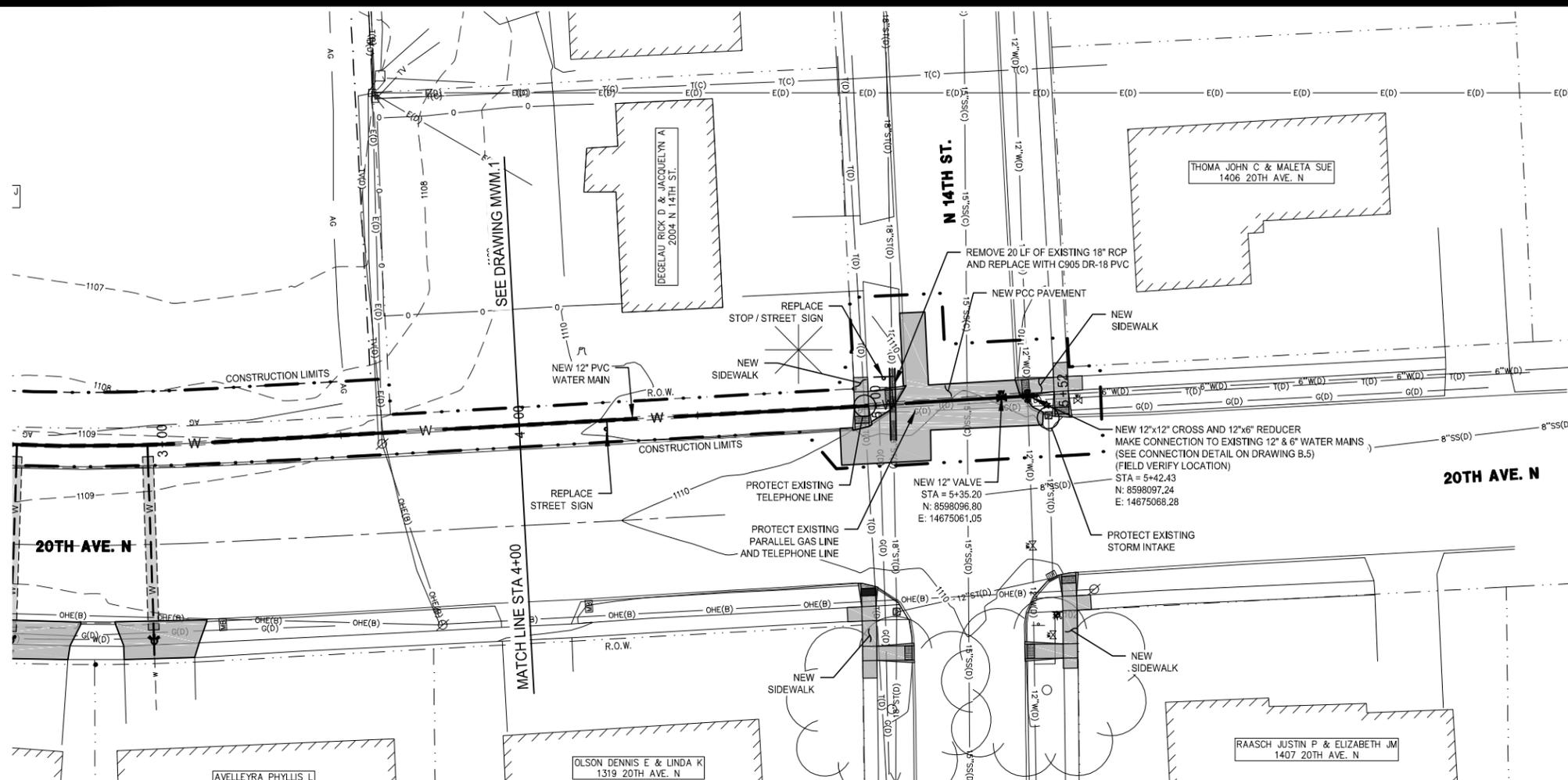
ENGINEER
AKW

DRAWN BY
CRH

CHECKED BY
AKW

DRAWING NO.
MWM.1

SHEET NO.
14 / 17



GENERAL NOTES:

- A. COORDINATE CONNECTIONS TO EXISTING WATER MAIN WITH CITY AND ENGINEER 48 HOURS MIN. PRIOR TO INSTALLATION. 8 HOUR MAX. ALLOWABLE SHUTDOWN AFFECTING WATER SERVICE TO END USER.



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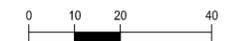
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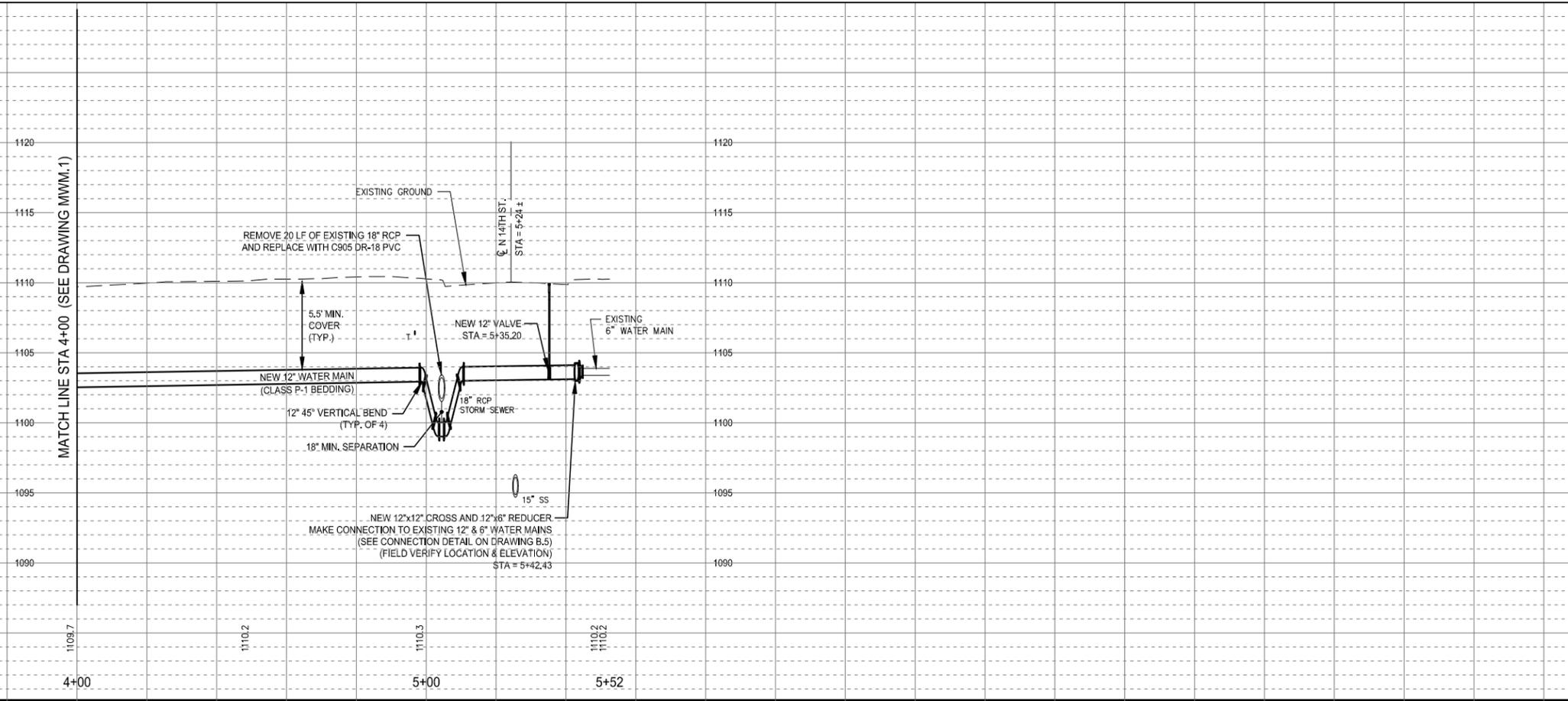


NORTH



GRAPHIC SCALE

**WATER MAIN
PLAN AND PROFILE**



**20TH AVENUE NORTH
WATER MAIN
IMPROVEMENTS**
FORT DODGE, IOWA
FTD 10317001
APRIL 2017

REVISIONS

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DRAWING NO. **MWM.2** SHEET NO. **15 / 17**

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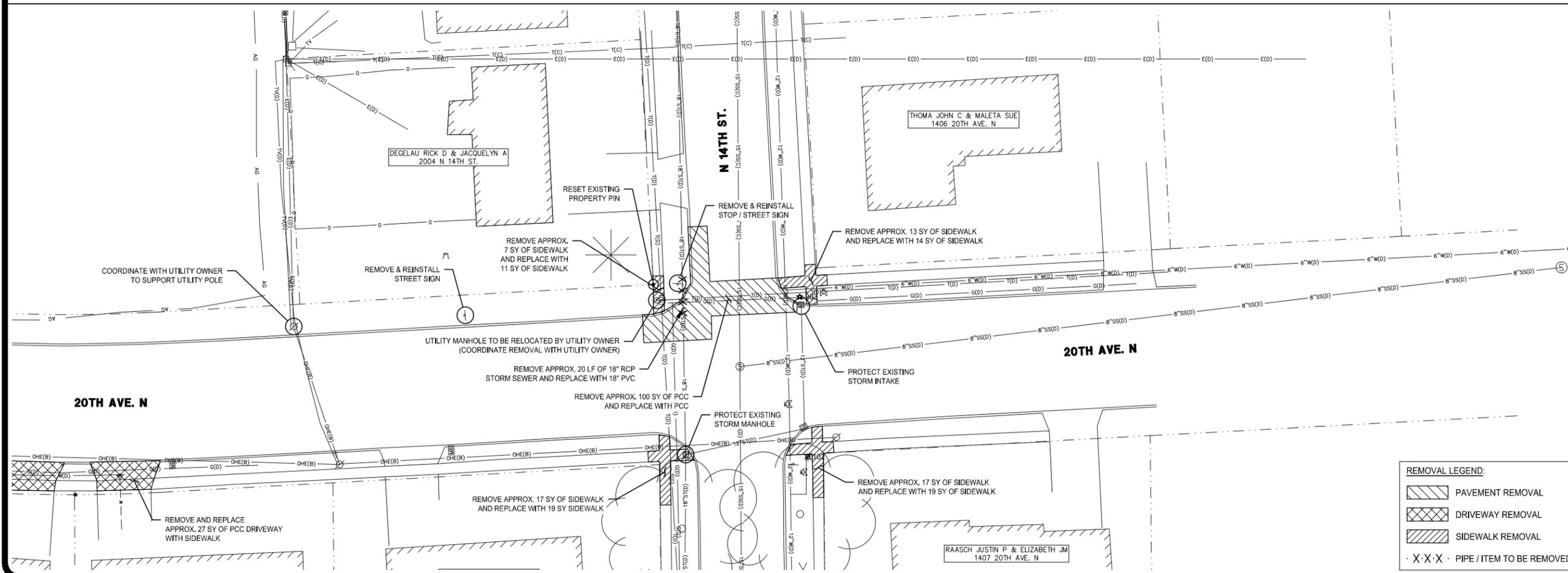
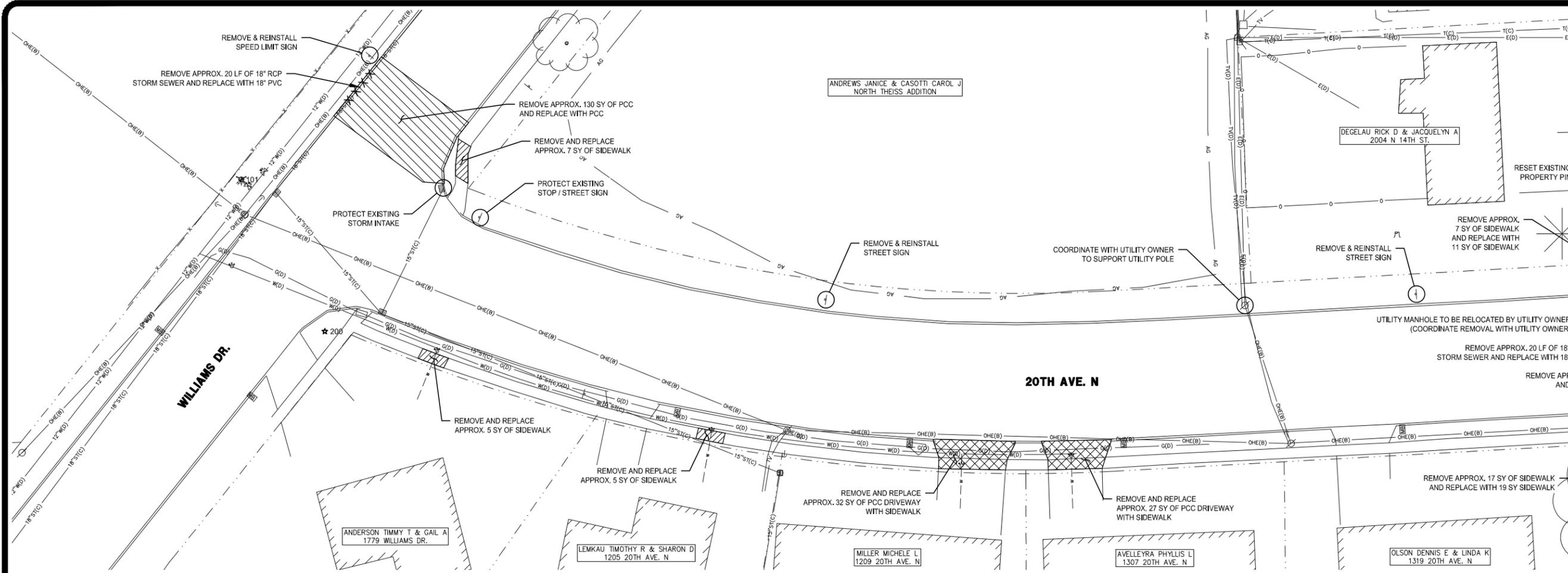


NORTH



GRAPHIC SCALE

REMOVALS PLAN



REMOVAL LEGEND:

	PAVEMENT REMOVAL
	DRIVEWAY REMOVAL
	SIDEWALK REMOVAL
	PIPE / ITEM TO BE REMOVED

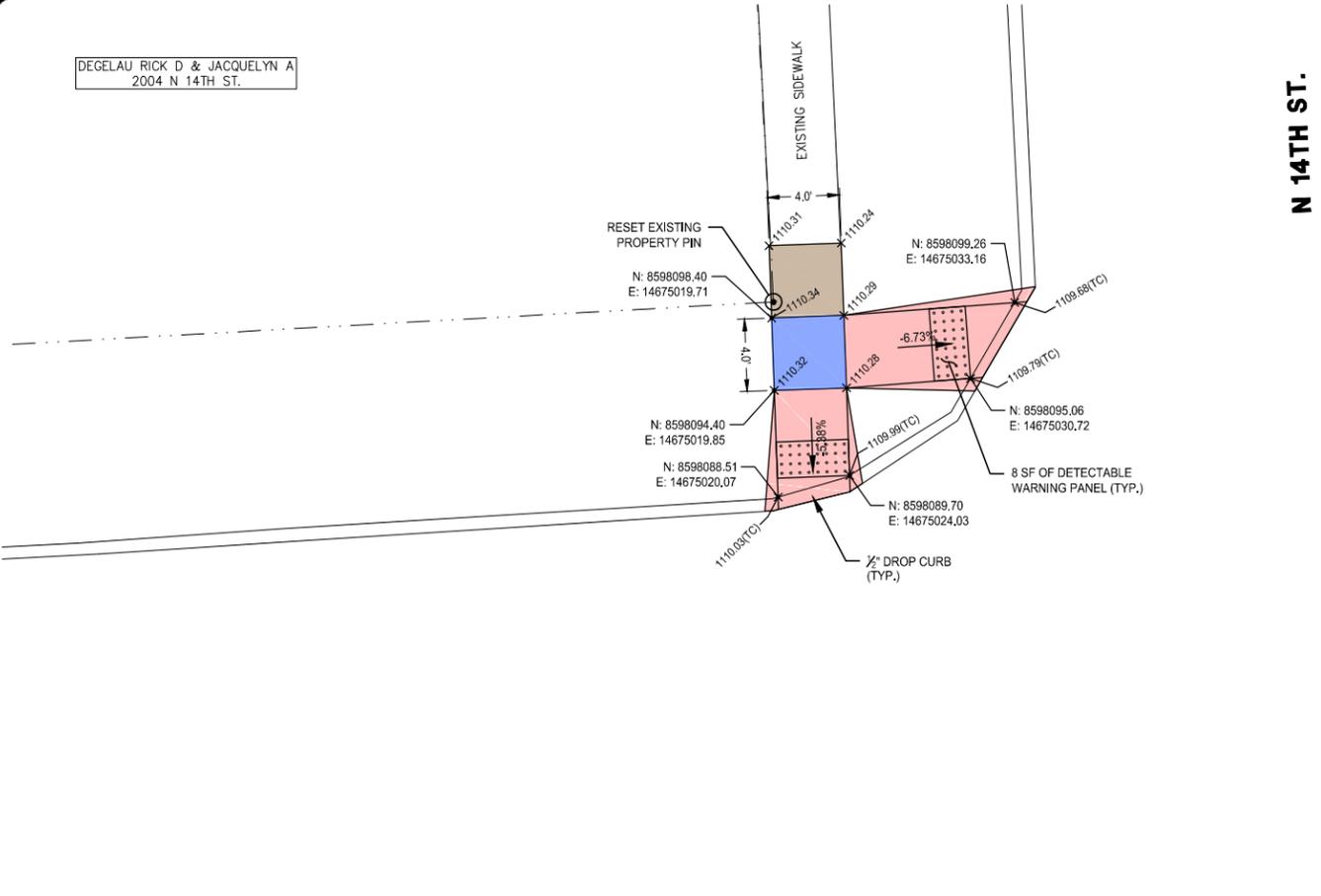
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WATER MAIN
IMPROVEMENTS**
FORT DODGE, IOWA
FTD 10317001
APRIL 2017

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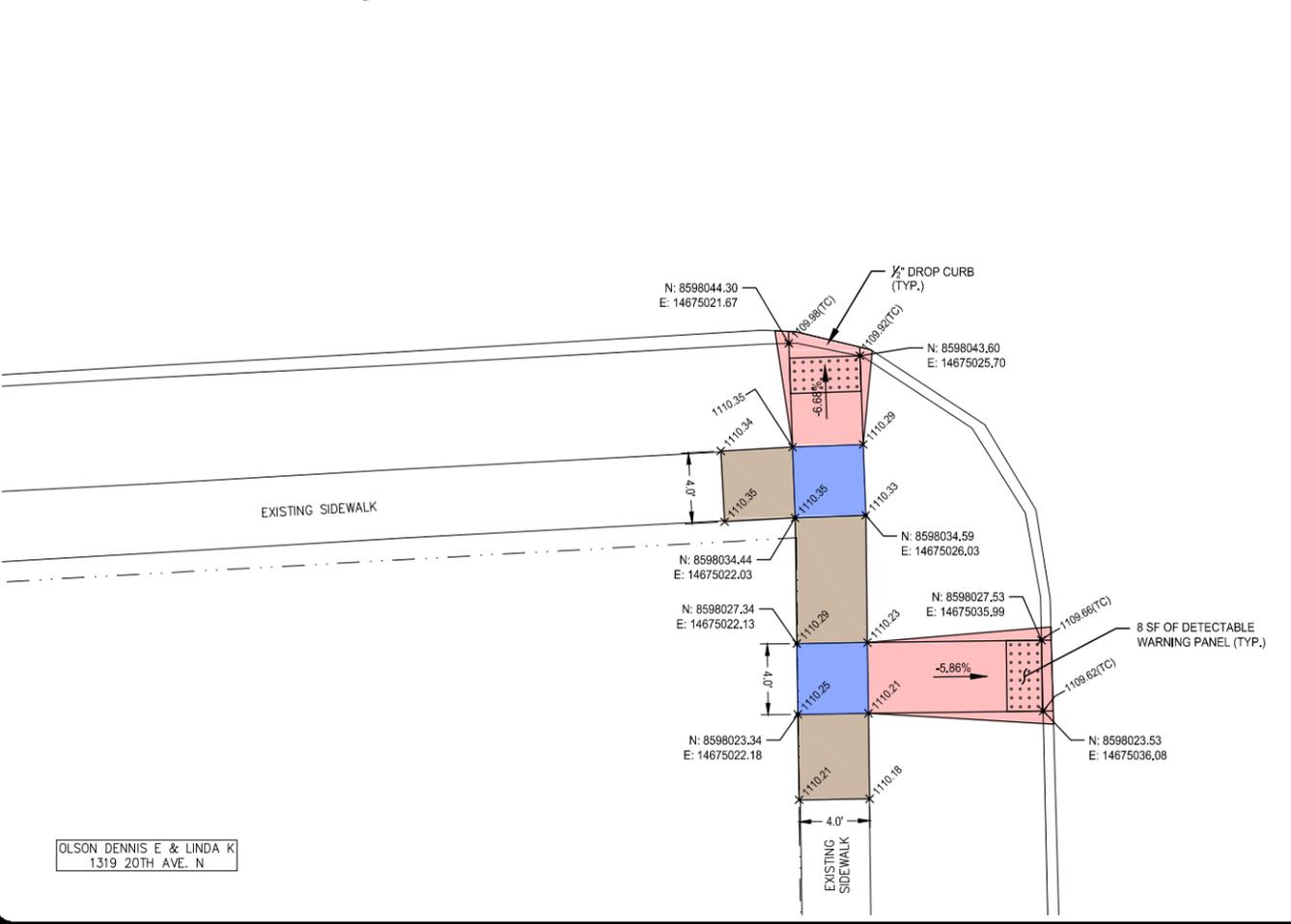
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DEGLAU RICK D & JACQUELYN A
2004 N 14TH ST.

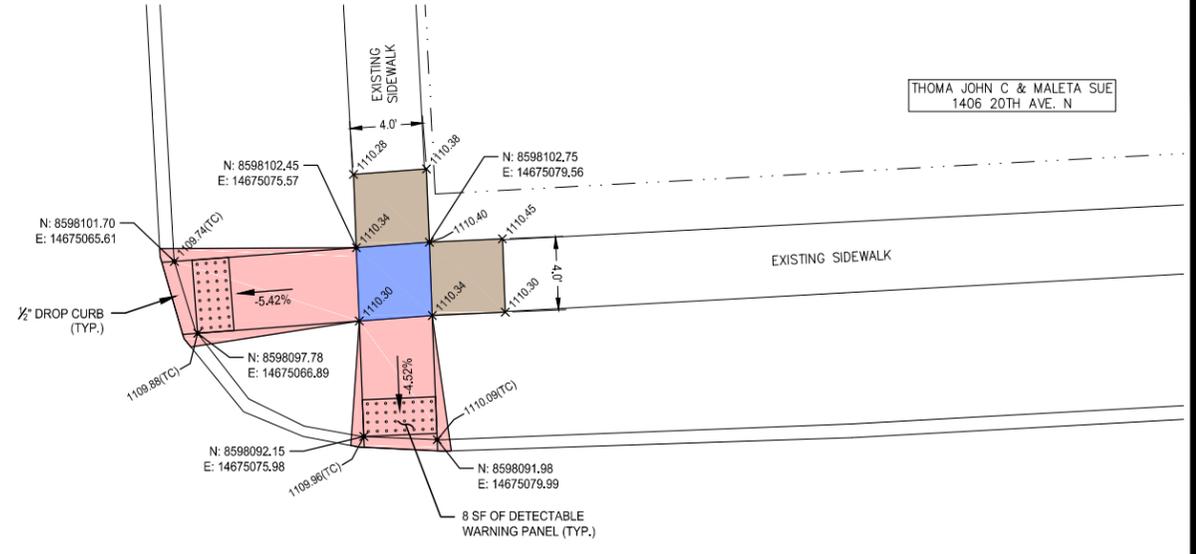


N 14TH ST.

20TH AVE. N



OLSON DENNIS E & LINDA K
1319 20TH AVE. N



THOMA JOHN C & MALETA SUE
1406 20TH AVE. N

LEGEND:

- PROPOSED SIDEWALK
- PROPOSED SIDEWALK LANDING
- PROPOSED SIDEWALK RAMP

GENERAL SIDEWALK NOTES:

- A. TOP OF CURB (TC) ELEVATIONS SHOWN ARE TOP OF 1/2" DROP CURB. REFER TO FIG. 7010.102 FOR DROP CURB AT SIDEWALK DETAILS.
- B. SIDEWALK REMOVAL AND REPLACEMENT LIMITS SHOWN ARE MINIMUM REPLACEMENT LIMITS. EXTEND REMOVAL AND REPLACEMENT LIMITS TO EXISTING SIDEWALK JOINT.
- C. INSTALL 1/2" EXPANSION JOINT AT EXISTING SIDEWALK AND AT DROP CURB.
- D. REFER TO FIG. 7030.204 - GENERAL FEATURES OF AN ACCESSIBLE SIDEWALK FOR TYPICAL SIDEWALK LAYOUT DETAILS.
- E. REFER TO FIG. 7030.205 - GENERAL SIDEWALK AND CURB RAMP DETAILS FOR TYPICAL ACCESSIBLE CURB RAMP SLOPES.
- F. REFER TO FIG. 7030.207 - CURB RAMP FOR CLASS B OR C SIDEWALK FOR TYPICAL CURB RAMP LAYOUT DETAILS.
- G. REFER TO FIG. 7030.210 - DETECTABLE WARNING PLACEMENT FOR TYPICAL DETECTABLE WARNING PANEL DETAILS.



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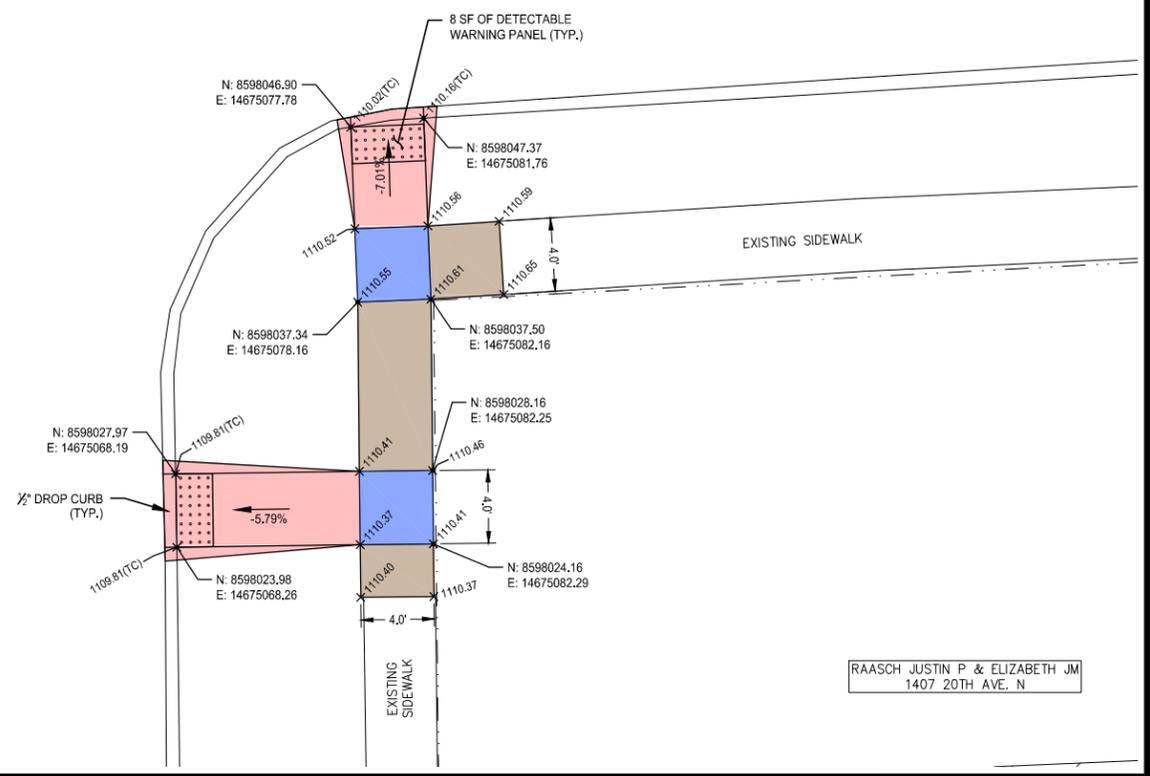


NORTH



GRAPHIC SCALE

SIDEWALK PLAN



RAASCH JUSTIN P & ELIZABETH JM
1407 20TH AVE. N

20TH AVENUE NORTH
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APRIL 2017

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